Sustainability Report 2004

# **SEE SD**

SAMSUNG SDI



#### **About Sustainability Report**

#### The Second Sustainability Report

Samsung SDI, which has introduced and practiced sustainability management as a new business management philosophy, published its second sustainability report. This report is featured with its annual report being incorporated, which has been issued separately, an idea to help various stakeholders better understand Samsung SDI with less efforts. Since the first sustainability report being issued in December 2003, Samsung SDI has carried out various initiatives for sustainability on triple bottom line of economy, environment and society. Those activities and plans for the future are encapsulated in this report.

#### **Reporting Principles**

The Sustainability Report of Samsung SDI was prepared based on the <sup>f</sup>GRI 2002 Sustainability Reporting Guidelines<sub>1</sub> and <sup>f</sup>Environmental Reporting Guidelines<sub>1</sub> announced by the Ministry of Environment in Korea. The report coverage of GRI indicators is provided in GRI Content Index on the contents page.

#### Verification of the Report

Data in this report were obtained from systems in Samsung SDI. The contents have gone through internal review by employees from relevant departments, review by management and independent auditors. The independent verification report is in appendix(page 89–91).

#### Scope of the Report

This report is based on basic performance data of 2004 fiscal year running from January 1, 2004 to December 31, 2004. For trending, data of recent five years have been mobilized. For this report, data from both domestic and overseas plants were collected. For social and environmental parts, however, data of overseas plants cover only major activities and practices. More and more quantitative data will be opened gradually, and data coverage will be also expanded.

For more information, please contact as following

Samsung SDI Sustainability Management Office, Samsung Insurance Building 17th floor, Taepyeong-no 2 ga, Jung-gu, Seoul, Korea Tel\_ 82.2. 727. 3366 • Fax\_82.2. 727. 3399 • www.samsungsdi.co.kr/contents/en/main.jsp • e-mail: sustainability@samsung.com

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Appendix

"Sustainability is the Power to Open the Future of People."

D

All members of Samsung SDI will collect wisdom and efforts to develop marketleading products and technologies and innovate businesses for the future. And we will not spare social and environmental improvement efforts to promote sustainable growth of people.

Dear our customers, shareholders and stakeholders across the world! Thank you for your interest and encouragement for Samsung SDI during 2004.

Samsung SDI, aiming to be the world-best digital company and top-tier company in the global market, has achieved remarkable growth in each economic, environmental and social aspect in 2004.

In economic aspect, Samsung SDI recorded the highest performance in sales and net income for five consecutive years. Market share of CRT and LCD for mobile phones, the platform business, and PDP and OLED, the development business, have not been challenged in the top position. And we exerted more efforts to make rechargeable battery business more competitive. What's more, we were highly praised for successfully developing the world-first ultra-thin CRT, Vixlim, and the world-largest 102" PDP that overcame the known limitation of a display size.

Besides, since Samsung SDI introduced sustainability management for the first time in Korea in 2003 to promote human growth and development in economic, environmental and social aspects, it has published a sustainability report and did a lot of things in social and environmental aspects such as an eyesight recovery operation project and a guide dogs project.

Those efforts paid off. Samsung SDI made the list of Dow Jones Sustainability Indexes for the first time in Korea last year and was selected the most respected Korean company. Such recognitions helped Samsung SDI take better shape as a true global company.

#### Customers!

Samsung SDI is preparing for another leap based on accomplishments of the last 35 years. We want to grow into a true globaltop company that can deserve its position with our members' collective wisdom and efforts.

To this end, all members of Samsung SDI will collect wisdom and efforts to develop market-leading products and technologies and to innovate businesses for future. And we will not spare social and environmental improvement efforts to promote sustainable growth of people. From this year, Samsung SDI publishes one corporate report by combining an annual report and a sustainability report. The integrated report will serve you as a kind guide into Samsung SDI and help you understand the company from different perspectives.

Samsung SDI, a company that creates the future of display and energy, and the power to open the future of people. Samsung SDI pledges to be with you all the time as a guide of sustainability management in Korea.

President & CEO Kim Soon-taek

SoonTack laun

Samsung SDI...

- S means Samsung,
- D means Display and Digital,
- means Interface and Internet Component.

It indicates a company image of playing out hi-tech businesses with focus on key items for 21C such as digital display and internet components.

Germany Frankfurt Hungary

AN ARE LED WHERE

Beijing Korea Tokyo Shanghai Osaka Dongguan Hong Kong Shenzhen Taiwan

Malaysia

Samsung SDI has built triangular business structure; the digital display business creating a ultra-large PDP and a prestigious CRT, the mobile display business for OLED and LCD, and the energy business dealing with rechargeable battery at each apex.

Samsung SDI has 13 production bases in seven countries and runs sales offices in Los Angeles, the U.S and Hong Kong, China. Domestically the company is based in Seoul with nation-wide plants in Suwon, Busan and Cheonan, and Corporate R&D Center in Giheung. As of late 2004, 9,884 employees were working in domestic sites and 27,054 employees worldwide.

Brazil

LA Mexico

## **Management Philosophy**

"We will devote our human resources and technology to create superior products and services, thereby contributing to a better global society"



Samsung SDI, with a management philosophy of contribution to the human society, does its best to develop globally competitive people and create the best technologies and products that can lead digital/mobile display business, aiming at maximization of customer satisfaction. TDC(Technology Driven Company) is to be realized based on the best digital technology.

Strongest competitiveness comes from creativity and sprit of challenge in the digital era. To build a new digital world beyond one's imagination, Samsung SDI never stops moving.

## **Management Principles**

Principle 1	We comply with laws and ethical standards	<ol> <li>We respect the dignity and diversity of individuals</li> <li>We compete fairly, complying with laws and business ethics</li> <li>We maintain accounting transparency by keeping accurate</li> <li>We do not intervene in politics and we maintain a neutral stance on all political issues</li> </ol>
Principle 2	We maintain a clean organizational culture	<ol> <li>We draw a strict line between public and private affairs in all business activities</li> <li>We protect and respect the intellectual property of the company and others</li> <li>We create a healthy organizational atmosphere</li> </ol>
Principle 3	We respect customers, shareholders and employees	<ol> <li>We value customer satisfaction the top priority in our business activities</li> <li>We focus on shareholder value</li> <li>We endeavor to improve employees' quality of life</li> </ol>
Principle 4	We care for the environment, health and safety	<ol> <li>We engage in environmentally friendly management practices</li> <li>We value human health and safety</li> </ol>
Principle 5	We are a socially responsible corporate citizen	<ol> <li>We actively perform our duties as a corporate citizen</li> <li>We respect the characteristics of local custom, culture, and society, and strive to prosper together with local communities</li> <li>We build win-win relationships with business partners</li> </ol>

## **New Vision**

Creating the future of Display & Energy

'Create' means more than manufacturing (produce, make). It is to capture needs that customers have yet to be aware of and to create products, offering convenience and beauty to customers, and represents the TDC spirit of making continuous efforts to explore a new future. This would lead Samsung SDI to shape the future of display and energy businesses with cutting-edge technologies.

### **Corporate Governance**

Samsung SDI fully satisfies legal requirements concerning corporate governance that the Commercial Law and the Securities and Exchange Act dictate, regarding ratio of independent directors in Board of Directors(BOD) and composition of an audit committee and so forth. Samsung SDI had had eight directors, four of whom were independent directors, until 2004. Following the revised securities and exchange act in 2005, one more independent director was appointed. The BOD, chaired by CEO, discusses and makes important decisions regarding a primary direction of company management through regular sessions and special sessions. In 2004, four regular sessions and 6 special sessions, 10 in total, were held. Under the BOD are the Management Committee, the Audit Committee, and the Recommendation Committee for Independent Directors Candidate. Management Committee, composed of three members including CEO, makes major management decisions mandated by the BOD. The Audit Committee, consisting of three independent directors, is convened quarterly and conducts audits for quarterly settlements and internal accounting management systems. The Recommendation Committee for Independent Directors and two outside directors and recommends qualified outside director candidates.

## **Crisis Management**

Samsung SDI operates the Management Administration Office under the direction of CEO. The Head of the office is a member of the BOD. CRO(Chief Risk Officer) and CFO(Chief Financial Officer, serving also as Head of the Management Administration Office) are placed under the Office direction. CRO takes care of social and environmental risks, while CFO does financial risks. Each plant operates a faculty of Plant Head and Vice Plant Head to respond to any contingencies in their plants.

Along with that, CCO(Chief Communication Officer) is installed to take care of communication activities.

## Sustainability Management Organization

Samsung SDI, for the first time in Korea, introduced Sustainability Management in 2003 and has run the SM Office. The Office works for sustainability management planning, operation of the Sustainability Management Committee, publication of sustainability reports, communication with internal and external stakeholders, and performance auditing. In 2004, the Office convened a Sustainability Management Committee session in March. And it has worked for sustainability management auditing for overseas plants, company-wide environment management process improvement efforts, sustainability management programs, formation of various working-level committees, and establishment of management infrastructure.





## WIDE

WIDE is This With 102" PDP, the largest display in the world, Samsung SDI brought down a barrier to development of displays. It is Samsung SDI that makes a way to the future of super-large displays you have never imagined.

## SLIM

**Magic for SLIM Revolution** Slimmer Samsung SDI CRT was built upon magic-like science.Samsung SDI's leading technologies move up revolutionary evolution of CRT. The best display for more refined digital broadcasting. Samsung SDI displays even your fascination.







## VIVID

A Hallucinated Butterfly LCD and OLED of Samsung SDI, which drive development of mobile displays as a leader, capture colors as they are in nature.

Mobile displays of Samsung SDI will be with you anytime and anywhere to deliver true-to-life images.

Enjoy surprisingly vivid colors and images in your mobile life.



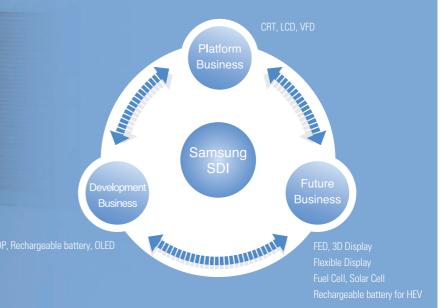
## STRONG

Power for a Stronger and Freer Life Power to give life to mobile. Strong wings to free mobile. Batteries of Samsung SDI free the mobile world to the fullest. They promise delight of mobile life for a longer time with unmatched robustness and safety. They enrich your mobile life.



## Triangle of Platform Business, Development Business and Future Business Creates Harmony for Sustainable Growth.

Marking the 34th anniversary of its foundation in May 14, 2004, Samsung SDI announced its mid and long term vision setting the target of 20 trillion won in sales and three trillion won in profits by 2010 with improved technologies and expanded market dominance. CRT, LCD and VFD were defined into the platform business, which would create revenue streams with a competitive edge. PDP, OLED and rechargeable batteries, items dubbed the new business in the past, are classified as the development business, and they will be value-added products positioning as a new growth engine with smart investment. Next-generation displays, such as FED and flexible display, and energy business to build fuel cells and solar cells are designated as the future business, which is to realize sustainable growth by the next-generation. Backed by the triangular business structure of platform business, development business, and future business.

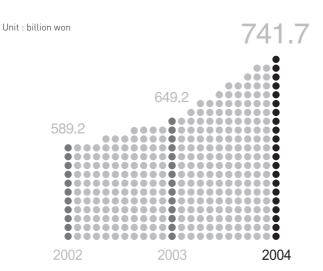


[Samsung SDI Business Portfolio]

## **Financial Highlights**

## **Record the highest profits for five consecutive years!**

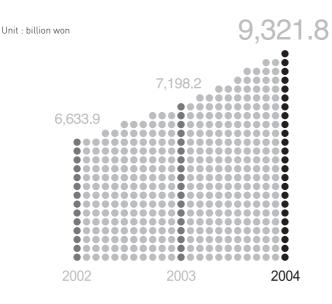
This sustainable growth is driven by innovations aimed to be a supreme leader and by focused investment for the future. Samsung SDI's journey to a top-tier global company will continue well into 2005.



### 741.7billion won in current net income

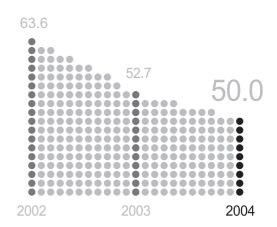
Not being satisfied with performance of 'record the highest profits for five consecutive years', Samsung SDI enhances competitiveness of all products including PDP, rechargeable batteries, mobile displays, and CRT, and takes off to be the No.1 digital company in the world.

Unit:%



### 9,321.8 billion won in sales

Thanks to sustainable growth of new businesses for PDP and rechargeable batteries and remarkable improvement of existing businesses for mobile displays and CRT, Samsung SDI reported the highest sales performance in its history.



### Debt ratio 50.0%

As the result of remarkable growth across the whole businesses, debt ratio declined to 50.0%. We pledge to build a healthier corporate structure again in 2005.



## CRT Vixlim-led Revolution Began

CRT is an excellent display in terms of high-resolution, color saturation, viewing capability for video-images and price competitiveness. Samsung SDI, which has dominated the market for the last several decades, achieved a new record of selling 70 million CRT in 2004. And in the fast emerging BRICs markets, the company has been leading the digital display market.

Samsung SDI, the new technology frontier, successfully worked out the thickness problem, the only challenge left in CRT technology. Breaking the conventional wisdom, "CRT is thick", Samsung SDI introduced 'Vixlim', the ultra-slim CRT for digital TV, leading the CRT revolution. 'Vixlim', which delivers excellent picture quality with slim body, is going to take over reputation that CRT has enjoyed so far.



## LCD Makes Way to a Beautiful Mobile World

Mobile LCD, enjoying the biggest market share with 23%. Samsung SDI released UFC(UFB for Camera)-LCD with higher color saturation and faster response time, building up more competitive power in the mobile display area. In 2004, Samsung SDI sold 95 million units of UFB-LCD, breaking its own record, and expanded business area further into the TFT module business. With the newly opened Tianjin LCD plant in China, Samsung SDI secured advantageous position in terms of production capacity over its competitors.

As a mobile phone gets positioned in the center of the mobile world, where information, entertainment, finance, and communications are converging, the best display for it is undisputedly Samsung SDI-made LCD.

## CRT, LCD, and VFD that have shaped Samsung SDI into a display maker, still form the platform of SDI

Samsung SDI earned a reputation as the world-best display provider from CRT making. Since then, from LCD to VFD, they have served as a cash cow for Samsung SDI with supreme quality and competitive edge. With emerging BRICs market and digital revolution, demand for platform products is expected to make steady growth.



## VFD Glittering Light, It Is VFD

VFD shines brilliantly in any places, bright or dark. VFD of Samsung SDI creates brilliant colors. Emitting soft and comfortable light, VFD has excellent visibility with self-illuminating ability and has much been loved for its wider viewing angle and lower-voltage operation.

## Watch PDP, OLED, and rechargeable battery that have been turned into a growth engine from being new business items

PDP, OLED, rechargeable battery are not a new business, but rather development business. Like a fast growing young tree, the development business is positioned as a new revenue stream. The development business will become a new growth engine for Samsung SDI when it is helped by bold investment into development of value-added products, innovation for manufacturing cost reduction, and aggressive marketing.



## PDP Fascination From the 102" Screen That Has Never Existed Before

It has been said in the display community that making over 100-inch display is way beyond the level of current technology. So comes the phrase 'elusive 100 inch' Samsung SDI, however, pulled off development of 102" display for the first time in the world, expanding the horizon of display. The newly developed display is the largest TV display available across CRT, LCD, Projection and DLP. Development of 102" PDP worked out innovation in productivity by allowing production of four 50" PDP modules at the same time out of one glass substrate. This will help ordinary families enjoy fascinating experience of watching a large screen more easily.

Samsung SDI is now able to offer various products through PDP full line-up for 37", 42", 50", 63", 80", and finally 102". Samsung SDI will advance days of popularized super-large digital TV.



## BATTERY Power for a Mobile Life

The heart of a mobile world is rechargeable battery. Rechargeable battery powers a mobile life. Samsung SDI is now developing a slimmer, lighter, and longer-lasting rechargeable battery to be recharged over 500 times. Safety is ensured after sophisticated 6 Sigma quality control techniques being applied. Cell material technology and pack design technology are ahead of others.

We will add convenience to your mobile life with safer and environment-friendly rechargeable battery.



## $OLED \ {\tt Realization of Limitless Potential}$

OLED is admired as a dream display. OLED can be presented in super-slim body with low power consumption and is self-illuminating without a supporting light source. OLED is also featured with wide viewing angle and fast response time making the product ideal for viewing video images.

Samsung SDI has been creating history of OLED from small to large, world-first mass production of 1.7" 65,000 - color PMOLED, development of 1.8" 260,000-color PMOLED, and development of UXGA(1,600x1,200) 17" AMOLED.

OLED, a dream display with limitless potential! With Samsung SDI, it is no longer a dream.

## For a sustainable future over the present, Samsung SDI moves forward with the future business

100 C 1. m

Samsung SDI is never complacent.

Our future business including next-generation displays such as FED and flexible display and energy products such as fuel cell and solar cell is growing up. Samsung SDI will bring the future business closer to reality by encouraging R&D activities led by a more competent Corporate R&D Center.

## FED Futuristic Display with Unlimited Development Potential

FED is a futuristic display featured with superior brightness of CRT plus the slim and light body of PDP. FED has unlimited growth potential created by application of new technologies and new materials like carbon-nano tube.

When a ultra-slim, operative with lower-power, clear-picturing and environment-friendly FED becomes commercialized, it will take the lead in the flat-panel display market.

## 3D DISPLAY 3D Images with a More Realistic Touch

3D display delivers reality-like images by taking advantage of different viewing angle of both eyes. General 3D display with no need for special glasses and real 3D technology, which are currently under development in Samsung SDI, will brighten the unprecedented future of displays. 3D display will offer you visuals more than a reality.

## FUEL CELL Dream Battery with No Pollution and No Limit

Fuel cell is a dream battery that produces little pollution and can be used without being affected by spatial and time constraints. Fuel cell produces electrical energy through the chemical reaction of hydrogen and oxygen, making it an energy with unlimited potential. Working with other Samsung affiliates including Samsung Advanced Institute of Technology, Samsung SDI does its best to bring this dream cell to popular markets.

## FLEXIBLE DISPLAY Marvelous Display that Can Be Bent and Folded

Have you imagined a display that you can bend? You can use flexible display anywhere and anytime with ease, and bend or roll it up to carry. Once commercialized, it will lead a mobile life. The flexible display will be applied to various media such as PDA, e-Book, sign boards, and etc.

## HEV BATTERY Environment-Friendly Car

Development is underway to develop a rechargeable battery for hybrid electrical vehicles to replace fossil sources in attempts to avoid air pollution from car exhausts and to survive in the days of expensive gas. We prepare for the HEV era by improving fuel economy and ease of use dramatically. Samsung SDI is also with you for an environment-friendly and convenient life in your car.

## SOLAR CELL Convert Solar Energy into Electrical Energy

From time immemorial, the sun was a friend of people. Now the sun lights up the hope of people as a new source of energy. The solar cell technology converts unlimited solar energy into efficient electrical energy. Samsung SDI is undertaking R&D to develop an environment-friendly and economically viable solar cell. The era of solar cells for undeletable energy and environment-human-friendliest energy is coming soon.

## Value Creation through Economic Growth and Technology Innovations

#### I Sales I

Samsung SDI's sales reached a record high in 2004 since its foundation, with 9,321.8 billion won according to its consolidated financial statement of 2004. Current net profit amounted to 740 billion won, rising for five running years. This performance was all the more significant in that we achieved the results in the middle of global economic downturn and harsher competition in the display business.

#### I Customers I

Our customers include world-renowned electronic product makers. Product exports took up 66% of the total sales. Looking at sales records by segment barring domestic one, Asia accounted for 40% of sales, Americas 12%, and Europe 14%. That was possible as production bases have been globally networked to cover major markets so that the company was able to readily respond to customer requests.

#### I Sustainable Product Portfolio I

Starting with CRT production, Samsung SDI is successfully realigning its product portfolio to adjust to changing competition environment and meet the changing customer needs. 2004 saw sales dependency on CRT lower to 43%, while sales dependency on development business products such as PDP, LCD, OLED, and rechargeable battery rise to 57% for the first time. This marked year 2004 as the first year of successful realignment of product portfolio leading to sustainable development.

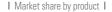
#### I Stronger Market Dominance I

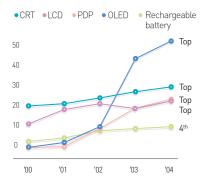
Samsung SDI has made continuous efforts to become the global No. 1 in the display and energy sectors. The efforts paid off. As of 2004, CRT, PDP, LCD, and OLED dominated the largest share in each market. Rechargeable battery in energy sector enjoyed the fourth largest market share, expanding the share gradually. Although production of OLED and PDP, in particular, was late, compared to our rivals, those products report steady increase in market share helped by bold investment, quality improvement, and a customer satisfaction initiative.

#### I SDI's Efforts for Technology Development I

Samsung SDI was able to increase its market shares, sales, and current net profits, defying difficult market conditions affected by rapidly changing customer requirements for products, fiercer global competition, and prices moving downward. Growing market share was the results of Samsung SDI's endeavor to seek the TDC(Technology Driven Company) for continuous technology development.

Setting up the TDC strategy in 2002, Samsung SDI shifted its business mind and focus from device-making to high-tech technology, putting values on early advancement of new businesses, value creation through proactive R&D investment rather than cost-cutting, and globalization of production bases. With these four innovation focuses, we drive on the road to innovations without putting on the brake.





#### I 6 Sigma, DNA of a Company Innovation I

If TDC is a strategic end for Samsung SDI, then 6 Sigma is a pillar for action to the end. 21st century is defined as an era of limitless competition. To win in competition, a company has to develop and refine its competitive edge not only in product quality but in all related processes covering sales, purchase, accounting and etc.

Samsung SDI's 6 Sigma management innovation is not a simple statistic technique, but DNA of company innovation activities, changing the way we work and think, and lead to customer satisfaction.

Total 8,294 projects were carried out in 2004, reporting 367.2 billion won in financial effect. In all business sites at home and abroad, 614 master black belts and black belts and 6,572 green belts were groomed in 2004 through consistent training and human resource refinment efforts.

6 Sigma projects led to development of the slim CRT 'Vixlim' and contributed to enhancement of product competitiveness of PDP, OLED, and rechargeable battery. It also helps transactional operations be performed more efficiently.

The 2nd 6 Sigma Olympiad was held in the Malaysia plant in November 2004, marking true global 6 Sigma spread, reaching out to overseas plants.

#### I 'Reward achievement', Responsible Management Assessment Scheme I

Samsung SDI put in place a responsible management assessment scheme with division-based structure by product line to cope with ever-expanding size and structural complication of the organization. Essence of the scheme is 'differentiated reward for achievements', which speaks for SDI's organizational culture. The scheme has played an important role for sustainable growth and development. Looking into details, an annual target is set for a current year according to the Valuable Performance Indicator after considering features and nature of different organization unit.

The Valuable Performance Indicator is a kind of balanced scorecard unique to Samsung SDI designed to consider different focus of operation in each division, for example, customer perspective and human resource development perspective as well as financial performance. Assessment is conducted half-yearly for divisions and yearly for executives.

Performance in target achievement and growth would determine the level of Productivity Incentive for a division and be reflected fairly in executive evaluation. This is an important management tool effective to encourage healthy competition among divisions as well as a means for compensation.

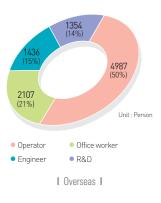
Samsung SDI employs the Scenario Planning and Portfolio Theory to make decisions on its mid and long-term business vision and management plan at a corporate level. With such scientific techniques, the company minimizes risks associated to decision-making on investment and company management.



2<sup>nd</sup> Six Sigma Olympiad: SDI Malaysia, Nov. 2004

## Economic Responsibility for Stakeholders

I Employee composition I





#### I Employees I

As of late 2004, 9,884 people in domestic sites and 17,170 people in overseas sites out of 27,054 employees in total were working in Samsung SDI. Domestically by job type, there were 4,987 operators, 1,436 engineers, 1,354 researchers and developers, and 2,107 office workers. By gender, 7,633 were male and 2,251 were female.

#### I Suppliers I

Samsung SDI spent 5.7 trillion won(in Korean sites) in purchasing parts and service from outside in 2004.

#### I Government I

Samsung SDI paid 90.7 billion won in tax, out of which 57.3 billion won was in corporate tax and 33.4 billion won in income tax of employees.

#### I Society I

Samsung SDI's donation for the public has been on the rise. Around 40.4 billion won (in Korea) was donated for social welfare fund, academic research promotion, and sports promotion.

#### I Shareholders I

Samsung SDI paid cash dividend to shareholders in 2004, following 2003. Dividend rate was 60% for common stocks and 61% for preferred stocks.

I Dow Jones Sustainability Indexes I

Dow Jones Sustainability Indexes is one of Socially Responsible Investments indexes that comprehensively determines social, ethical, and environmental values, not confined to taking in only financial information of world-renowned companies. The DJSI reviews performance of sustainability management of world-class companies, selects excellent players and provides its findings to investment institutions and investors. The Indexes are highly regarded for credibility and objectivity so that DJSI review results should affect investment decisions. Samsung SDI, with its sustainable development efforts being appreciated in the world, became the first Korean company that made the DJSI list in September 2004.



## Key Financial Indexes

I Summary Profit and Loss Statements (in million won) I						
	2000	2001	2002	2003	2004	
Sales	5,548,810	5,635,265	6,633,908	7,198,169	9,321,770	
Gross profit	1,440,476	1,363,295	1,564,077	1,644,647	1,676,602	
Operating profit	893,278	783,083	873,404	908,987	775,457	
Ordinary profit	775,027	723,058	785,331	825,003	748,219	
Netincome	545,248	555,953	589,191	649,358	741,749	

#### I Corporate Stability Index I

	2000	2001	2002	2003	2004
Current ratio	92.36%	112.20%	159.93%	150.03%	153.15%
Debt ratio	129.48%	80.14%	63.55%	52.70%	50.00%
Leverage ratio	32.66%	25.29%	16.49%	13.42%	13.63%

### | Profitability Index |

	2000	2001	2002	2003	2004
Ratio of net income to net sales	9.83%	9.87%	8.88%	9.02%	7.96%
ROA	10.03%	9.84%	10.38%	10.70%	11.30%
ROE	24.40%	19.88%	17.78%	16.87%	17.09%
Earnings per share	11,646won	11,878won	12,608won	14,528won	16,682won

### I Growth and Activity Index I

	2000	2001	2002	2003	2004
Sales growth rate	14.88%	1.56%	17.72%	8.51%	29.50%
Net income growth rate	189.34%	1.96%	5.98%	10.21%	14.23%
Net asset growth rate	8.79%	-0.58%	1.67%	11.96%	4.88%

### I Summary Balance Sheet (in million won) I

	2000	2001	2002	2003	2004
Assets	5,663,565	5,630,805	5,725,091	6,409,798	6,722,372
Current assets	2,406,671	1,844,869	2,418,398	2,736,184	2,761,811
Non-current assets	3,256,894	3,785,936	3,306,693	3,673,614	3,960,561
Liabilities	3,195,546	2,505,062	2,224,502	2,212,057	2,240,824
Current liabilities	2,605,789	1,644,269	1,512,160	1,823,722	1,803,321
Long-term liabilities	5 589,757	860,793	712,342	388,335	437,503
Equity	2,468,019	3,125,743	3,500,588	4,197,741	4,481,548
Capital stock	240,198	240,198	240,672	240,672	240,681
Capital surplus	1,257,621	1,260,860	1,265,622	1,267,867	1,281,431
Retained earnings	1,026,065	1,488,370	1,962,267	2,614,181	3,122,955



## Create Environmental Values through Harmony with Nature and Cooperation with Stakeholders

Samsung SDI prepared five environmental strategies to reduce environmental footprints and maximize values throughout the life cycle of its products and services.

- Integrated Environmental Management System
- 2. Green Supply Chain Managemen
- 3. Cleaner Production Technologies
- 4. Eco-Design
- 5. Interactive Communication

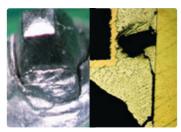
Irue environmental value can't be created simply by environment-friendly management. The life-cycle of Samsung SDI's businesses should be controlled, and environmental partnership with the nature around Samsung SDI, suppliers, customers, and society should be established. Among them, you have to take as little as possible from the nature and control emissions to the environment to a minimum. With the rest of them including suppliers, customers, and society, you have to cooperate and exchange more and more. This is the basic direction that Samsung SDI is to go for environmental sustainability.



## Eliminating Hazardous Materials from Products



Lead-Free PDP module



Samples for reliability testing



Research for lead-free soldering

#### I Lead-Free Soldering I

November 1, 2003, Mr. Hwangbo Won-dong of PDP division of Samsung SDI was challenged by a task that was deemed almost impossible. It was to develop a viable lead-free soldering technique for PDP by the end of 2004. By the time the request was made, only a few large companies employed lead-free soldering for small PCB (Printed Circuit Board) of VCR, never for a large PCB used, for example, in PDP. Even theoretically it was not an easy task, considering a high melting point of a lead-free solder. Hwangbo quickly made inquiries to research centers and laboratories and got only disappointing responses. In the mean time, Mr. Ha Chung-soo of the MD division was wrestling with a different problem. Unlike PDP, LCD employed FPC (Flexible Printed Circuit), which was very thin and small, causing unexpected problems. One year later, the two engineers finished tasks successfully with commercialization of lead-free products. Considering time spent for preparation, it took over a year, but in that relatively short time period they made great achievements.

Module parts used for PDP, LCD, CRT, and rechargeable batteries of Samsung SDI are assembled by vendors. It means the company has to work together with vendors in the first place to make a transition to lead-free soldering. So jobs for lead-free soldering were carried out in vendor companies from the start.

Multiple jobs should be done at the same time. First of all we had to figure out how responsive soldering equipment of a vendor was to lead-free. Due to thermal and chemical characteristics of lead-free solders, some soldering equipment was replaced or improved. Soldering containers were replaced with one resistant to corrosiveness of lead-free solder. In some case, new equipment was brought in after all.

Selecting the most appropriate lead-free solder for a particular product application was also an important job. After countless experiments, each product was matched with the most appropriate lead-free solder.

Next came a mounting technology. A lot of changes had to be done. Existing PCB designs could not afford leadfree soldering. Circuit design standards were modified and soldering temperatures were also changed. Even components of soldering equipment were rearranged. Then mounting tests and multi-stepped, strict reliability tests for thermal impact resistance, tensile property, bending strength, and fracture analysis, came, and the results were incorporated into standard conditioning. That was not the end. The standards had to be applied to all suppliers and equipment. After months of efforts, those standards were completely and successfully implemented in all suppliers, though a little difference was detected among different lead-free soldering equipment.

### I Compliance with RoHS for Parts and Material I

For lead-free soldering, part change should be accompanied by obtaining a soldering mounting technology. First of all, coating of part connectors should be changed. In the mean time, joint efforts with suppliers were made to eliminate six hazardous substances, regulated by RoHS from all parts and materials. All parts and materials were analyzed. Composition of each part and material was defined and improvement work was conducted. For CRT and PDP, cadmium and lead contained in magnetic parts and electric wires were taken out. Halogenated flame retardants used in tape for CRT were replaced by other materials. Test analysis on packaging materials and labels was completed, which was followed by improvement activity.

Samsung SDI has been working hard to complete compliance with RoHS in products since 2004. By the end of the first quarter of 2005, RoHS compliance system will be established for all products. That is because we know that lowering contents of hazardous materials is the first thing to do for environmental management, considering their environmental impacts.



Products without hazardous materials



Lead-free line in a supplier

### Convert Light to Electricity!



First Polycrystalline Si PV House: 3kW PV System



Color cell

Standard Si cell

"Solar Cell" is the environment-friendliest energy that generates electricity using cleaner energy source of the sun. "Solar cell will win over many other renewable energy after all", said Cho Eun-chel from the Energy Lab of Samsung SDI Corporate R&D Center. Cho is studying a polycrystalline solar cell. Already in December 2003, 3kW polycrystalline silicon photovoltaic house was up and running for the first time in Korea. Now efforts are being concentrated on development of a polycrystalline solar cell with the highest efficiency in the world. Solar cell can go as long as 20 years without much maintenance effort and does not emit carbon dioxide. However, initial installation cost is very high. As of 2003, the facility cost around 12 million won/kW in Korea, which means that for an ordinary home requiring 3kW of electricity, around 36 million won should be invested. To make it economically affordable, a study is underway to lower the price of cells and modules that account for more than half of a photovoltaic system.

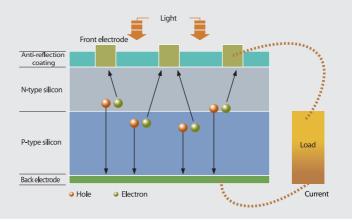
Korea is deemed five years behind advanced countries in solar cell development. Nevertheless we can be optimistic as we have the world-best display technology. As a semiconductor has been rice of industry, a solar cell would be rice of energy for human beings in the era of climate-change, which is already with us. Samsung SDI's research and development efforts continue today.

#### I Solar Cell and Solar Panel I

A solar cell is different from a solar panel. A solar cell is meant to capture energy from the sun and to turn this energy into electrical power, while a solar panel is for converting solar energy into thermal energy, using it for heating and water boiler.

#### I Theory of a Solar Cell I

The key to photovoltaic power generation lies in a pn junction solar cell. Incoming photon, light, creates electron-hole pair within a solar cell. Affected by electrical field created at a pn junction, the electrodes are diffused in the n-type silicon and the positive holes are scattered in the p-type silicon. Then they are collected at both electrodes respectively.



### Here Comes the Era of Hydrogen





PC powered by a fuel cell

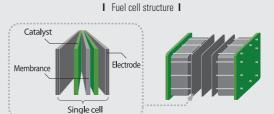
Samsung SDI R&D Center, the Mecca of fuel cell, and next-generation energy and display development

As global warming gets accelerated due to burning of fossil fuels, hydrogen has been emerging as the most promising alternative energy. Hydrogen is the most easily found source of energy in universe. 70% of the earth surface is composed of hydrogen. A unit of mass of hydrogen can generate four times more energy than gasoline. Its carbon content is zero. A fuel cell is a device to convert this hydrogen energy into electric energy and thermal energy.

Fuel cell development began in 2002 in Samsung SDI. Currently 40-strong engineers commit themselves to development of fuel cell. In 2004, 20W DMFC(Direct Methanol Fuel Cell) that creates hydrogen by oxidizing methanol) for a laptop was successfully developed in prototype. In 2005, fuel cell with the highest efficiency in the world will be developed. Yet it is hard to imagine that you use a laptop without power cable connection or a rechargeable battery. The dream will come true in the near future by the Energy Lab of Samsung SDI.

### I Fuel Cell? What Is It? I

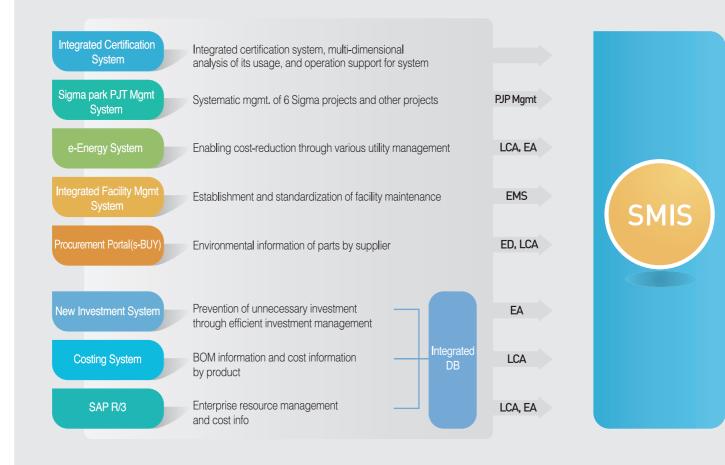
The theory of fuel cell was first discovered by W.R. Grove in UK in 1839, and gained popular attention in 1959 when practical 5kW hydrogen-oxygen cell was demonstrated. Since then, fuel cell has been developed to a point, where it was loaded into a US spacecraft, and reached to commercialization level by now. Fuel cell employees reverse-hydrolysis reaction. In detail, when hydrogen or fuels with hydrogen in it(methane, natural gas, alcohol) are met with air(oxygen), resulting in chemical energy, fuel cell converts it into electrical energy. If fuel and oxidant are in continuous supply, electricity is generated continuously. That's why fuel cell is called a tertiary



battery. For your reference, a primary battery is in no use once discharged like mercury battery. A secondary battery is a rechargeable battery like lithium-ion battery. To get practical voltage, many single cell capable of producing 0.4 volt should be linked together to form a stack. Placing a power controller and a fuel cartridge on it is a final touch for a complete fuel cell.

### Development of SMIS

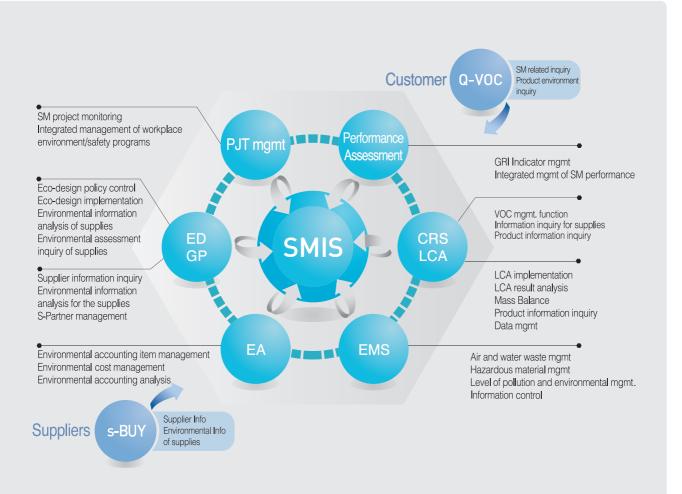
Samsung SDI is developing SMIS at the moment. SMIS for Sustainable Management Initiative System is a total information management system for practicing sustainability management. SMIS is composed of six product modules of Life Cycle Assessment(LCA), Green Procurement(GP), Eco-Design(ED), Environmental Accounting(EA), Environmental Management System(EMS), and Customer Response System(CRS), and two management modules of PJT mgmt and Performance Assessment. Modules will play a pivotal role for development of environment-friendly products and innovation of business processes, while implementing a pivotal role for Samsung SDI's sustainable development.



SMIS will be linked to existing backbone systems such as ERP, Costing System, e-Energy System, and Project Management System, analyzing product environment and controlling progress of sustainability management. Development of SMIS began in 2004, and will be completed by the end of 2005. The next year's report will contain more details about SMIS.



SMIS Intro look under development





### Working with Part Suppliers

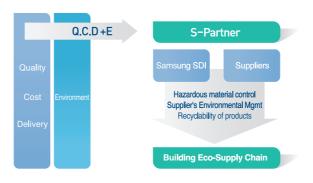
### I The First Step for an Environment-Friendly Supply Chain I

Mr. Cho Jae-hyun, a manager of the Busan Plant, prepared a pilot project phase 1 for green procurement for LCD modules jointly with the Purchase Team in March 2003. He wanted to fathom possibility of a new process implementation totally different from the existing one. After nine months of trials and errors, the pilot program went through the phase 1 in November in the same year. It was a turning point to introduce green procurement across the company in January 2004.

The primary purpose of green procurement is to make products environment-friendlier. Environment-friendly products are made of environment-friendly parts. Likewise, environment-friendly parts can't be made without environment-friendly raw materials and environmental management of a supplier. In a nut shell, green procurement has a purpose of improving environment-friendliness over the whole supply chain through environmental management by a supplier. It means that when you talk about parts, you have to consider not only their quality, cost and delivery, but the environmental aspect.

Many things had to be done to implement green procurement. First of all Samsung SDI carried out the green purchase phase 1 across the company in 2004, which was about establishing a hazardous material management system for supplied parts and materials and defining where a supplier is in terms of environmental management. Though looking simple, it required tremendous efforts from Samsung SDI and the supplier side. As for Samsung SDI, each Purchase Team at the product level put together a task force team for green procurement and held a session to explain it to suppliers. As for suppliers, they checked out contents of hazardous substances in parts and materials and established material composition of each part.

I Concept of green procurement I





Green Procurement System

The confirmed hazardous material information in suppliers was sent to Samsung SDI, which then checked again hazardous material status of each part (assessment of supplies) before approving the delivery. It would not be enough just to eliminate noxiousness from parts currently in use. Each supplier had to be equipped with an environmental management system and a hazardous material control system, considering any changes in materials and parts. For year 2004, Samsung SDI assessed supplies and defined the status of their environmental management systems of 603 part suppliers at home and abroad. Based on the assessment results and identified status, Samsung SDI is going to designate S-Partner(Sustainable Partner) from 2005. In the future, suppliers which are not selected as S-Partner will not be able to maintain a cooperative relation with Samsung SDI. That's because Samsung SDI regards environmental aspect as an important factor in cooperative business relation. What's more, Samsung SDI would not confine such efforts to the environmental aspect. Social aspect of a supplier will be considered another critical factor.



#### I Transfer and Expansion of Cleaner Production Project I

Samsung SDI joined the integrated environmental management project of the Transfer and Expansion of Cleaner Production Project led by Korea National Cleaner Production Center under the umbrella of the Ministry of Commerce, Industry and Energy in 2004.

This project is part of a CP technology project led by the MOCIE in line with 'Act for facilitating shift to environment-friendly Industry structure' enacted back in 1995. The project is about transfer and spread of cleaner production hosted by a leading player(large company) to target players(SMBs) through assisting audit training, technology transfer, and environmental management. In this project, Samsung SDI presented the topic of 'Network Building for Supplier's Environmental Competency: Samsung SDI's SCEM Network Development, Supply Chain and Environmental Competency Improvement Project' and has been working to help suppliers enhance environmental competency. The results include removal of hazardous materials in vendor's products, cleaner production education, set-up of environmental management systems, and reduction in pollutants generation.



# Analysis of Hazardous Substance in All Products and Materials



Analysis technology exchange



RoHS GuideBook

December 10, 2004, the SM Task Force Team of Corporate R&D Center published a booklet after one-week training in a separate place. It was 'RoHS GuideBook'.

The SM Task Force Team, composed of senior engineer Kweon Jin-ki and six colleagues, installed within The Analysis Team in the R&D Center, which was promoted to a Team in early 2004, completed analysis technology development and part assessment for RoHS compliance of all products and parts, which any other company in Korea had never tried before.

Hazardous material analysis technology in products is a necessary technology to effectively respond to product environmental regulations. But there have been few accreditation testing, inspection and research institutes able to carry out harmful substance analysis in Korea. International testing specifications related to analysis for electrical and electronic equipment's hazardous materials were almost non-existent yet. Most Korean electrical and electronic companies have either performed analysis on their own, applying similar domestic and international standards from ISO, ASTM and EPA or never tried testing at all. Making things worse, an analysis method for bromide series flame retardants(PBB, PBDEs) used in high molecular substances has not known at all. Because of this, there have been few institutes which can perform qualitative and quantitative analysis and generate accurate data about them in Korea.

The Analysis Team began preparation for analysis from the latter half of 2003 and brought in analyzers such as a high resolution mass spectrometer, and an inductively coupled plasma(ICP) and the Auto-Clean-Up Systems such as Cryogenic Miller and Accelerated Solvent Extractor(ASE). The Team finished assessment of six materials regulated by RoHS for over 4,000 parts across the company on December 10, 2004. Analysis was made for parts and Work-In-Process(WIP) requested by CRT, PDP, battery, OLED, LCD, and VFD divisions to identify any hazardous materials. The findings resulted in RoHS compliance in some products. Taking on the enormous work required 200~300 samples to be analyzed a month. From July to September, in particular, around 400~500 samples were handled a month.

Samsung SDI has a long way to go before the developed analysis standard being certified as an international standard. But we have confirmed its legitimacy after the analysis method being verified several times by Korean and international research societies, going through comparison tests numerous times with domestic accreditation institutes, and being presented to advisory conference in the Korean Agency for Technology and Standard. Encouraged by these, Samsung SDI presented 'Work for RoHS Compliance' at the Korea Electrical and Electronic Fair and came to a point, where the 'RoHS GuideBook' was published to compile achievements up to now.

But this is not the end. Requests for assessment on product improvement in terms of reduction of hazardous material contents keep coming in. And assessment on not only six RoHS materials but other tens of environmentally-unviable materials is on the constant demand.

### Integrated Environmental Management

Integrated environmental management is the first strategy for environmental sustainability. It means to build an environmental management system and integrate it to existing management systems.

### I Environmental Management System and Environmental Audit I

Samsung SDI was the first company that introduced an environmental management system in the Korean display industry. Starting from the Busan plant's being BS7750 certified, the predecessor of ISO 14001, all domestic plants including Suwon and Cheonan plants were certified for environmental management systems. And Samsung SDI was designated as an environment-friendly company by the Ministry of Environment. By extension, all overseas plants but the newly opened Hungary plant and the Tianjin LCD plant in China were ISO 14001 certified. By 2005 plants without an environmental management system yet will set up the system and get ISO 14001 certification. The already-established environmental management systems will be upgraded continuously through yearly internal maintenance inspections and operation inspections.

### I Environment and Safety Risk Management I

Manufacturing sites have dangers in any form always with them. Bracing for any dangerous situations, Samsung SDI placed disaster prevention centers in each site and has been conducting contingency training and education for any possible situations. For overseas plants, organizations were formed in preparation for contingency, and fire-fighting drills, fire-prevention drill competitions, and toxic substance-leakage control trainings have been being carried out as proactive prevention efforts.

ISO 14001 certification status of overseas plants	Tianjin, China	2004	
	Shenzhen, China	1999	
	Dongguan, China	2004	
	Shanghai, China	2003	
	Tianjin LCD, China	2005 plan	
	Germany	2004	
	Hungary	2005 plan	
	Mexico	2000	
	Brazil	2003	
	Malaysia	2004	

#### Suppliers Suppliers



Fire engine in SDI Malaysia



Drill for toxicant leakage control

### I SDI Mexico Certified with Industria Limpia I

Industria Limpia was introduced in 1992 by the Ministry of Environment in Mexican Federal Government to encourage voluntary environmental management of companies. Those practicing environment-friendly management have been awarded a certificate. The Mexico plant received the certificate in December 2002 in recognition of its environment-friendly business management. Since certification is valid for two years, the plant got assessment again in November 2004, and successfully kept the certified status.



Reciben certificados 10 industrias limpias

### 46 Eco-Value Creation



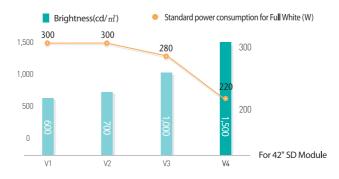
### Eco-Design

Development of eco-products is to make "products without hazardous materials, products requiring less energy, products with a longer life cycle, products requiring less materials, and recyclable products." Aware of the concept, Samsung SDI is making continuous efforts to develop eco-friendlier products. Our efforts to develop environment-friendly products during 2004 are as following.

### I The Best Flat Panel Display, PDP I

Samsung SDI developed the world largest 102" PDP module in 2004. The product is a full HD display with 1,920  $\times$  1,080 in resolution, a 1,000 candle power per square meter brightness rating, and a contrast ratio of 2000:1. This is not a just large display. With the product, Samsung SDI succeeded in development of 4 multi-panel technologies, by which four 50" PDP modules can be produced from one PDP glass substrate at the same time. Taking full advantage of space reserved for glass substrate cutting, Samsung SDI can produce four 50" panel modules by developing the 102" PDP module. Samsung SDI has already secured four 42" multi-panel technologies for the first time in Korea. Along with the four 50" multi-panel technology achievements, Samsung SDI also achieved to reduce the number of process steps and save electrode materials through removal of ITO metal layer. Samsung SDI was also able to enhance the life cycle and brightness by improving photoluminescence through a new electrode structure and highly efficient materials, while reducing power consumption. PDP is positioned as the best flat panel display.





I PDP consumes less energy than LCD! I

According to a JP Morgan report on July 24, 2004(quoting a press release of Pioneer, a Japanese company, dated on July 23), it was known that 42" PDP consumed 30% more power than 40" LCD in general, but PDP consumed same or less power than LCD when it was turned on. As for LCD, all backlights remain turned on irrespective of brightness of display, while as for PDP, brightness of display determines required power. Indeed, Samsung SDI tested and found that when generally watched programs such as movies and soap operas were on, power consumption was low. Samsung SDI is making more and more efforts to reduce power consumption through study of high-efficiency materials and low-voltage structure.



The world largest 102" PDP

### I High Saturation UFB with Fast Response Time for a Camera Phone I

As more and more mobile phones are featured with multimedia and camera functions, Samsung SDI has developed an UFB product(65K color, color saturation of 60%, response time of 180ms) that has fast response time suitable for a high picture quality camera phone. Compared to existing products, backlight performance is improved, resulting in 25% better brightness(Backlight brightness: 2500cd/m<sup>2</sup>) with the same power(160mW). Thickness of a light guide plate is improved by 20% from 1.0mm (year 2003) to 0.8mm or less. The size of active IC is reduced by 30%, achieving simplicity in design and saving material consumption.

### I 2.2" Dual Module with One FPCB I

This product is featured with dual displays to meet the trend of mobile phones going upscale and becoming multi-media devices. Main display is 260K color, 2.2" TFT LCD and external display is 1.3" UFB with high picture quality and high brightness(Main LCD: 200cd/m<sup>2</sup>). Existing dual-display products needed three pieces of FPCB(Flexible Printed Circuit Board) to activate main and external LCD. Unlike them, this product is loaded with only one piece of FPCB covering functions of existing three. As a result, Samsung SDI was able to save FPCB resources by over 50% and bypass soldering processes done to connect FPCB and substrates.



UFB for mobile phone



2.2" dual module

### I World Best OLED I

Current Samsung SDI's OLED is environment-friendlier than existing ones in terms of thickness, weight, and no-use of environmentally harmful materials. OLED doesn't need backlight and color filter used for LCD, making it environment-friendlier than LCD. PMOLED of Samsung SDI achieved remarkable growth in 2004. Its coverage expanded from external display for a mobile phone to main display. It rose to the top in terms of market share. On top of these economic successes, efforts were made for environment-friendly design. First of all the panel thickness was reduced by 20%(1.865T→1.452T). Power consumption got lowered by 27% thanks to application of new organic light-emitting materials. With development of new common layer materials, operating voltage was reduced by 30% from 20V to 14V. Development of these new materials led to 33% longer life time. Following success of PMOLED, Samsung SDI is going to commercialize AMOLED soon. Its efforts for environment-friendliness continue.



PMOLED for main display





17" FST VE- III DY without hot melt

### I Less Resource Usage for DY (Deflection Yoke) I

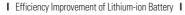
Hot melt in DY fixes molded plastics, cores and coils tightly. In that sense hot melt is a chemical working like an industrial adhesive. Hot melt is made from various kind of plastics and rubber. When it is sprayed, obnoxious smell comes out. When DY has to be disposed, parts are not easily separated because of hot melt. Samsung SDI got rid of hot melt from 17" FST VE-III DY and 19" DFT DY. The idea was to change the arrangement of molded plastics and core so that parts could remain stable without hot melt. As for 17" DY, operation for Ferrite Core, a magnetic part, was changed from grinding to no-grinding, which lowered the weight by 20%. In 19" DY, the weight of copper wires was reduced 30%, and lengths and thickness of a magnetic part were also down, resulting in 10% weight loss, compared to existing ones.

### | Power Saving CRT |

CRT's power consumption depends on DY's deflection sensitivity efficiency. Deflection sensitivity is energy required to move an electron emitted from an electronic gun to the outmost edge of active area of a CRT display using DY. Usually CRT neck aperture is reduced, or DY design change is conducted to improve the deflection sensitivity efficiency. Samsung SDI improved 25% in sensitivity from 41mJ to 29mJ in 32" RAC DY in 2004. RAC DY is a rectangular DY, different from existing cylinder DY. This technology has been applied to 32" S/tint, 32" fine, 34" AF, contributing to power saving.

### I Lithium-Ion Battery for Higher Efficiency I

Lithium-ion battery is an environment-friendly rechargeable battery. Samsung SDI has been seeking for higher efficiency of the battery since it began mass production of Lithium-ion battery. Cylindrical battery saw 30% improvement in capacity from the level in 2001 and prismatic battery saw 30% increase in energy density per volume. In addition to efficiency increase, a harmful substance of NMP(N-Methyl Pyrolidione) was eliminated, and a water-type binder was in use. Raw material usage also reduced, and a new battery using a substitute for cobalt, a scarce material, was developed recently. Samsung SDI continues design for environment efforts.



Measured capacity of cylindrical battery (mAh)
 Volume density of prismatic battery (Wh/L)



### **Cleaner Production**

Cleaner production is the primarily pursued environment-friendly effort in Samsung SDI. Samsung SDI strives to take as little as possible from the nature and emit minimum to the nature. Next comes Samsung SDI's efforts for that. (Data in this chapter are only from domestic sites)

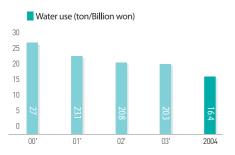
### I Efficient Resource Utilization I

Taking resource as little as possible from the nature is critical to the environment. To this end, you have to minimize resource utilization and try to use recycled raw materials. Samsung SDI has been trying continuously to use fewer raw materials for products.

### I Water Saving I

Water is source of a life. Without water, Samsung SDI can't produce products. In 2004 Samsung SDI consumed 10,057,000 tons in Korean sites. It was 19% decrease over the previous year, meaning 164 ton of water was used to earn 100 million won in sales. For more efficient use of water, Samsung SDI has been reusing water. About 200 ton/day of final waste water has been recycled in R&D center and 500 ton/day in the Mexico plant. Rain drops are also reused and heavy water in waste water treatment water is used in the Shenzhen plant and the Mexico plant. Samsung SDI practices water saving in various forms.

### I Water use I



### I Recycling Waste Water in the Mexico Plant I

Samsung SDI Mexico is located in water-shortage area. The plant decided to recycle waste water to solve water-shortage. They put waste water through multi-stepped treatment processes and make it available for production processes. Through this efforts, the plant saved 500 ton/day and even lowered costs needed for maintenance of boilers as recycled water was relatively warm, enjoying cost-cutting effect worth 300,000 USD a year.

### I Recycling Rain Drops in the Hungary Plant I

The Hungary plant installed rain drop collection lines across the whole site. At the end of the collection lines are rain drops storages. The plant reuses the collected water for watering plants and greens. It saves 36,000 ton/year of industrial water.

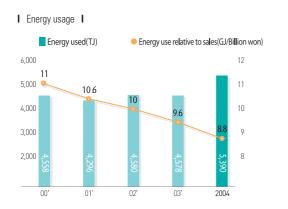






### I Reduction of Carbon Dioxide Emission I

Samsung SDI thinks global warming is directly linked to survival of human life. To help curb the phenomenon, Samsung SDI has been implementing an integrated management of energy usage through a company-wide e-Energy system and sharing successful improvement cases within the company. Plants at home and abroad signed voluntary agreements with local governments for energy-saving and reduction of greenhouse gas emission, and has set forth a lot of energy-saving activities. As a result, energy usage relevant to sales amount has been decreasing every year, although total energy usage increased in 2004 as production volume increased. Looking at carbon dioxide emission per won earned, 2004 saw 958 ton/million won in sales, down by 17% from year 2000. Successful energy saving practices in Korean sites are shared with overseas plants, which also implement their own activities fitting to their situations.



Carbon Dioxide Emission (relative to sales)
 I
 Indirect emission from electricity use (ton/million won)

Direct emission from fuel consumption (ton/million won)



### I Helped by River Spree in the Germany Plant I

Samsung SDI Germany let water of River Spree, whose temperature is kept at  $5^{\circ}C$  during winter, through a heat-exchanger at a rate of 600 ton/hr and lowered the temperature of cooling water supplied to its ventilation system, saving 25% of electricity for a refrigerator during winter time.

### I The Heat-Exchanger of the Shenzhen Plant I

Samsung SDI Shenzhen warmed pure water temperature used in processes from 25°C to 42°C after taking advantage of waste heat generated from the frit-sealing process, reducing 460 ton/year in carbon dioxide emission from its boilers. Similar heat-exchangers have been installed and used in all Samsung SDI plants.

### I Heat Exchange of Waste Heat from Cooling Water in the Tianjin Plant I

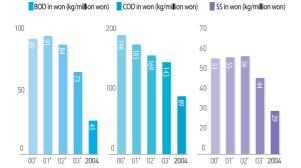
Samsung SDI Tianjin installed a heat-exchanger to make use of heat coming off from circulating cooling water in an air compressor. The temperature of input water,  $5.8^{\circ}$ C during winter time, was warmed up to around  $19^{\circ}$ C(up by  $13.2^{\circ}$ C) for a reverse-osmotic facility. With this operation, water collection improved 28%, and carbon dioxide emission was cut by about 970 ton/year.



### I Activities to Reduce Pollutants Emission I

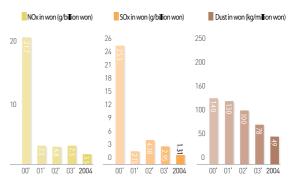
Reduction of a use and emission of pollutants is the focus of Samsung SDI's continuous improvement efforts. In 2004, the air pollution prevention facility was upgraded to reduce the use of volatile organic compounds, and the waste water treatment facility was also enhanced to reduce water pollutants. Through such continuous investment for environment, Samsung SDI worked hard to minimize pollutants emission. Samsung SDI works not only for pollutants treatment but for removal of source of pollutants. To this end, Samsung SDI is replacing hazardous materials in processes and tries activities to reduce chemicals used in processes on a continuous basis.

I Water pollutants emission (per won earned) I



The reason that water pollution data is different from data in the previous report is that unlike data in the previous report, input data for the Cheonan plant was amount flowed into the waste water treatment facility, this data is based on waste finally discharged to the nature.

Air pollutants emission (per won earned)



NOx and SOx DATA are not identical with data in the previous report, because when we collected data for 2003 report, the Busan plant took SOx for NOx and vice versa. The mistake was detected in data validation for this report, and corrected.

#### I Facility to Remove VOC in the Suwon Plant and the Germany Plant I

To get rid of VOC, the Suwon plant installed a recovery system(430m<sup>3</sup>/min, elimination efficiency of 99%) in 2002, and an regenerative thermal oxidizer(RTO, 130m<sup>3</sup>/min, elimination efficiency of 97%) and two biofilters(550m<sup>3</sup>/min, elimination efficiency of 90%) in 2004. The Germany plant also installed an RTO(275m<sup>3</sup>/min) to remove VOC generated from the rebinding process and to control the number of VOCs below the ppm level.



#### I Elimination of NMP from the Battery Manufacturing Process I

Lithium-ion battery processes require N-Methyl Pyrolidone, a harmful chemical to well mix battery materials. Samsung SDI developed and applied water replacing the solvent to processes. It led to cleaner working environment, prevented energy loss caused by operation of air-pollution prevention equipment, and led to replacement of artificial graphite (petroleum byproduct) with natural graphite as water serving as a solvent. In addition, the natural graphite laid foundation for a high-capacity battery production and reduced the chances of break-out of fire. With one aim of removing hazardous chemicals, Samsung SDI harvested five achievements.

### I Reduction of Wastes I

2004 saw 62,161 tons of wastes, 72.8% of which were recycled. Samsung SDI has exerted continuous efforts to reduce waste generation and recycle them. By 2005, Samsung SDI will increase recycling rate from current 72.8% to 90% through reuse and recycling of sludge in waste water and waste glasses as input materials.

### I Hazardous Chemicals Control I

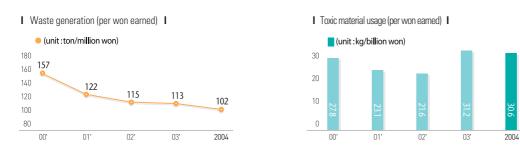
In 2004, Samsung SDI used 18,735 tons of toxic substance out of many hazardous chemicals declared by Korean law. Samsung SDI has been working hard to use less such chemicals in processes. Recycling and replacing Trichloroethylene led amount of toxic materials used to 6.810 ton in 2004 from 8,819 ton in 2002 in CRT and LCD processes, which was 22% decline. However due to PDP and rechargeable battery line addition in the Cheonan plant, which moved up use of hazardous material(12 times increase from 964 ton in 2002 to 11,647 ton), total amount of use of such material went up. Samsung SDI pledges to lower the amount continuously.

### I Use of Ozone Depleting Materials I

Samsung SDI doesn't use Class I materials on the Montreal Protocol in its manufacturing processes. As an exception, it is used as a cooling agent for some outdated refrigerators, a utility facility, in some of our overseas plants (the Malaysia plant and the Shenzhen plant). Samsung SDI is going to discontinue use of CFC with replacement of those facilities.

### I Environmental Costs I

Samsung SDI spent 6.3 billion won, in which investment cost is not included, for environmental management in Korean sites in 2004(if waste sell-off is combined, then 2.8 billion won in surplus would be recorded). For accurate calculation and management of environmental costs, Samsung SDI is in the middle of development of an environmental accounting system, which is going to be reported in detail in the next report.





All overseas plants exercise separate waste collection very actively. Everyone is aware that separate waste collection is the simplest and surest way for all employees to join for the earth environment preservation. This picture is a container for separate collection in the Malaysia plant.



### Green Communication

Green communication with stakeholders is crucial for a company to seek for environmental sustainability. Samsung SDI thinks it as an important key to measure how open a company is to the society where it belongs to.

Samsung SDI carries out green communication in various forms. What is most important to Samsung SDI is activities done jointly with local communities where Samsung SDI does business. For example, the One mountain, One river, and One company campaign is regularly conducted. Samsung SDI invites schools in the neighborhood to its environmental facilities for education purpose and carries out joint environmental preservation activities. The company also actively participates in environmental protection programs led by local government organizations.

On top of this, Samsung SDI keeps monitoring on environments around the company and runs environmental audit programs with academic organizations on areas whose environment might be affected by our businesses. These are the Samsung SDI's efforts directed to environment preservation.

These activities are done not solely by Samsung SDI. The company works with local government organizations, providing environmental technology assistance and environmental education to local small and medium businesses. Samsung SDI tries to practice environmental protection together with members of local communities.

Green communication is not confined to Korean sites. Overseas plants are also carrying out such activities with local government organizations and local communities. Activities are not active, compared to Korean sites, but communication activities suitable for local communities that our plants are in operation will be played out continuously.

#### I Saving Shingal Reservoir by the R&D Center I

The Corporate R&D Center has been working on pollutants monitoring and environmental auditing for Shingal Reservoir with the Environment Research Center of Kyunghee University since 2004. We expect the work may confirm level of pollution of the reservoir and lead us to more specific and appropriate improvement efforts. Along the study, the R&D Center conducts environment cleaning activities around the reservoir regularly. This is a parallel implementation of study and action for cleaner environment.

### I Saving Taehwa River by the Busan Plant I

The Busan plant is neighboring with Sangchun river, a branch river of Taehwa river. Discharged water from the plant is destined to flow into the Sangchun, whose water is used for agriculture in the neighborhood. In keeping face with Eco-Police Initiative of Ulsan city, where the plant is located, the plant has been trying to minimize its environmental footprint through strict environmental management, and control water quality of Sangchun. It planted and grew eco-plants with cleaning effect and undertook regular cleaning activities. All of these are directed toward building an eco-friendly city.







### I Samsung Park by the Malaysia Plant I

Lenggeng Forest, 18km away from Samsung SDI Malaysia, used to be a resting place for residents. But due to loose management resulted from lack of budget and careless behaviors of people, the place were getting devastated. The Malaysia plant set a plan to return the place to its original look in May 1998. Volunteer workers with skills repaired wooden bridges, benches, gazebos, and waste bins, while general volunteers worked on environment cleaning activities. Up to now, monthly environmental activities go on. Thanks to these collected efforts, the park recovered its liveliness. Joined by the Forestry Department, the state government agency in charge, Malaysian Nature Society, an environment protection agency, and local residents, Samsung's environment protection activity was expanded to be a state government event. The state government named this state park of Lenggeng Forest as Samsung Park. The Governor attended the naming ceremony and said, "Samsung's activity will set a good example for other companies in Malaysia." As he testified, the Malaysia plant's environment preservation activity affected environmental awareness for the better and policies, and is still going on as an important event.

#### I Cleaning Playas de Tijuana by the Mexico Plant I

The Mexico plant conducts regular environment cleaning activity for beach area in Tijuana. About 90 employees participated in repairing broken stairs running 1.6 km in the beach, painting establishments and facilities, and cleaning around. Also the Mexico plant joined the ECO BAJA event sponsored by the Mexico plant. The Mexico plant has been active in conducting environment communication.



#### I Forest Hongsulin and the Shenzhen Plant I

The Shenzhen plant in China actively participated in global social contribution activities of Samsung and rolled out various activities in 2004, according to its own environment-friendly activity policy for local community. In May, it attended in the Futiangu Environment Protection Initiative Announcement of the local government on behalf of companies, announcing green management and environment-friendly policy. And on the World Environment Day in June, the plant attended the eco-system protection event for Forest Hongsulin, which was designated as an environment protection area of Shenzhen. Samsung SDI designated the "SDI Green Area" in Hongsulin and planted trees there. Along with continuous environmental protection activities for Hongsulin, the company has been cleaning the sand bank of beachpark Dameisha and working with the Social Contributor's Association to remove Mikania Micran tha, an alien plant spices threatening the eco-system of native plants.



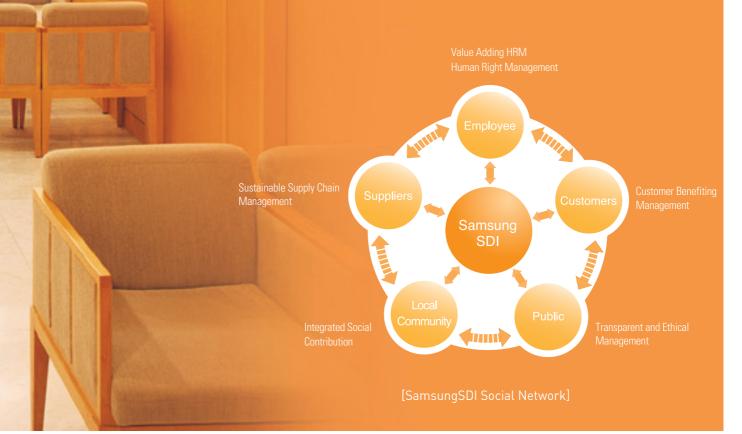
### I Legal Compliance I

Samsung SDI always observes laws and regulations. In Korean sites, we had not been told of any environmental accidents and public complaints over the past five years because of stricter environmental management. For overseas plants, some plants were reported to have violated environmental safety regulations by a little margin during the reporting period(2003~2004). But those practices have already been corrected and are in compliance now with relevant laws and regulations. Samsung SDI maintains stricter standards by itself than the legally-required level. Through more efforts for skill-up for facility operators, and enhancement and maintenance of facilities, Samsung SDI will ensure no violation of local regulations across the whole establishments around the world.



# Fulfill Responsibility as a Global Corporate Citizen through Win-Win Partnership

Samsung SDI has been working with six strategies for the social aspect of sustainability management, which were established in 2003 in an effort to fulfill our corporate social responsibility, one of triple bottom lines of sustainability management pillars. Following the strategy, we set forth key performance indicators for each part and try to achieve the agreed target. Various initiatives are up and running to integrate sustainability management into existing business processes. To systematically manage action plans we are going to put in place a project management and performance management systems in all sites both at home and abroad by 2005.



### Contributing to Global Social Development



International School in Manaus, Brazil

### I Samsung SDI as a Global Corporate Citizen I

The key value of sustainability management practiced in Samsung SDI, a global leading company with 13 production bases in seven countries around the world, lies in fulfillment of social responsibility based on global corporate citizenship. Respecting cultural and social demand of countries where we operate, we do various social activities to contribute to and grow together with local communities.

### International School in Manaus, Brazil

Sustainable development of a company is in an inseparable relation with development of the local community. The Brazil plant, established in 1998, has proactively been responding to Central and Latin American markets with mid-size color CRT, where demand for color TV sets and monitors is growing rapidly. Operation of the plant resulted in 1,600 jobs. Its various social contribution activities have positioned the plant as one of the most respected companies in the local community.

Samsung SDI opened an international school in Manaus, where its Brazil plant is located in, providing education service to the community. Jointly with CiEC-Tech school with 50 years of history, Samsung SDI has funded about 420 million won to run the school.

Giving opportunities for quality education not only to children of local people but also to the local residents themselves, Samsung SDI is contributing to local community development. The school offers "Korean" and "Taekwondo" classes, in particular, which are highly welcomed by the Korean community.

### **Snapshots of Social Contribution Activities**

### 1978~80

Rural community outreach for harvesting Photo taken when "Meari Bunimcho," an small inhouse group, visited the elderly in Gacheon.



### 1996

Employees working with parentless students in a kitchen garden.



### 1000

Emplyees repairing homes of the elderly living in solitude and parentless adolescents.



### 2000

"Wives' Club" of Cheonan plant visiting "Lighthouse," a welfare facility.



### Tianjin Plant in China, in the Vanguard of 'Healthy-Eye' Campaign

Samsung SDI has funded treatment of ophthalmic diseases such as a cataract for the visually challenged. Since 1995, around 2,000 patients have been benefited in Korea. Now we are expanding the coverage of the initiative to China, where some of overseas sites are in operation. Marking the National Healthy Eye Day on June 6, 2004, the Tianjin plant sealed on for free eyesight recovery operations support agreement with the Disabled People Association in Tianjin with 30 of its members' presence.

Under the agreement, Samsung SDI Tianjin will donate 100,000 Yuan in year starting from 2004. So far about 50 underprivileged patients including the poor, the solitary-living elderly, and parentless adolescents have already been benefited from this free eye-sight recovery operation.

"I could not see at all because of a serious cataract. But now, I can see and feel reborn."

- The first beneficiary of free eye-sight recovery operation led by the Tianjin plant, Wan Ing(age 43)



Eyesight recovery operation support announcement



Visiting a beneficiary

### 2001

The newly hired of SDI Tianjin visiting a school for the visually challenged in Tianjin.



### 2002

A community service team of Busan plant receiving an award in the "United Hearts Convention".



### 2003

Employees signing on for opening accounts of "Light of Love" Fund.

CEO Kim Soon Taek donating "Mobile Eye Clinic" for free eyesight recovery operations.



### Innovation Activities to Build a Trusted Company-Labor Relationship





Training for craftsmanship



Efforts for prestigious products

### I Busan Plant, 'Myeong-Mun-Jong-Ga(the Distinguished and Honored Family)' - 'Myeong-Jang(Craftsmanship)', 'Myeong-Pum(Prestigious Products)', 'Myeong-Ye(Reputation)' I

For sustainable growth and development of a company, enhancement of internal capability for innovation, enabling to proactively respond to changing internal and external business environments, is essential. That is possible only when you restructure existing business systems and processes to meet upcoming business environment changes. The very driving force behind continuous growth over the past 34 years has been innovation activities led by each plant.

Since its foundation in 1970, the Busan plant has risen to the best plant of Samsung SDI, thanks to its innovation activities such as the 'Myeong-Mun-Jong-Ga(the Distinguished and Honored Family)' campaign. The campaign was designed to maximize total productivity through social and economic productivity improvement to take off as the best of the best.

The three strategies for the campaign were to secure 'Myeong-Jang(Craftsmanship)', 'Myeong-Pum(Prestigious Products)', and 'Myeong-Ye(Reputation)'. Craftsmanship is to be achieved by most competent talents, Prestigious Products by development and production of top-quality products at the lowest cost, and Reputation by taking pride in working in the Busan plant.

For successful strategy implementation, all members including the plant manager, union members, and senior managers helped to create trusted and harmonized management culture and carried out activities to make workplace a fun place to work.

- 'Myeong-Jang' strategy is to go back to the basics, establish mindset of practicing standards, and develop true leadership seeking changes proactively through continuous learning.
- 'Myeong-Pum' strategy is to build a defect/machine break-down/accident-zero plant as well as to secure competitiveness with the best quality and the lowest cost by merging with the 6 Sigma concept.
- 'Myeong-Ye' strategy is to promote internal trust among employees and local community by encouraging volunteerism and forging sister-hood based projects.

### Contributing to Global Social Development



Tape-cutting ceremony of supplier support center

### I Sustainable Partnership I

What would small and medium-sized suppliers want the most from a large company, their customer? Samsung SDI conducted a survey on suppliers in 2003 to get answers for the question. What suppliers wanted the most from their customer was not the price increase, resolution of quality problems, or reasonable request for delivery. It was 'continuous, mutually-cooperative partnership', which might be an encapsulation of all mentioned above.

Then what is 'continuous, mutually-cooperative partnership'?

Samsung SDI is trying to find the answer in the word 'Win-Win'. When each party collects strength and lives with each other, and when each party achieves better results in each field, a continuous partnership can be established.



**OPEN** seminar



On-site training



Suppliers' product fair



Win-Win competition of suppliers

#### I Win-Win Partnership with Suppliers I

For win-win management, Samsung SDI assessed the overall supplier management strategies in 2003, and formed a task force team to plan supplier operation strategy in 2004, establishing a supporting strategy to build a win-win partnership with suppliers and to develop a mid and long-term development plan of suppliers.

Following that, Samsung SDI came up with the policy of "Building Top-tier Global Company with Suppliers... and the 6-point action plan for win-win management. On June 16, 2004, Supplier Support Center was opened and has provided assistance activities in various forms ever since. A lot of activities have been conducted; running a channel to listen voice of suppliers and give advice to them, operating a center, where suppliers can report any unfair and dishonest deals, operating and supporting SSP(Samsung SDI Partner), studying items of supplier's interest, holding seminars, providing information on government projects and government assistance, training supplier's employees, providing guidance, and addressing complaints. In addition, it supports building an infrastructure for establishment of environmental management system and calibration of measurement systems. It also provides guidance for quality upgrade of suppliers covering single-PPM certification system, institutional innovation and 6 Sigma consulting, offering various training and education for TPM and TPS, and assisting them financially for their business expansion and facility investment.

What's more, Samsung SDI is running the 'SDI Family' system, whereby the Win-Win PLAZA, a bulletin published for the closer relationship with suppliers. Operation of web-sites for our SSPs, important suppliers, and celebration of anniversaries of CEOs representing SSP Association and foundation days of suppliers are also a part of the system. Samsung SDI has been delivering not only large-scale financial support and assistance for system building, but the family system to embrace them as our family members.

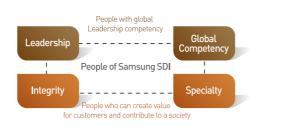
Samsung SDI will shape a better relation with suppliers based on mutual respect and trust for the sake of continuous partnership and move forward to build the best of the best campanies with them.

## People-Centric Management, Employees

Competitiveness of a company is determined by the capability of its human resource. Human resource is the very end for all management activities and ideas, presenting a differentiating factor that cannot be copied. For that reason, human resource is a key factor indicating the level of a company's sustainable growth and development. The root of selection, development, and retention of talents in Samsung SDI is in its people-oriented management philosophy of Samsung. All employees are encouraged to pursue continuous self-development, for which Samsung SDI puts in place various training courses and a supportive welfare system. Samsung SDI is seeking for improvement of quality of living of employees and sustainable development of the company at the same time.

### I People of Samsung SDI I

People of Samsung SDI understand the mission given to a corporate citizen, respect others' dignity and individuality, exercise creativity and capability to the fullest, explore a boundless future, and contribute to the development of human beings.



I People of Samsung SDI	
• Leadership	<ul> <li>People with a clear goal of leading changes in 21C, being equipped with commitment and enthusiasm to realize the goal, carving out one's own life with creativity and aggressiveness</li> <li>People with distinctive talents and their own style, flexible thinking, great imagination, and challenge and frontier sprits</li> </ul>
Global Competency	<ul> <li>People thinking and behaving as global citizens with international mindset and ability to embrace diversity</li> <li>People with language proficiency, ability to adjust to different culture, admit culture difference and respect global standards.</li> </ul>
Specialty	<ul> <li>People with expertise and ability to respond to digital revolution</li> <li>People expanding their horizon with professionalism and own expertise, and with power to respond to changes</li> </ul>
Integrity	<ul> <li>People with humanity and morality, cooperative with others, fulfilling one's role and responsibility as a member of society</li> <li>People who respect rules and principles, who are positive, honest, and responsible and who can be a good team worker with healthy values and upright company view</li> </ul>

## Win-Win Partnership 63



#### I Winning Talents I

Various programs are in place to win, develop, and retain talents. To secure excellent people who are able to create values and practice them in the company, Samsung SDI convenes the 21st Century People Committee on a quarterly basis with CEO as the chairman and division heads and relevant executives as the members.

Recruitment of Samsung SDI for a position is an open process following the recruitment regulation. And rigorous evaluation criteria are applied, whose credibility and feasibility have already been verified. Recruitment opportunities are equally given to anyone regardless of their religion, race, nationality and gender.

### I Development of People I

Category(unit) 2000

Investment

(billion won) Per capita amount (Thousand won)

Life-long-learning is a key factor in adjusting to changing business environment and in growing to be a top-tier global company. Samsung SDI offers various assistance programs to motivate its people to learn and build up study network. For the sake of development of creative people, Samsung SDI invests 0.1% of its sales, offering quality training with various curriculums and programs.

I Per capita training hours and investment in training I

4.94

608

I Cyber course operation I

2001 2002 2003 2004	2000	2001	2002	2003	2004
5.21 5.92 6.69 <b>11.0 No. of cyber cou</b>	rse .	380	366	486	579
685 685 860 1,061 No. of students	2,353	12,854	13,299	14,253	16,157

### I Development of Brains and Next-Generation Leaders I

Samsung SDI offers a range of programs to develop key global minds and next-generation leaders. To nurture future executive officers and technology officers, Samsung SDI runs MBA course linking with universities at home and abroad. Among many, the Regional Expert Program, in particular, was designed to develop a pool of executives with global leadership and overseas expatriates. Those on the Program are trained for six to twelve months in overseas sites, learning essential capability for global business management. Those who completed the Program have been playing pivotal roles in many business areas and different regions. Targeting middle managers, Samsung SDI operates the Next-Generation Global Leader Course, doing its best to groom future CEO's of Samsung SDI.

### I Evaluation of Employees I

Samsung SDI revised its performance evaluation system in an effort to proactively respond to changing business environment in 2001 and has refined it since. We defined the HR system by job group reflecting nature of our business to achieve the vision for the 21C and develop experts for specific strategic jobs systematically. The ranks and positions were overhauled to accommodate the team based organization operation, the annual salary scheme and role changes in jobs. Evaluation was made based on individual's performance and competency. The existing MBO(Management-By-Objective) system was replaced with BSC(Balanced Scorecard) system. For performance evaluation, all employees from CEO to staff set individual goals in line with company's management strategy, and their achievements have been evaluated. For competency evaluation, competency requirements were defined by position and job to help individual competency development, and evaluation was made for criteria already defined.

### I Overseas Expert Development Program I

Korea Expert Course(KEC) is available in 10 overseas plants of Samsung SDI, a global company. The KEC program, run in Korea, offers Basic Korean and Advanced Korean as well as OJT. Trainees would be able to share core values of Samsung SDI and understand cultural differences found among local plants and trainees through experience of Korean culture and practical on-site training.

### I Education for Families of Employees I

Samsung SDI's programs, which encapsulate each site's and local community's cultural aspects, benefit not only SDI workers but their families. Programs for primary schoolers include Children English, Internet Class teaching basic knowledge of informatization, and how to navigate the web, and Group Tour for visiting historic and cultural scenes. For families, they are invited to plants and classes that can enrich life, which is designed to deepen understanding of the company and to express gratitude their support and encouragement for the company.

### I Sharing Business Results I

Samsung SDI, as an employer, runs a series of incentive schemes to share business results with all employees. According to Profit Sharing, effective from 2000, payment pool is created with 15% of company EVA(Economic Value Added). Differing amount of payment is made to business teams, decided by their performance level of a year, and a person can be compensated up to 50% of one's annual salary. As a separate incentive payment for productivity improvement, the company pays up to 300% of one's base salary twice a year. On top of this, there is Stock Option offered as a way to compensate for remarkable performance.

#### I Trusted and Cooperative Labor and Management Relation I

A mutually-trusted, cooperative, and productive industrial relation is critical in working out sustainable development and growth. Samsung SDI exercise a variety of activities to build a mutually-cooperative culture between labor and management through our labor association composed of representatives of employees. In monthly management briefing sessions, latest development in terms of management is reported to all employees. In addition, labor-management communication involving the labor association members, Ombudsman jointly run by both parties, labor-management seminars, and workshops, are held to promote multi-angular dialogues and cooperation, seeking for sustainable growth and development of Samsung SDI.

### I The Sharing-Wing Bird Dialogue in the Suwon Plant I

Open and candid dialogue would be the best way to understand others and build trust. In Suwon plant, various communication sessions have been opened, practicing harmonious relation between labor and management. The case in point is the Sharing-Wing Bird Talks. Like the legendary birds with one eye and one wing;only by sharing wings can they fly, labor and management meet and work together in the talks as one body to achieve business goals. The talks is led by the head of the plant and the head of the labor association, and attended by 30-40 people(all employees present in rotation) on Wednesdays. They exchange ideas freely in the gathering and put down their recommendations on Phytoncide post cards and the plant head and the association head make spontaneous answers, building trust with each other.



### I Improvement of Quality of Living of Employees I

Samsung SDI believes that healthy life of an employee leads to a happy family and a healthy member of a society, contributing to development of the society. To see the realization of such belief, Samsung SDI offers various welfare packages.

### **Working Hours and Compensation**

Samsung SDI plants in Korea, following the revised labor act on July 1, 2004, implemented changes accordingly in such as weekly working hours(40hrs), yearly/monthly leave, and menstrual leave. Overtime payment is made at legally required rate of payment in effect when employees worked for over 8 hours. And work on non-working days, for example, public holidays and Sundays, is also paid properly according to the related law. For overseas plants, the labor law of the host country is applied based on the ILO labor standards.

### Welfare System

Samsung SDI institutionalizes a welfare system beyond legal requirements to accommodate changing social and personal needs. For domestic employees, Samsung SDI undertook national pension insurance, health insurance, employment insurance and industrial accident insurance as required by law. On top of this, personal pension scheme assistance, medical expense support, and fitness facilities are provided.

Category	Description
Personal pension	Shares a certain portion of personal pension contribution based on one's annual salary to help them lead a stable retirement.
Medical expense	For covered items by the health insurance, an employee shall be fully compensated and his or her spouse shall be compensated for amounts over 10,000 won
	per receipt. For uncovered items, the company supports costs for MRI, CT, ultra-sonic care, meals, and care by designated doctors.
Fitness facility Group	Supports employees to use fitness clubs for stress-release and work-out.
insurance	compensated for amounts over 10,000 won per receipt. For uncovered items, the company supports costs for MRI, CT, ultra-sonic care, meals, and care by
	designated doctors.
Family affair support	Provides employees on the occasions of congratulations and condolences with wreath and expense, special leaves, and other assistance.
Mortgage	Supports for those who do not own a house with inexpensive long-term loans
Financial support for children education	Support employee's pre-schoolers, students, and disabled children with financial grants
Recreation	Allow refresh leaves for all employees, and make available recreational facilities in tourist attractions.

### I Samsung SDI's Voluntary Welfare System I

### I Human Rights Protection Policy for Employees I

Observing international labor standards stipulated by the International Labor Organization in all operations around the world, Samsung SDI complies with human rights-related regulations, respecting cultural differences of different sites, areas, and countries as well as individual human right of all employees.

### Anti-Discrimination

Samsung SDI makes clear in its ethical regulation and HR management policy that no individuals will be discriminated against their academic credentials, regional background, gender, religion, and race, in recruitment, placement, promotion, training, retirement, and other treatment.

### **Forced/Child Labor**

In compliance with labor laws of the countries where business is in operation, forced labor is totally banned in any of Samsung SDI's business sites. Following laws enforced in countries where business is in operation, outright ban is placed on child labor.

### **More Opportunities Given to Female Workforce**

Samsung SDI fills up to 30% of recruitment pool with female college graduates to maximize utilization of female resources and accommodate individual desire for social participation through expanded working opportunities for females. Intending to develop female operators, we run 'WorkmanShip Training Course'. As a way to motivate female worker's will to work, they can claim monthly menstrual leave and 90-day maternity leave and use child care assistance centers. The online ombudsmen channel helps resolve their anxieties and difficulties as female workers.

I The First Female Executive in 35 Years I



In 35 years since foundation of Samsung SDI, the first female executive was appointed. On 12th Samsung SDI announced that Ms. Kim You-mee, a senior manager of rechargeable battery division, was promoted to vice-president candidate in recognition of her outstanding contributions to the business. Based on 15 years of battery development experience, she has led product development efforts. Given her strong drive and enthusiasm, she was called, "A woman married to a battery", said the company. Samsung SDI said that she succeeded in new model development and new customer development. Not only that, she had also made great contributions to sales increase of lithium-ion polymer battery from 1.7 million units in 2002 to 13 million units in 2003. After encountering battery in 1982, Kim joined Samsung SDI in 1996 and has committed to Lithium-Ion battery development ever since.

As a Chungnam National University graduate with a master degree in Chemistry, she has been recognized as the most competent member in the secondary battery division where 80-strong ph.Ds are working, and called as a "National treasure of secondary battery area" within the company.

With personal motto of "Don't do energy-consuming work", the new executive has not spent much time and energy in makeup and hair-do. In particular, she said she has never put on makeup. Instead, she concentrate more on work.

"Kim is widely respected as she is competent, charismatic, and kind", said a Samsung SDI official. "It is very significant that the first female executive is produced from the secondary battery division, one of three new businesses along with PDP and OLED businesses."

From Yonhap News, Jan. 13, 2005.

### I Health and Safety Policy I

Samsung SDI implements a lot of programs and support systems to promote health and safety of its employees. First of all, Samsung SDI has the CRO(Chief Risk Officer) structure in place. All domestic plants have been OHSAS 18001 certified and all 10 overseas plants will be certified as well by 2006. Samsung SDI runs a safety and health program as following(for domestic sites only).

### **Industrial Safety and Health Committee**

The Committee is represented by the same number of people each from the management level and the general employee level. 10 ~16 committee members make up the Committee of each plant. The Committee prepares prevention plan for industrial accidents, does investigation of causes of industrial accidents, incorporates the results into recurrence prevention plan, and keeps track of various statistical records.

### **Operation of Industrial Health Facilities**

Samsung SDI is equipped with a clinic that provides emergency medical care and other medical support for employees. For general health care, the Wellness Clinic Center and Physical Treatment Center are available for them.

### **Medical Check-Up**

Medical check-up in Samsung SDI can be categorized into three; basic check-up for all domestic employees, special check-up for those in special processes involving noise and organic solvents, and total check-up for married employees over 30 years old. Basic check-up is conducted annually for those working in manufacturing and biannually for office workers. Special check-up is conducted with a 6 months to 12 months cycle. For total check-up, workers between aged 30 - 40 receive biannually, and those over age 40 get it annually. Spouses of employees aged over 30 are also benefited from total medical check-up, which includes HIV/AIDS tests.

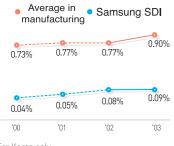
#### **Occupational Safety Training**

Trainings for prevention of occupational accidents have been provided for eight hours a year for the newly hired, 16 hours for those in supervisors, and two hours a month for manufacturing workers. In addition, 20 hour-cyber course for environmental safety has been developed and used by workers in five sites in Korea and China.

#### **Occupational Accident Rate**

Samsung SDI has various organizations, institutions, facilities and trainings in place to prevent occupational accidents, which have maintained accident rate much lower than other companies in Korea and in the same business. Samsung SDI is making continuous efforts to realize 'accident-free' workplace to ensure improvement of quality of employee's life and healthy working environment.

Occupational accident rate



For Korea only

### Sustainable Supply Chain, Suppliers

### I Win-Win Relations with Suppliers I

### **Purchase Policy**

- Samsung SDI selects vendors in a fair manner based on transparent criteria such as quality, price, and credibility of vendor's products and service.
- Suppliers should be treated as a counterpart on an equal footing in contracting. Both sides are obliged to work together for creation and maintenance of transparent deal-making and clean business environment.

Samsung SDI's growth as the top-tier global display company has been powered by win-win and cooperative relations with over 600 global suppliers.

To maintain the win-win relations with suppliers, Samsung SDI applies transparent and fair selection criteria across the board such as supplier's business management capability, financial soundness, quality and environmental awareness in selecting suppliers.

### I Supplier Development Strategy I

Aiming at continuous win-win relations with suppliers, Samsung SDI considers supplier's future value as well as presents value in evaluation, and comes up with customized ideas for improvement of a supplier. Suppliers are categorized into four groups. For example, Group A is supported as Samsung SDI Partner and SDI family and Group B can benefit from quality improvement coaching and training offering of Samsung SDI for their strategic development.

### I S-Partner System I

S-Partner system was devised to assess, guide, and help improve supplier's environmental and social aspects based on global standards such as ISO14001, ISO9000, and SA8000.

In 2004, Samsung SDI developed a group of environmental auditors and led environmental auditing for major suppliers at home and overseas. In order to assess social aspects from 2005, Samsung SDI is going to develop assessment tools by referencing to ILO and SA8000 and conduct both environmental and social auditing for suppliers.



Supplier management strategy



### I Purchase Efficiency Improvement I

Samsung SDI has been pushing forward continuous innovation activities for higher efficiency in the purchase process. At the moment, a project is underway to improve the s-Buy system. Through the system, we will enhance communication with suppliers, improve business processes, cut transaction costs, and further activate business relations with them.

#### I Quality Improvement Guide I

Together with the Small and Medium Business Administration and S-PPM Quality Innovation Center, Samsung SDI has guided quality improvement efforts of selected modeller suppliers since 1995. As a result of guiding 114 suppliers by 2004, 74 companies had been certified. And we also provide manufacturing innovation guidance to help strengthen manufacturing competitiveness of suppliers. Samsung SDI provides on-site consulting by our own experts to a supplying company for three months and practical supports fitting into their situation such as productivity improvement, enhancement of production responsiveness, and propagation of role models applicable to their business.

Category	2000	2001	2002	2003	2004
Coached suppliers	<b>s</b> 12	29	21	14	13
Certified suppliers	<b>s</b> 10	23	17	10	underway

### I Financial and Information Support I

As a way to develop suppliers and secure the best parts from them, we have financial support package to suppliers as a strategy to work out a world-class company with suppliers. The financial aid has various purposes such as technology development, quality improvement, productivity improvement, upgrade of facilities and equipment, and elimination of hazardous materials, and is given free-interest for five years.

Besides, Samsung SDI has the 'SDI Family Care' scheme in place, a strategy to recognize and treat suppliers as a family. Seminars, held twice a month, are opened to help suppliers collect more information, and a monthly bulletin is issued for information sharing.

I A thank-you note from SAES Getters Korea CEO Jin Se-kwang I

On a boring Saturday afternoon, my family received a surprising present(a flower basket, wine, and cake) and were moved. It turned a boring Saturday afternoon into a much impressive 17th wedding anniversary for four of us. We talked a lot, and were reminded of things that we just put behind and of love we were in as a family. I would like to say thank-you for those who prepared it, and appreciate the precious opportunity of getting to know you.

### Value Creation for Customer Satisfaction, Customers

### Supplier SAMSUNG SDI Local Community Public

### I Proactive Response to Customer Requirements I

Samsung SDI is well aware of its reason for existence. We do business to satisfy customers. Samsung SDI conducts various innovation activities to capture customer requirements proactively and meet their needs in this rapidly changing business environment. 6 Sigma initiative, practiced across the company, is the most representative activity for customer satisfaction enabling internal process improvement and quality improvement. The results of such activities now serve as the backbone of company growth for over the 30 years.

#### I Improvement of Green Quality of Products I

Product competitiveness is differentiated in a different way. In the past, products used to be differentiated by quality, price, and delivery. Now a new differentiating factor is added, which is the environment. This is because global environmental regulations get stricter covering end-to-end life cycle from production to disposal. Samsung SDI has been developing environment-friendly business processes internally and production technologies. For example, development of technology for products free of six hazardous materials regulated by RoHS is soon to be finished.

### I Listening to Voice of Customers I

Samsung SDI's efforts to satisfy customers are supported by VOC system, which was designed to catch even a very petty customer complaints and resolve them. The VOC system, built originally for quality problem revolving, now covers the whole area including purchase, sales, technology, and management. In 2004, 2,821 VOCs were received, 96.9% of which have been responded. Other improvement efforts include a customer satisfaction survey, Happy Call, by which we try to shift the focus of organizational culture to customer along with the 6 Sigma effort.

#### I Support for Customer's Productivity Improvement I

In an effort of expanding sales in the emerging Indian market, Samsung SDI undertook a productivity improvement project for six months from June to November in 2004 for its customer, HCL.

This project was carried out through on-site activities on three occasions and remote support through e-mail to improve the process and line of A-Line in the Pondicherry plant, which produces 15" monitors. As the result, production capacity of the customer's line was up by 45%, which led to sales increase of Samsung SDI. It also gave two of us the opportunity of ensuring the long-term business partnership.



### 72 Win-Win Partnership





Community service - street sweeping



Outing with the disabled

### For a Beautiful World with Light of Love, Community Service Activity

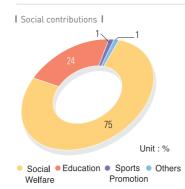
### I Community Service Activity I

Under the slogan, 'Good-hearted Neighbors, Society for All', Samsung SDI, as a global corporate citizen, is conducting a series of community service activities to prosper with community. Finding projects fitting into the nature of our businesses of building displays and energy products, Samsung SDI has been conducting the 'Three Community Service Strategies'; free eye-sight recovery operation, guide-dog project support, and Matching Grant - 'Light of Love' Fund. Catering to local communities where we operate, Samsung SDI provides human and financial assistance for community operations.

For ten years since 1995, free eyesight recovery operations presented a new bright world to 2,320 blind people in Korea. To expand the benefits to communities where overseas plants are in operation, Samsung SDI signed on the free eyesight recovery operation support agreement with a blind people welfare association in Tianjin, China. 100,000 Yuan a year will fund the operation for 50 patients, most of whom will be people on subsidy and parentless adolescents selected among the visually impaired in the city.

### I From 'Light' to 'Sound' I

Samsung SDI helps not only the visually impaired, but also the auditory impaired through the support for training guide dogs for them. Guide dogs for the deaf are selected from dogs protected in a deserted dog center and go through sound sensitivity tests. Those selected are put through 6-month intensive training. Samsung SDI has donated 1.5 billion won, almost twice as much as the previous year's 780 million won. In addition, Samsung SDI is going to increase the number of helper dogs for mental and physical treatment of the intellectually disabled to 10 so that more people can benefit from them.



#### I Matching Grant Fund I

From the year 2000, Samsung SDI began to develop voluntary donation culture among employees with Matching Grant. Matching Grant is a donation scheme, by which the company contributes an equal amount of money when employees make regular donation to non-profit organizations and institutions. Under the scheme, total 1.82 billion won was mobilized, 910 million won by employees and another 910 million won by the company, over the past five years. 1.38 billion won of it has been spent for social welfare facilities, the intellectually disabled, and the elderly living in solitude.

I Number of employees in Matching Grant (as of year end)

Category	2000	2001	2002	2003	2004
No.(persons)	1,400	1,837	2,566	6,700	7,053

#### I Community Outreach I

Through volunteerism, Samsung SDI builds a healthy corporate culture, and delivers hope to the disabled, encouragement to the isolated, and pride and loyalty to its employees.

Category	Participants	Participation rate	Annual participants
2001	5,049	67	16,588
2002	7,340	64	12,927
2003	5,713	70	28,112
2004	8,114	81	19,009

I Number of employees in community outreach (as of year end) I

#### I Community Partnership of SDI Hungary I

A Welfare Center for the Disabled under the direction of Pest County, located in the neighborhood of the Hungary plant, was founded in 1977. Now it is protecting and treating a total of 220 intellectually and physically challenged people. 25% of the disabled are orphans. Most of disabled children were deserted by their own parents. In the Hungary plant, a campaign of friend-making with the disabled in the center, first initiated by HR team members, is now participated by the Employee Welfare members, local managers, and staff. As their first activity, employees collected and delivered clothes and toys to the center. And the managing director of the plant and local employees went to the opening ceremony of a newly built welfare complex building. On the day, they donated TV sets, decorated rooms, and repaired the old facilities. Samsung SDI is going to strengthen partnership with local communities by expanding such volunteerism on a continuous basis.



### 74 Win-Win Partnership



# Trust Building by Openness and Transparency, Transparent and Ethical Management

#### I Value Creation for Shareholders I

Samsung SDI directs toward a 'Clean Company'. To secure accounting transparency for shareholders, Samsung SDI has brought in independent directors to the BOD, organized the Audit Committee, and applied US GAAP. And the company has made public announcements voluntarily on quarterly management status. In 2004, 129 public announcements were made. On top of it, IR activities were conducted very actively at home and abroad on 434 occasions including management briefing sessions and international road shows. To return value to shareholders, we paid cash dividends at 60% of par value(including interim dividend payout) in 2004. For the first time in company history, Samsung SDI undertook retirement of shares(2% of common stocks, 1.8% of preferred stocks), reducing volume of stocks in circulation in an effort to stabilize mid-and-long term share price.

Thanks to these efforts, Samsung SDI received the Asia Best IR CEO award from Institutional Investor Research Group based in U.K in 2004 and selected the most respected company by IBM Consulting and Dong-a ilbo in 2004.

#### I Strengthening Corporate Ethics Education I

Under the banner of "We will devote our human resources and technology to create superior products and services, thereby contributing to a better global society". Samsung SDI enacted value sets and code of conduct of employees for fair and transparent company management, and strengthened education and an internal audit system. For new entrants and those promoted, the audit team leads corporate ethics education. In monthly management briefing sessions led by heads of plants, special education is provided to avoid and prevent influence peddling for job solicitation, monetary or non-monetary deals with suppliers, and security violation.

Cyber audit team of Samsung SDI receives any reports on irregularities of any stakeholders including employees, employees of suppliers, customers, and shareholders, and ideas and suggestions of how to correct or improve practices and policies running against ethical management principles.

The received reports are subject to investigation to determine the fact in the audit team, the leading department for ethical management. Confientiality is ensured so that a reporter(or a suggester) may feel free to report or suggest anything without fear of being exposed. If a case reported by unidentified person is very clear and well supported by evidence, the case is subject to investigation.

## Win-Win Partnership 75

# Communication with Stakeholders

#### I More Active Communication with Stakeholders I

Samsung SDI wishes to build trust with stakeholders through open and transparent dialogue. We believe that conflict between the two parties due to differing perspectives and opinions would be a learning process leading to a new and higher level of trust.

In 2003, Samsung SDI was the first company to publish a sustainability report based on GRI Guidelines. A sustainability report is a means to open a company vision, management strategy as well as economic, social and environmental performance in a transparent and honest manner by referencing to indicators presented in the GRI Guidelines. Therefore, the report itself is a critical communication strategy in earning trust from stakeholders.

Samsung SDI expanded the GRI indicator coverage further to better respond to calls that stakeholders have made after 2003 Samsung SDI sustainability report was published. At the same time Samsung SDI included information regarding overseas plants in this report and combined a sustainability report and annual report, as an expansion of information coverage.

Samsung SDI opened various communication channels to listen to voices of stakeholders sincerely. We have the VOC system to listen to voices of customers, and conduct a survey on employee satisfaction, and another survey on suppliers to know their level of satisfaction with business relations with us, and collect opinions from NGOs and government organizations. We make use of this information for sustainable improvement undertakings.



Contents	page	GRI Content Index
Recognition	77	3.14, SO4, PR6
Environmental Data by Site	78	EN6, EN20, EN21, EN23, EN24
Ethics Policy	80	3.7, SO3
Terminology	82	
Financial Report	85	
Independent Verification Report	89	2.20, 2.21
Voice of Audience	92	2.10, 2.22

# Recognition

Silver Tower Order of Industrial Service Merit on the Day of Taxpayers granted by National Tax Service	Mar. 2000
Excellent Research Lab Award given by prime minister granted by the Ministry of Science and Technology	Mar. 2000
Best Listed Company of 1999 in disclosure granted by Korea Stock Exchange	May 2000
Solar cell's being selected into ten new technologies by Korean Agency for Technology and Standards	Oct . 2000
Korea Technology Award given by President granted by the MOCIE	Nov. 2000
National Quality Award, the Presidential award, granted by Korea Standards Association	Dec. 2000
New Industrial Culture Award given by President granted by the Ministry of Labor	Dec. 2000
Best Company Award for Shareholder-Centered Management granted by Korea Economic Daily and	Aug. 2001
the Ministry of Finance and Economy	
2001 National Quality Award, a Bronze Tower Order of Industrial Service Merit, granted by KSA	Nov. 2001
Best Award for Knowledge Management in Organization and Focus fields, granted by Maeil Business Newspaper	Nov. 2001
Best Award for E-biz given by President granted by E-Commerce Promotion Agency	Nov. 2001
Being selected as a leading part and material exporting company with the highest score hosted by the MOCIE	Nov. 2001
Presidential Award in Single PPM quality Innovation Competition granted by the Small and Medium	Apr. 2002
Business Administration and Korean Chamber of Commerce and Industry	
Best Award for Environmental Management given by the Minister of Environment granted by the Ministry of Environment and Maeil Business Newspaper	Jun. 2002
Best Award for Transparent Accounting granted by Korea Accounting Academy	Jun. 2002
Korean Technology Award(for 2.2"CMOS OLED) given by President granted by the MOCIE and Korea Industrial Technology Foundation	Oct. 2002
Safety Management Award given by the Minister of Labor granted by the Ministry of Labor and Maeil Business Newspaper	Nov. 2002
Digital Knowledge Management Award given by the Minister of Information and Communications granted by the MOIC, the Federation of Korean	Dec. 2002
Industries and the IT Research and Consulting	
Best Economic Justice Award granted by the Citizens' Coalition for Economic Justice	Feb. 2003
Industrial Technology Innovation Award granted by the MOCIE, the Seoul Economic Daily and the Korea Science and Engineering Foundation	Jun. 2003
The Best Award for Korean Economic Daily-Levering's Great Place To Work granted by Korean	Oct. 2003
The Best Global CEO Award granted by Korean Academy of International Business and Maeil Business Newspaper	Nov. 2003
Most Respected Company, Led by Dong-a ilbo - IBM BCS	Jun. 2004
25 People, The Stars of Asia hosted by BusinessWeek	Jul. 2004
Best Environment-Friendly Management Award awarded by Korea Economic Daily	Jul. 2004
Best Award for Professional Business Manager led by Korea Professional Business Manager Society	Dec. 2004
Best Award for Korea New Growth Management Award hosted by Maeil Business Newspaper	Dec. 2004
Trusted Company hosted by CEO Association	Dec. 2004

# Environmental Data by SiteEnvironmental Data by Site

I Area I



## I Input I

			Suwon			Cheonan	
				2004	2002		2004
	Electricity(MWh/year)	122,875	94,924	95,417	127,530	217,200	388,344
Energy	LNG(10 <sup>3</sup> m <sup>3</sup> /year)	6,690	6,783	7,273	6,505	8,658	11,497
	Diesel Oil(kL/year)	4.52	3.7	0	1.62	0.24	0.29
	Total (10³ ton/year)	1,309	1,147	1,101	839	1,557	2,636
Water	Underground(10 <sup>3</sup> ton/year)	0	0	0	81	118	70
Sourc	e of Water Supply	Paldang Dam		Daecheong Dam, Underground Water			
			Busan			R&D Center	
	Electricity(MWh/year)	478,056	421,914	440,884	24,416	30,638	34,293
Energy	LNG(10 <sup>3</sup> m <sup>3</sup> /year)	27,984	24,433	23,704	1,316	1,534	1,584
	Diesel Oil(kL/year)	50.73	120.00	36.92	0.80	0.20	0
	Total (10³ ton/year)	7,201	6,694	5,990	160	310	331
Water	• Underground(10³ton/year)	• 0	0	0	0	0	0
Sourc	e of Water Supply		Daeam Dam			Paldang Dam	

### I Contact I

Name	Site	E-mail	Tel	Fax		
Sung Dae-gye	Suwon	dg.sung@samsung.com	82-31-210-7231	82-31-210-7261		
Bae Jong-seok	Cheonan	jongseok.bae@samsung.com	82-41-560-3273	82-41-560-3279		
Kim Hyun-ok	Busan	kimhyunok@samsung.com	82-55-380-1212	82-55-380-1115		
Ha Soo-chang	R&D Center	soochang.ha@samsung.com	82-31-288-4154	82-31-288-4157		

## I Output I

			Suwon			Cheonan	
		2002		2004	2002		2004
	CO <sub>2</sub> (ton/year)	77,980	64,719	66,304	79,709	129,038	219,674
Air	NOx (kg /year)	1,330	738	257	1,464	2,509	1,668
All	SOx (kg /year)	179	161	302	0	0	0
	Dust (kg /year)	16,490	9,870	8,440	1,497	543	823
Water	Sewage (ton/year)	163,000	134,905	120,030	83,950	230,033	259,697
water	Waste water (ton/year)	917,000	709,682	607,330	434,450	655,185	1,362,679
	Recycling(ton/year)	4,009	3,049	3,224	1,076	4,671	10,019
Waste	Incineration(ton/year)	594	441	434	643	1,609	1,388
	Landfill(ton/year)	259	173	42	715	2,892	3,812
			Busan			R&D Center	
	CO2 ( ton/year)	308,904	272,108	279,023	15,458	19,069	20,976
Air	NOx (kg /year)	230	219	220	84	36	0
All	SOx (kg /year)	653	620	273	1,175	628	228
	Dust (kg /year)	28,300	26,885	20,673	•		210
	Sewage ( ton/year)	400,440	288,026	269,193	-	-	-
Water	Waste water ( ton/year)	3,193,926	2,967,005	2,649,311	125,255	187,239	147,186
	Recycling(ton/year)	32,020	28,818	31,158	69	594	548
Waste	Incineration(ton/year)	587	528	1,646	149	108	105
	Landfill(ton/year)	12,279	11,051	9,738	125	33	46

## I Level of Compliance I

Plant's performance in 2004



# **Ethics Policy**

I Ethics Charter I 1. Customer satisfaction is our top priority. We will strive to meet customer needs and expectations, create values for them and maximize return on their investments through efficient management.

2. We offer fair opportunities to all suppliers and create conditions for transparent transactions, thus promoting a win-win relation on an equal footing.

- 3. We respect national and social values, observe related regulations, and conduct sound business activities to contribute to national development.
  - And also as a global company, we respect values of host countries and communities, and abide by regulations with integrity.
- 4. We create organization culture, in which the company respects dignity of every single employee, never treats them unfairly, provides opportunities appropriate to their capabilities and aptitude, and rewards them based on fair and just evaluations.
- 5. We as SDI men and women, have pride with humanity, morality, civility, and etiquette, keep dignity, and perform in the company with integrity and fairness.

# I Ethics Code of Conduct I Chapter 1. Customer respect

Keeping in mind that customers are the foundation for company growth and profitability, we should provide best products and services living up to customer expectations and needs. We always listen to customers and strive to create values for them. We know that providing products with best quality at right time is the best service and thus do the best to do so.

#### Chapter 2. Shareholder respect

We pursue maximization of shareholder values by realizing honest profits through efficient management. We adopt generally accepted accounting principles, providing corporate information accurately and transparently to help shareholders' investment decision making. We ensure equal treatment for all shareholders and listen to their reasonable demand. We always make efforts to enhance corporate values through active communications and IR.

#### Chapter 3. Co-existence and co-prosperity with suppliers

When selecting suppliers, candidates' service quality, prices, and reliability should be considered against transparency criteria and selection should be objective and fair. We conduct transactions with suppliers on an equal footing and work together to create clean condition for transactions and keep transaction orders.

#### Chapter 4. Coexistence with a nation and a society

1. Healthy business activities

The company respects values of a country and a society, abides by rules and regulations, and conducts healthy activities, making

growth of the company and contributing to national development. The company fulfills its obligations including tax payments imposed

by governing bodies of communities such as the central government And municipal organizations, where the company operates.

The company is against all improprieties undermining healthy business activities.

#### 2. Contribution to social development

The company encourages and supports employees' participation in sound social activities and volunteerism. The company fulfills its obligations including tax payments imposed by governing bodies of communities such as the central government and municipal organizations, where the company operates. 3. Ban on political activities

The company does not engage in political affairs. But it is allowed to express its position on a certain bill or proposal which is related to interest of the company. The company respects individual suffrage.

#### Chapter 5. Environment-friendly management

We avoid pollutions to protect environment and do our best and observe environment protection laws and regulations to help improve environment.

#### Chapter 6. Responsibility as a global company

The company promotes healthy corporate culture by respecting customs and values of countries and communities where overseas

sites and offices are housed and keeps relevant rules and regulations. We thoroughly abide by environmental standards of host countries and regions, nurturing the image of an eco-friendly company. The company respects local employees' values and cultural features, seeking for co-prosperity based on mutual trust and understanding.

#### Chapter 7. Respect for employees

1. Respect for employees

The company deeply appreciates human dignity and values of employees and respects their basic rights. The company tries to make workplaces, where employees feel rewarding, proud and fun in their jobs and solve their difficulties. The company treats employees fairly according to their ability and contribution and does its best to improve health, education, quality of life of employees and their families.

2. Equitable human resource management

Any kind of discrimination is not tolerated in the company. Sex, academic credential, religion, origin, physical disability, and marital status do not affect recruitment, promotion, and evaluation. The company provides equal opportunities to employees. Objective criteria is applied to evaluation and rewarding 3. Human resource development

The company recognizes creativity and autonomous behaviors of employees as its intangible assets and provides training opportunities for self-development with a long term perspective. The company comes up with measures such as systems, training and education to help employees perform in a legitimate way. Samsung SDI works on conflict prevention and creativity promotion through working communication channels.

#### Chapter 8. Basic ethics of employees

#### 1. Basic ethics

Samsung SDI's men and women observe the Samsung Constitutions(humanity, morality, civility, and etiquettes) and always keep honor and pride. Samsung SDI men and women are just and honest, and behave with pride and dignity as employees of Samsung SDI. They keep ethical standards high and make efforts to keep individual dignity and prestige of Samsung SDI.

2. Principled working

Employees perform their jobs with principles and integrity and always try to build transparent and clean corporate culture. Employees protect the employer's physical and intellectual assets and trade secret. They do not use company properties for personal purposes in any circumstance. Employees do not perform anything illegal nor unethical in their daily life and professional life. Employees do not make false reports to protect particular individuals or departments and conceal or monopolize important information.

3. Mission fulfillment

Employees agree to vision and business philosophy and do their best to carry out assigned work. Understanding fully their duties and roles, they make own judgments to achieve company goals and behave accordingly.

With active cooperation and open communication between employees and between departments, employees do their best to increase effectiveness and efficiency of work. Employees do not engage in other work in other company without prior permission of the employer nor profit making businesses to seek personal interests.

4. Self-development

Employees set an ideal image of a worker in a global competition era, and make strenuous efforts to enhance competitiveness through self-development. 5. Prevention of sexual harassment

Employees are aware that sexual harassment not only violates human rights and hurts workplace atmosphere, but undermines work morale and productivity. Therefore they behave with decency and act to prevent sexual harassment.

6. Information security

Confidential information should not be released without prior consent and approval. Sensitive documents should bear the author's name and confidentiality rating and be prevented from being released to other companies and persons. Usage of illegal software should not be allowed in the company.

7. Safety and risk management

All employees are obliged to safety and risk management of the company. Employees should be on alert to prevent safety failure and if one detects a sign of a potential safety failure, it should be immediately reported out for appropriate actions. Safety rules and instructions should be kept in any circumstances regardless of time and place.

#### Chapter 9. Compliance obligation for ethics code of conduct

1. Coverage

'The whole company(overseas sites and offices included)' and 'all employees' are subject to ethics code of conduct.

2. Compliance obligation

All employees are requested to observe ethics code of conduct. Executives and division heads are responsible for the compliance within the organizations under their charge. Violation of ethics code of conducts is subject to punitive actions. When one notices such violations, he or she should dutifully report to the head of his or her organization, the HR team, or the Audit team. When ethics code of conduct is applied to work and the interpretation is not clear enough for practical application, he or she should consult with the executives of the department and ask for authoritative interpretation to the HR team and the Audit team.

# Terminology

#### **6 Sigma activities**

Management initiative implemented to secure 6 sigma level quality (0.00034% which means, 3.4 occurrences out of 1 million opportunities).

6 Sigma was first adopted by Motorola in 1987 and by Samsung SDI in 1996 for the first time in Korea

#### AMOLED(Active Matrix Organic Light Emitting Diode)

OLED with active driving method. Unlike PMOLED, independent RBG driving is applied, which lowers power consumption and allows fine display presentation.

#### **Back light**

A feature that beams white lights from the back of a display that is not illuminating by itself like an LCD.

#### **BOD(Biochemical Oxygen Demand)**

Oxygen requirement for underwater microorganisms to decompose pollutants in water. Higher BOD means more pollutions in a sample of water.

#### **Brightness**

A measure for luminance of a display.

#### **BS 7750**

World first Environmental Management System rule that BSI(British Standards Institution) announced in 1992. It led to creation of ISO14001.

#### **BSC(Balanced Scorecard)**

With four parallel perspectives of financial/customer/internal business process/learning and growth, past/present/future of a company is reviewed. It is a strategic tool to achieve company-wide performance improvement.

#### **Class I Material**

Ozone layer depleting materials such as CFC and Halon

#### **CO<sub>2</sub>(Carbon Dioxide)**

Gas produced when carbon compounds are burned, being believed to be contributing to global warming.

#### **COD(Chemical Oxygen Demand)**

The quantity of oxygen required when pollutants in water is oxidized by oxidant like  $KMnO_4$  or  $K_2Cr_2O_7$ . The higher COD is, the worse water quality becomes.

#### Contrast

Level of dependence on debt. A measure of a company's soundness, equal to debt divided by common shareholders' equity.

#### Core

A magnetic part used in DY for CRT. It deflects electrons with coils.

#### **CRT(Cathode Ray Tube)**

It is a general term for CDT and CPT

#### **Current ratio**

An indication of a company's ability to meet debt obligations, equal to current assets divided by current liabilities.

#### Debt ratio

Debt capital divided by total assets. This will tell you how much a company relies on debt to finance assets.

#### **EA(Environmental Accounting)**

As a traditional accounting does not reflect environmental aspect too well, EA is developed and support decision-making for environmental management by analyzing environmental investment, benefits, and results.

#### ED(Eco-design)

Design for Environment. A company's product development strategy to design, produce and sell products excellent in both environment and economic terms as cost, quality, and environmental aspects are considered.

#### **EVA(Economic Value Added)**

After-tax cash flow generated by a business minus the cost of capital it has deployed to generate that cash flow.

#### **FPCB(Flexible Printed Circuit Board)**

A PCB used for hi-tech products such as a module for a mobile phone. Circuit is built on a thin polymide so that it is bent and highly resistant to heat and chemicals.

GJ

Gigajoule. 1GJ=10<sup>a</sup>J. Giga is a metric prefix indicating 10<sup>a</sup> times base unit(1 followed by 9 zeros). 1 Joule is equivalent to 0.24cal or amount of work done when 1W of electricity is consumed for 1 second

#### **GRI(Global Reporting Initiative)**

A non-permanent institution under UNEP established in 1997 whose mission is to develop and disseminate globally applicable Sustainability Reporting Guidelines.

#### **HD(High Definition) TV**

Compared to ordinary TVs, picture quality and clarity are superb. A conventional TV has 525 ~ 625 in the number of scanning lines, while an HD TV has twice as many from 1,050 to 1,250, bringing in remarkable touch of reality.

#### ILO(International Labor Organization)

The UN specialized organization established in 1919 to improve working conditions and promote worker's social positions.

#### **ISO(International Organization for Standardization)**

An international institution established in 1946 to coordinate and unify industrial standards and promote cooperation in Science and Economy. ISO 9000 series is for quality management, while ISO14000 series is for Environmental Management.

#### ISO14001

International standard that forms the basis for setting up, auditing and certifying environmental management systems.

#### LCA(Life Cycle Assessment)

An objective process to evaluate the environmental burdens associated with a product, process, or an activity by identifying energy and materials used and wastes released to the environment, and to evaluate and implement opportunities to affect environmental improvements.

#### Lead-free soldering

Instead of lead soldering, tin-copper alloy and tinsilver alloy are used in soldering.

#### Leverage ratio

Level of dependence on debt. A measure of a company's soundness, equal to debt divided by common shareholders' equity.

#### **Matching-Grant Fund**

An idea to encourage donation of employees. A company donates relative to its employee's donation at a certain ratio.

#### **Multi-panel technology**

Technology that enables multi-panel production from one glass substrate

#### NOx(Nitrogen Oxide)

These gases (NO,  $N_2O$ ,  $NO_2$  and etc.) contribute to the greenhouse effect and possibly to the deterioration of the stratospheric ozone layer. Also they are causes of smog and acid rains.

#### **OHSAS18001**

This is an international occupational health and safety management system specification.

#### **PL(Product Liability)**

When consumers or a third party has their life, body, and property damaged due to defects of products, the manufacturers or the sellers become liable and compensate for the damages.

#### **PMOLED (Passive Matrix Organic Light Emitting Diode)**

PM-type OLED. Manufacturing processes are relatively simple and cost less. But the products require high power consumption.

#### **PS (Profit Sharing)**

Profit distribution by a company to employees apart from wages, calculated by a formula agreed between the company and workers.

#### **Return on sales**

A measure of a company's profitability and overall efficiency, equal to current net income divided by sales.

#### **ROA: Return On Assets**

soundness, equal to debt divided by common shareholders' equity.

#### **ROE: Return On Equity**

A measure of how well a company used reinvested earnings to generate additional earnings. It is used as a general indication of the company's efficiency, equal to current net income divided by book value.

#### RoHS (directive on Restriction of the use of certain Hazardous Substances in electrical and electronic equipment)

A directive banning the use of six hazardous materials of Lead, Mercury, Cadmium, Chromium VI, PBB and PBDE in products to be sold in the EU market effective from July 2006.

#### **SCEM (Supply Chain Environmental Management)**

A management technique to minimize environmental impacts of upstream activities such as vendor selection, material sourcing, and management of selected suppliers. Environmental aspect is added to existing supply chain management goals of quality, lower cost, stable delivery

#### **SM: Sustainability Management**

Business management activity and philosophy. SM is introduced for a company to take leadership and responsibility in triple bottom lines of economic, environmental, and social aspects, and eventually secure competitive advantage, enhancing corporate values.

#### SOx (Sulfur Oxide)

These gases(SO<sub>2</sub>, SO<sub>3</sub>) are created when sulfur in fossil fuels react with oxygen, contributing to the acid rain effect.

#### **SR: Sustainability Report**

A sustainability report is issued to open a company's economic, environmental, and social performances and their impact to stakeholders.

#### SS (Suspended Solid)

Particle solids over 0.1 in diameter that are floating on the surface of, are suspended in sewage or other liquids.

#### **Technology Driven Company**

A strategy of Samsung SDI to secure global competitiveness.

#### TJ

 $1TJ=10^{12}J$ . Tera is a metric prefix indicating  $10^{12}$  times base unit(1 followed by 12 zeros).

#### **US GAAP (Generally Accepted Accounting Principles)**

The US accounting principle.

#### **Valuable Performance Indicator**

Samsung SDI specific BSC(Balanced Scorecard) to consider not only financial performance but also business nature of different divisions such customer perspective and people-training.

#### **Viewing angle**

When you look at a display like an LCD that uses back light, transmissivity changes depending on where you look at it. As you move toward sides, the display looks darker. Visual angle is the angle at which you can see the display.

#### VOC (Voice of Customer)

The system on the Samsung SDI web page where customers express opinions about product and service quality.

#### **VOCs (Volatile Organic Compounds)**

Substances like paints, cohesive and petro-chemical products. VOCs form optic chemical ozone, doing harm to human bodies with cancer risks and potentially damaging on genes.

#### WEEE (directive on Waste Electrical and Electronic Equipment)

A directive enforcing recycling of all electrical and electronic products disposed within the EU market to be placed under responsibility of producers, effective from January 2007.

# **Financial Report**

Consolidated Balance Sheets Consolidated Statements of Income Consolidated Statements of Cash Flows Samsung SDI Co., Ltd and its subsidiaries

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(Unit: Million KRW)

		35 <sup>th</sup> Fiscal Year(Current)	34 <sup>th</sup> Fiscal Year (Previous)
		Amount	Amount
[Assets]	I . Current Assets	2,761,811	2,736,184
	(1) Quick Assets	2,064,869	2,156,991
	(2) Inventories	696,942	579,193
	II . Non-current Assets	3,960,561	3,673,614
	(1) Investment and other Assets	767,900	585,014
	(2) Tangible Assets	3,105,792	3,025,200
	(3) Intangible Assets	86,869	63,400
	Total Assets	6,722,372	6,409,798
[Liabilities]	I. Current Liabilities	1,803,321	1,823,722
	II. Long -Term Liabilities	437,503	388,335
	Total Liabilities	2,240,824	2,212,057
[Shareholders' Equity	I. Capital Stock	240,681	240,672
	II. Capital Surplus	1,281,431	1,267,868
	III. Retained Earnings	3,122,955	2,614,181
	IV . Capital Adjustment	△334,650	△276,559
	V. Minority Interests in	171,131	351,579
	Consolidated Subsidiaries		
	Total Shareholders' Equity	4,481,548	4,197,741
	Total Liabilities and Shareholders' Equity	6,722,372	6,409,798

(Unit: Million KRW)

	35 <sup>th</sup> Fiscal Year(Current)		34 <sup>th</sup> Fiscal Ye	ar (Previous)
	Amo	ount Ar		ount
I . Sales		9,321,770		7,198,169
II . Cost of Sales		7,645,168		5,554,192
III. Gross Profit		1,676,602		1,643,977
IV . Selling, General and Administrative Expenses		901,145		735,660
V . Operating Profit		775,457		908,317
VI. Non-Operating Income		229,081		202,721
W. Non-Operating Expenses		256,319		286,035
WII. Ordinary Profit		748,219		825,003
IX. Extraordinary Income		-		-
X . Extraordinary Loss		-		-
XI . Net Income Before Income Taxes		748,219		825,003
XII . Income Tax Expenses		△8,883		130,655
XIII. Net Income after Income Taxes		757,102		694,348
XIV . Minority Interests in Earnings of		△15,353		△44,990
Consolidated Subsidiaries, Net XV. Net Income		741,749		649,358

End of 35th fiscal year : December 31, 2004

Samsung SDI Co., Ltd and its subsidiaries

(Unit: Million KRW)

	35 <sup>th</sup> Fiscal Year(Current)	34 <sup>th</sup> Fiscal Year (Previous)		
	Amount	Amount		
I . Cash Flows from Operating Activities	1,311,349	1,249,572		
1. Net Income	741,749	649,358		
2. Addition of Expenses Not Involving Cash Outflows	960,089	671,178		
3. Deduction of Revenues Not Involving Cash Inflows	△74,344	△48,271		
4. Changes in Assets and Liabilities Resulting from Operations	∆316,145	△22,693		
II . Cash Flows from Investing Activities	△1,174,602	△741,660		
1. Cash Inflows from Investing Activities	255,097	174,939		
2. Cash Outflows from Investing Activities	△1,429,699	△916,599		
III . Cash Flow from Financing Activities	△46,131	△405,966		
1. Cash Inflows from Financing Activities	964,276	204,867		
2. Cash Outflows from Financing Activities	△1,010,407	△610,833		
Ⅳ . Net Increase(Decrease) from Foreign Currency Translation	∆31,312	6,559		
V . Increase with Change of Subsidiaries Consolidated	38	-		
VI . Net Increase in Cash and Cash Equivalents( I + II + III + IV + V )	59,342	108,505		
M. Cash and Cash Equivalents	691,183	582,678		
at the Beginning of the Year	031,105			
III . Cash and Cash Equivalents at the End of the Year	750,525	691,183		

## **Independent Verification Statement**

#### To: Management of Samsung SDI

BVQI Korea("We'), an independent certification body of Bureau Veritas Group, which provides expert technical service in quality, environment, safety, health, ethics and social responsibility with 650 local offices in over 160 countries, presents an independent opinion after reviewing contents of this sustainability report.

We do not have any profit-seeking interest in operations and management of Samsung SDI('the Company') other than providing a third party assurance on contents of this report. we do not have any biased opinion on any stakeholder of the Company. The Company is responsible for the collection and presentation of information within the Report. Our responsibility in performing this work is to the management of Samsung SDI only.

#### Scope of Verification

We referenced requirements of 2002 GRI Sustainability Reporting Guidelines('GRI') that the Company took as a foundation of a report and took an incremental approach to expand coverage of reporting, Dow Jones Sustainability Indexes('DJSI'), and AA1000 series principles and process model('AA1000') for verification.

For auditing and verification we looked at the sustainability governance structure of the Company and visited the Busan plant, the Cheonan plant, the Suwon plant, the Corporate R&D Center and the Head Quarter to see overall process of how requirements of GRI, DJSI and AA1000 were implemented. For overseas plants, we examined related documents.

The purpose of verification was to confirm application and implementation of requirements of GRI, DJSI and AA1000 in the Company, and see if the information contained within the Report was honest and fairly reflected Company's activities and performances.

#### Methodologies

To confirm the accuracy of the information reported, we made use of ISO 19011, GRI guidelines, and AA1000 AS and other known auditing methods, which involved review of records and documents, identification of source of information and accuracy level, interviews and site inspection. Our role was to review the Report based on GRI, DJSI, and AA1000 requirements, and make recommendations to help the Company improve reporting process continuously.

Our audit and verification team was composed of expert auditors internationally certified in environment, safety, health, ethics, and social responsibilities. Although we could not confirm every single detail due to time constraint, we did our best to perform verification process for as many parts as possible.

#### Opinion

As an independent third party verification body, we are confident that the Report, a second in kind, does not have critical errors or misleading information according to our findings. The Report, the result of integrating with the financial report, describes economic, environmental, social challenges ahead of the Company and how to deal with them, which stakeholders want to know, in easy-to-understand terms. Most of data are easily compared with data in the previous report.

The Company did make appropriate efforts to cover as much as possible in the Report. Limited engagement of stakeholders rather undermined inclusivity and completeness of this sustainability reporting process. Considering that the Company remains at early stage of sustainability reporting, the shortcoming is understandable. We expect it would be improved over time.

The Company has to capture stakeholders' expectations and requirements by engaging them systematically to the reporting process, and present actionable commitments. We believe, in that way the Company can enhance quality and inclusiveness of the Report. Besides, the information in this report is confirmed to be a material, complete, and meaningful representation of the reporting process.

The Company made commitment that during the third reporting cycle it would finish deployment of Sustainability Management Initiative System, or SMIS, which is under development at the moment, and further improve sustainability reporting process and performance measurement practices by using SMIS. It has already set up a budget plan for continuous reporting.

#### GRI, DJSI and AA1000 Review and Commentary

To verify reliability of data related to economic, environmental, and social performance measurements, we assessed effectiveness of internal management systems and processes and completed auditing on relevant areas. To add more accuracy to our findings, we checked evidence supporting GRI, DJSI, and AA 1000 implementation results.

But some information was missing in the Report pursuant to those standards, and reasons for that was not specified. Because of it, the Report did not fully satisfy some of those conditions.

The company has to explain why some information or data are excluded in the Report. In that way a report in compliance can meet requirements and delivers better comparability.

#### **Our Recommendation**

- The Company will have to prepare communication channels to ensure an extensive consultation with a various and wide range of stakeholders, reflect their interest in reporting process, and report performance indicators which are developed with participation of stakeholders, targets and level of progress honestly, achieving inclusivity, completeness, and relevancy.
- The Company is required to develop and maintain a management system enabling practice and maintenance of corporate values, information management, assessment of target achievement, and review of inclusiveness and completeness of its reporting process.
- By expanding reporting coverage in compliance with GRI Guidelines and performance indicators, DJSI, and AA1000 principles and
  process model, the Company has to view its company performance in terms of sustainability aspect not only in the internal
  management context, but also in a broader and external context, as a way to enhance materiality and comparability of a report.

March 23, 2005

BVQI Korea Leading auditor BhangWhan 0



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## Voice of Audience

Samsung SDI publishes a sustainability report to enhance transparency in the triple bottom lines of economic, environmental, and social aspects for a sustainable society, and to communicate better with stakeholders. Since the last report, many audience have given us valuable opinions on it. Their opinions are incorporated into the sustainability management system of Samsung SDI, and into improvement of our management systems. As a part of such change, we prepared an integrated form of a report by combining with our annual report. Samsung SDI will listen to voice of audience on a sustainability report sincerely, roll out more advanced sustainability management, and publish more improved sustainability reports.

Please kindly fill out the questionnaire on the following page and send it to SM Office of Samsung SDI. Thank you. [Tel\_ 82. 2. 727. 3366, Fax\_ 82. 2. 727. 3399] SM Office of Samsung SDI

Fax: 82. 2. 727. 3399

\*You may just fill out the questionnaire below if you don't wish to identify yourself.

F/M

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)

1. Which of the following best describes you or your affiliation?

① Investor/shareholder ② Business partner ③ Community residents ④ NGOs ⑤ Company ⑥ Academic

)

⑦ Public officer ⑧ Journalist ⑨ Samsung SDI employees ⑩ Others (

2. How did you know about Samsung SDI sustainability report?

① Samsung SDI web page ② IR/seminar/lecture/exhibition ③ Newspaper/Magazine ④ Other web pages )

⑤ Samsung SDI employees ⑥ Others (

3. Which section was of the most interest to you?

① Company Profile ② Economic part ③ Environmental part ④ Social part Describe (

4. Which part did you find need improvement?

① Company Profile ② Economic part ③ Environmental part ④ Social part Describe (

5. Please give us any opinions, impressions, request, etc.

For more information, please contact as following

Samsung SDI Sustainability Management Office, Samsung Insurance Building 17th floor, Taepyeong-no 2 ga, Jung-gu, Seoul, Korea Tel\_ 82.2. 727. 3366 Fax\_ 82.2. 727. 3399

> http://www.samsungsdi.co.kr/contents/en/main.jsp e-mail: sustainability@samsung.com

> > \* This report is printed on recycled paper.

# Power to Imagine