

2008 TSMC CORPORATE
SOCIAL RESPONSIBILITY REPORT

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As a good corporate citizen, TSMC has always fully committed itself to its corporate social responsibilities. In 2008, we were honored to be included in the Dow Jones Sustainability Index for the eighth consecutive year and to be named as a member of the Carbon Disclosure Leadership Index by the Carbon Disclosure Project for the first time, and the only Taiwan company to be included.

After publishing our first Corporate Social Responsibility Report last year, this year, we continue to share our efforts in strengthening employee and supplier relations, corporate governance, business ethics, social contribution, and environmental protection. These are cornerstones of TSMC's business and our uncompromised commitment to sustainable development.

Report Scope and Profile

This report contains information related to all TSMC fabs located in Taiwan, as well as the Environmental Safety and Health (ESH) performance of our two wholly-owned manufacturing subsidiaries, TSMC (China) and WaferTech in the United States. Financial figures in this report are expressed in NT dollars unless otherwise specified. ESH performance is expressed in commonly accepted benchmarks.

We publish this report annually, and the previous report was published in August 2008. This report is compiled based on the Global Reporting Initiative (GRI) G3 framework; a table is attached at the end of this report for the readers' reference. We self-declare that this report complies with GRI Application Level A+. This report is published in both English and Chinese and is available on TSMC's corporate website.

Report Assurance

The British Standard Institution (BSI) reviewed this report against the AccountAbility AA1000 Assurance Standard and the GRI G3 guideline on materiality, completeness and responsiveness. BSI's Report Assurance Statement can be found at the end of this report.

Message from the Chairman and Chief Executive Officer

A corporation is connected to many stakeholders, including shareholders, employees, society, creditors, customers, and suppliers. It balances the interests of these stakeholders, and under the leadership of the government, upholds its corporate social responsibility.

TSMC has always aspired to be a model corporate citizen, and we believe that a model corporate citizen is a company that upholds its corporate social responsibility to become an uplifting force in society.

At TSMC, our vision for society is one that works together towards sustainable development, equality and justice, and a harmonious environment to live and work. We believe that the great majority of enterprises and citizens share this vision as well.

To achieve this vision:

1. We act with integrity towards society. Integrity is our highest value and governs our actions both inside and outside the company.
2. We respect democracy and the rule of law.
3. We strive for sound corporate governance and balance the interests of the company's stakeholders.

4. We aim to provide not just employment, but good job opportunities.
5. We value environmental protection and combat climate change.
6. Finally, we have also established an Education and Culture Foundation to make contributions to cultural, educational, and community activities.

With the conscientious hard work of all its employees, TSMC has won recognition and awards from around the world in corporate governance, business, employee welfare, environmental protection, and investor relations. Nonetheless, this has not made us complacent, and we continue to honestly review and improve ourselves as we strive to realize our vision of a society that works together towards sustainable development, equality and justice, and a harmonious environment to live and work.



A handwritten signature in black ink, reading "Morris Chang". The signature is fluid and cursive, with the first name "Morris" and last name "Chang" clearly distinguishable.

Morris Chang
Chairman and CEO



TSMC is the world's largest dedicated semiconductor foundry, providing the industry's leading process technologies and the foundry sector's largest portfolio of process-proven libraries, IP, design tools, and reference flows. TSMC's leading industry position is based on a trinity of key differentiating strengths: technology leadership, manufacturing excellence, and customer partnership. Revenue for 2008 totaled NT\$333.16 billion, net income was NT\$99.93 billion, and earnings per share was NT\$3.83.

2.1 An Introduction to TSMC

TSMC is the world's largest pure-play semiconductor foundry. Founded on February 21, 1987 and headquartered in Hsinchu, Taiwan, TSMC pioneered the business model of focusing solely on manufacturing customers' semiconductor designs. As a pure-play semiconductor foundry, the Company does not design, manufacture, or market semiconductor products under its own brand name, ensuring that TSMC does not compete directly with its customers.

With a diverse global customer base, TSMC-manufactured microchips are used in a broad variety of applications that cover various segments of the computer, communications and consumer electronics markets.

Total capacity of the manufacturing facilities managed by TSMC, including subsidiaries and joint ventures, was 9.38 million 8-inch equivalent wafers in 2008. In Taiwan, TSMC operates two advanced 12-inch wafer fabs, four 8-inch wafer fabs, and one 6-inch wafer fab. TSMC also manages two 8-inch fabs at wholly owned subsidiaries: WaferTech in the United States and TSMC (China) Company Limited. In addition, TSMC obtains 8-inch wafer capacity from other companies in which the Company has an equity interest.

TSMC provides customer service through its account management and engineering services offices in North America, Europe, Japan, China, South Korea, and India. The Company employed more than 22,000 people worldwide as of the end of 2008.

TSMC continues to lead the foundry segment of the semiconductor industry in advanced process technologies. Already the first foundry to provide 65nm production capacity, again, in 2008, TSMC was the first foundry to provide 40nm production. In addition to general-purpose logic process technology, TSMC supports the wide-ranging needs of its customers with embedded non-volatile memory, embedded DRAM, mixed signal/RF, high voltage, CMOS image sensor, color filter, MEMS, and silicon germanium technologies. In September 2008, TSMC announced future plans to deliver its 28nm process as a full node technology in 2010, offering the option of both high-k metal gate (HKMG) and silicon oxynitride (SiON) material to support a variety of customer applications.

The Company is listed on the Taiwan Stock Exchange (TWSE) under ticker number 2330, and its American Depositary Shares trade on the New York Stock Exchange (NYSE) under the symbol "TSM".

2.2 Market/Business Summary

2.2.1 TSMC Achievements

In 2008, TSMC maintained its leading position in the pure-play foundry segment of the global semiconductor industry, with an estimated market segment share of 51%. TSMC achieved this result amid fierce competition from both established players and relatively new entrants to the business.

Leadership in advanced process technologies is a key factor in TSMC's business success. In 2008, 64% of TSMC's wafer revenue came from manufacturing processes with geometries of 0.13 μ m and below. A critical milestone was reached in September 2008, when TSMC shipped its five hundred thousandth 65nm 12-inch wafer. Moreover, TSMC also achieved volume production of the 45/40nm process as well as development of the leading-edge 32/28nm process, both foundry firsts. As of the fourth quarter of 2008, 27% of TSMC's wafer revenue came from 65nm processes and below.

In addition to advanced technologies, TSMC also offers innovative services in line with its unwavering focus on customer partnership. Among the many innovative services unveiled in 2008 was wafer level chip scale package (WLCSP) which offers smaller form factor, addressing the trend of mobile devices becoming smaller and thinner while providing richer features. TSMC also rolled out its Open Innovation Platform™ initiative in 2008 to promote and facilitate timely innovation among the semiconductor design community, its ecosystem partners and TSMC's IP, design methodology, design implementation, DFM capabilities, process technology and backend services.

TSMC continued to advance the semiconductor roadmap in 2008. Examples of technologies the Company developed or rolled out include:

- 32/28nm technology with functional static random access memory (SRAM)
- 45/40nm technology
- 55nm general performance technology, a 90% linear shrink from 65nm
- 85nm general performance technology
- 85nm low power technology
- 0.12 μ m general performance technology
- 0.13 μ m high voltage process for small panel single chip drivers
- 0.152 μ m logic process for low power and radio frequency (RF) applications
- 0.18 μ m low power embedded flash memory
- 0.18 μ m bipolar complementary device (BCD)

At the same time, the following technology is also in our development roadmap:

- 55nm low power technology

In addition, one major focus of TSMC's technology development in 2008 was its specialty technology strategy, including 65/90nm embedded flash, 65/90nm CMOS image sensor and 0.13 μ m analog technologies. In 2008, TSMC offered the foundry segment's first CMOS image sensor with innovative back side illumination technology, known as 0.11 μ m BSI. These specialty technologies are key differentiators from competitors and provide customer with greater value.

2.2.2 Market Overview

It is estimated that the semiconductor market in 2008 reached US\$249 billion in revenue, a slight decrease of 3% compared to 2007. According to IC Insights, total foundry, a manufacturing sub-segment of the semiconductor industry, generated total revenues of US\$25 billion in 2008, up 2.9% year on year, while revenues from pure-play foundries such as TSMC reached US\$21 billion. In 2008, the largest geographic market for pure-play foundry services was North America, which accounted for 62% of overall pure-play foundry revenue. The second largest geographic market was Asia Pacific (excluding Japan), which accounted for 24% of total pure-play foundry revenue in 2008. European-based customers accounted for 9%, and orders from companies based in Japan contributed 5%. The TSMC figures are based on the customer's headquarters location and not actual end-product destination or use.

2.2.3 Industry Outlook, Opportunities and Threats

Industry Demand and Supply Outlook

The semiconductor market in 2008 experienced a slight decline of 3%. For 2009, based on the deteriorating global macro economic conditions of first quarter, the semiconductor market could decline in percentage terms by around 20%, depending on the severity of the recession. As the inventory level in the supply chain generally appeared to be higher than average at the end of 2008, the decline of the foundry segment could be deeper than the semiconductor industry by another mid-to-high single digit percent in 2009. Pure-play foundry capacity is estimated to increase by around 5% in 2009, compared with the 12% compound annual growth rate from 2006 to 2008. This indicates that

foundry players may only invest very limited capacity in response to the recession in 2009.

Opportunities and Threats in the Foundry Segment of the Semiconductor Marketplace

Despite the fact that the semiconductor market as a whole is maturing, and considering the global challenges of 2009, TSMC believes that foundry services, the segment in which TSMC principally competes, will play an increasingly important role as the semiconductor industry becomes more reliant on outsourced manufacturing in the long run. With the assumption of production value being 2.2 times pure-play foundry revenue, it's forecasted that by 2013, 21% of global semiconductor revenue could come from pure-play foundries, compared with 17% in 2008, according to IC Insights. As the leader in pure-play foundry services, TSMC is well positioned to capture the growth opportunities of this segment. On the other hand, threats facing the foundry segment include a continuing decline in wafer prices, due to the fact that the IC industry is prone to fast-declining end application prices, as well as potential industry overcapacity when the global economic climate experiences a downturn.

2.2.4 TSMC Position, Differentiation and Strategy

Position

As the leader in the pure-play foundry segment of the semiconductor industry, TSMC commanded a 51% share of this segment in 2008, with total consolidated revenue of US\$10.6 billion. In terms of geographic distribution of wafer revenue, 74% came from North America, 13% from the Asia Pacific region excluding Japan, 10% from Europe, and 3% from Japan. In terms of end-product application, 33% of total wafer revenue came from the computing sector,

42% from communications, 19% from consumer products, and 6% from other categories, such as industrial products. The TSMC figures are based on the customer's headquarters location and not actual end-product destination or use.

Differentiation

TSMC's leading industry position is based on a trinity of key differentiating strengths: technology leadership, manufacturing excellence, and customer partnership. As a technology leader, TSMC has consistently been the first pure-play foundry to develop the next generation of leading-edge technologies. As a manufacturing leader, TSMC is renowned for its yield management, and offers best-in-class support services to expedite time-to-market and time-to-volume. And, in customer partnership, TSMC works closely with its customers on end-to-end collaboration to optimize design and manufacturing efficiencies. Going forward, TSMC will continue building on this trinity of strengths to provide the best overall value to its customers.

Strategy

TSMC is confident its differentiating strengths will enable it to leverage the attractive growth opportunities in the foundry segment going forward. TSMC works constantly to ensure that these strengths are maintained and improved. For example, TSMC is intensively working on the leading-edge 28nm and 22nm processes to maintain its technology leadership position, and is poised to be the first pure-play foundry player to roll out production in these technologies. Numerous efforts are also underway to ensure manufacturing excellence, such as continuing enhancement of Design-For-Manufacturing (DFM) support services to increase yield and efficiency. TSMC also introduced its Open

Innovation Platform™ initiative, a set of ecosystem interfaces and collaborative components initiated and supported by TSMC that efficiently empowers innovation throughout the supply chain to enhance timely innovation. Finally, TSMC conducts throughout the year customer reviews and surveys to better understand customer needs and wants, and accordingly may adjust its offerings in response, thereby strengthening its partnership with customers.

TSMC's plans to continue strengthening its core capabilities and value propositions, including its ability to deliver customer product to market earlier and with better functionality; to develop advanced and mainstream technologies with sufficient capacity support and flexible manufacturing; to continue to focus on customer service; and to continue optimizing its service portfolio in order to balance profitability and growth.

2.3 Business Activities

2.3.1 Business Scope

TSMC's business scope is semiconductor foundry and associated services. The Company excels in all aspects of its business, including semiconductor process technology research and development, wafer manufacturing, logistics management, capacity utilization, customer service, and associated services such as design services, mask manufacturing, wafer probing, and in-house bumping and testing. TSMC strives to provide the best overall value to customers; the success of TSMC's business is manifested in the success of its customers.

2.3.2 Customer Applications

Over the past 21 years, more than 500 customers worldwide have relied on TSMC to manufacture chips that are used across the entire spectrum of electronic applications, including computers and peripherals, information appliances, wired and wireless communications systems, automotive and industrial equipment, consumer electronics such as DVDs, digital TVs, game consoles, digital still cameras (DSCs), and many other applications.

The rapid evolution of end products drives our customers to utilize TSMC's innovative technologies and services, while at the same time spurring TSMC's own development of technology. As always, success depends on leading rather than following industry trends.

2.4 Financial Highlights

2008 was a year of rapid change. TSMC's business remained vibrant in the first three quarters of the year, but saw demand slowing by the middle of the third quarter. Fourth quarter revenue substantially declined and showed no sign of recovery by the year-end.

With the sharp decline in the demand for semiconductors in the last quarter of 2008, revenue of the worldwide semiconductor market for the full year is estimated to have declined by about 3 percent from its 2007 level. Pure-play foundry segment is estimated to have outperformed the semiconductor industry and registered an annual growth rate of approximately 2 percent. TSMC outperformed its peers, delivered 7.9 percent revenue growth in

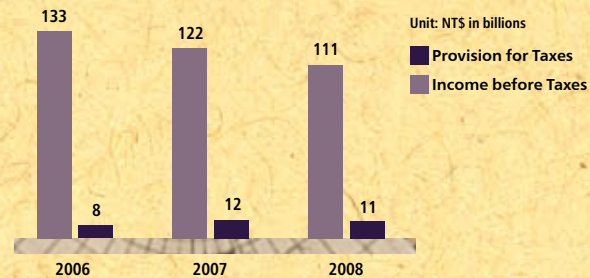
US dollars, and gained market share to reach 51 percent among pure-play foundries during 2008. The outperformance is particularly pronounced in the advanced process technologies where TSMC successfully ramped its 65-nanometer process technology from 10 percent of wafer revenue at the beginning of the year to 27 percent by year-end.

Total TSMC consolidated revenue for 2008 was NT\$333.16 billion, a 3.3 percent increase compared with NT\$322.63 billion in 2007. Mainly due to the implementation of a new accounting rule that requires expensing of employee profit sharing in the Company's financial statements starting in 2008, net income decreased 8.5 percent to NT\$99.93 billion, compared with 2007 net income of NT\$109.18 billion. Similarly, diluted earnings per share decreased 5.7 percent to NT\$3.83, compared with NT\$4.06 a year earlier. Had the accounting rules remained the same and employee profit sharing had not been expensed, net income in 2008 would have been NT\$112.42 billion and EPS NT\$4.31. In US dollars, TSMC's 2008 revenue was US\$10.61 billion and net income was US\$3.18 billion.

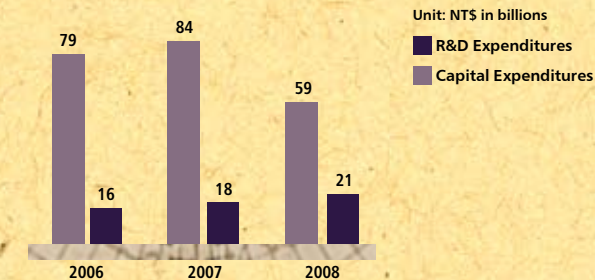
TSMC paid dividends of NT\$3.0 in cash and 0.5 percent in stock per common share in 2008.

Based on the increase on the previous expansion, the purchase of production equipment and research and development expenditures, TSMC is entitled to tax incentives, such as tax exemption and investment tax credits. For more information, review TSMC's "Income Tax" disclosed in the "Financial Information" of Annual Report (II), page 19-20.

Income before Taxes and Provision for Taxes



Capital and R&D Expenditures

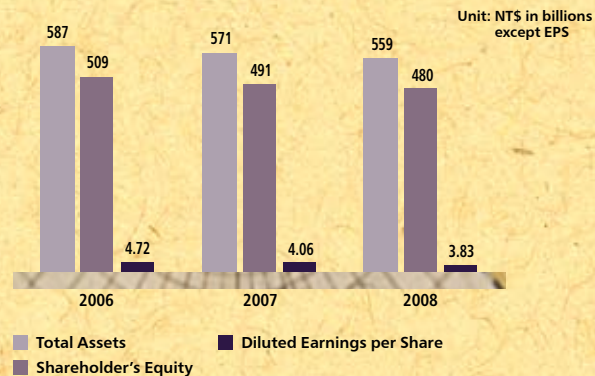


2.5 Corporate Developments

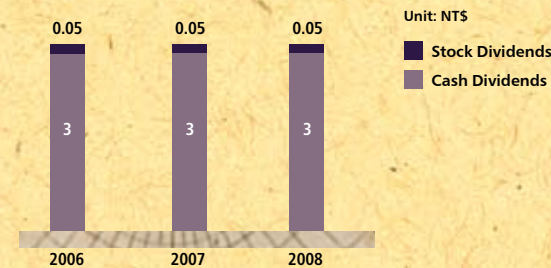
Early in 2008, TSMC reorganized and established the Advanced Technology Business Organization and the Mainstream Technology Business Organization by merging manufacturing operations with technology and service marketing. These two new organizations respectively take responsibility for formulation, development, and execution of advanced technology and mainstream technology business objectives, with dedicated human resources and increased flexibility.

In August 2008, Royal Philips Electronics NV completed a four-phased plan and exited from its TSMC shareholding. As part of the plan, and subsequently for the purpose of partially offsetting the dilution from employee profit sharing, the Company repurchased, in two separate programs, a total of 495,549 thousand common shares in the open market of the Taiwan Stock Exchange, accounting for approximately 1.92% of its total outstanding shares, at an average price of NT\$61.4 per share. The repurchased shares were cancelled subsequently.

Assets and Capitalization—Year End



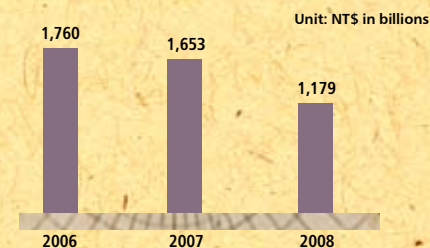
Dividends Distribution



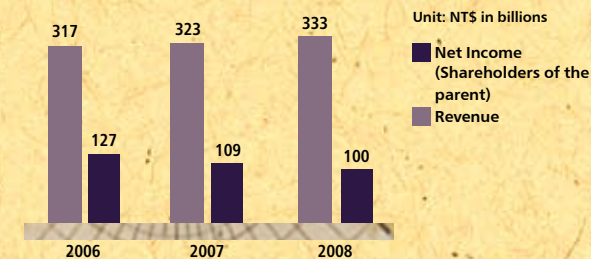
2.6 Awards Received in the Reporting Period

- "Excellence in Corporate Social Responsibility First Prize", *CommonWealth Magazine*
- Won top honors from *AsiaMoney Magazine*, *The Asset Magazine*, *Corporate Governance Asia*, *FinanceAsia*, and *Institutional Investors* in the areas of Corporate Governance, Management, and Investor Relations
- *IR Magazine* announced TSMC as the winner of "Grand Prix for Best Overall Investor Relations" for a sixth year in a row
- *CommonWealth Magazine* awarded TSMC "Most Admired Company in Taiwan" for a twelfth consecutive year

Market Capitalization—Year End



Revenue and Net Income





TSMC's Most Admired Company Award (left) and Corporate Social Responsibility Award from *CommonWealth Magazine*

- Recognized by the Ministry of Economic Affairs Industry Development Bureau for "Excellence in Voluntary Greenhouse Gas Reduction"
- Recognized by the Executive Yuan, Council of Labor Affairs (CLA) for "National Industrial Safety and Health Award"
- Chosen for membership in the Dow Jones Sustainability World Index for an eighth consecutive year, and the only Taiwan member from 2003 to 2007
- Chosen for CDLI (Carbon Disclosure Leadership Index) by Carbon Disclosure Project, and the only Taiwan company in the index
- Fab 14 Phase 3 was recognized by the U.S. Green Building Council (USGBC) with "Leadership in Energy and Environmental Design of New Construction (LEED-NC) Gold Class Certification". TSMC is the only company in Taiwan with this certification
- Fab 14 Phase 3 has passed Taiwan's "Diamond Class Ecology, Energy Saving, Waste Reduction, and Health (EEWH)" certification, which is the second "Diamond" class in Taiwan and the first factory to attain this certification

- Fab 14 was recognized by the Executive Yuan, Environmental Protection Administration (EPA) for "The Annual Enterprise Environmental Protection Award"
- Fab 12 was recognized by the Science Park Administration (SPA) for "The Low Carbon Enterprise Award"

2.7 International Sustainability Indexes

TSMC has not only achieved outstanding business performance, but has also done so in the spirit of giving back to society. TSMC continuously seeks sustainable development, and strives to improve employee welfare as well as workplace safety. TSMC also actively participates in community activities, supply chain management, and environmental protection.

In 2008, TSMC was selected as a member of the Dow Jones Sustainability Indexes (DJSI) for an eighth consecutive year.

The Dow Jones Sustainability Indexes were launched in 1999 and TSMC joined in 2001. TSMC was the first Taiwan company to join the DJSI, and the only Taiwan company selected for membership for eight consecutive years. The DJSI evaluates companies along economic, environmental, and social dimensions, and this year TSMC achieved the highest scores in the semiconductor industry for "risk and crisis management", "product quality and recall management", "environmental policy/management system" and "climate strategy". TSMC's outstanding overall performance in all three dimensions has once again affirmed the company's achievements and commitment to sustainable development.

The Dow Jones Sustainability Indexes (DJSI), are based on the cooperation of Dow Jones Indexes, STOXX Ltd.

and SAM Group of Zurich, Switzerland. TSMC is a member of the Dow Jones Sustainability World Index, which selects the top 10% of 2,500 major global companies based on economic, environmental, and social criteria to provide a benchmark for socially responsible investors.



2.8 Membership in Industry Associations

As a semiconductor industry leader, TSMC actively participates in trade and industry associations. TSMC executives have been nominated to and hold senior positions in associations including the Taiwan Semiconductor Industry Association, the Association of Industries in Science Parks, the Chinese National Association of Industry and Commerce, the Taiwan Electrical and Electronic Manufacturers' Association, the Mount Jade Science and Technology Association of Taiwan, the Taiwan Business Council for Sustainable Development, and the Taiwan SOC Consortium, holding positions such as Chairman or Executive Board Director. In addition, many TSMC employees also contribute to the semiconductor industry by serving in industry associations as committee chairman or vice chairman in professional committees.

2.9 Stakeholder Identification and Communication

TSMC corporate social responsibility activities are led by a CSR core team. The core team's members include representatives from the Investor Relations, Public Relations, Human Resources, TSMC Education & Culture Foundation, and Risk Management &

Corporate ESH. The core team identifies stakeholders and integrate stakeholders' concerns into routine tasks and annual plans, and maintains flexibility to incorporate ad-hoc issues into annual plans. The core team also seeks support from additional departments as necessary.

TSMC stakeholders include stockholders and investors, employees, suppliers, customers, government,

community, and non-profit organizations. TSMC has certain responsibilities to its stakeholders and needs to communicate with them through various measures and channels so as to understand their needs and expectation for TSMC, and also takes these needs and expectations into account for corporate social responsibility policy and projects. TSMC and its stakeholder communication measures and channels

are described in the table below; more detailed information can be found in related chapters of this report.

2.10 Investor Engagement

TSMC's business strategies and financial policies aim to uphold and enhance the value of our long-term shareholders. We not only align ourselves with international standards that demonstrate our position and reputation as a premier investment and sustainability champion, but are ranked within the semiconductor industry as a sustainability leader, and are honored to be a component of the Dow Jones Sustainability Index (DJSI) every year since 2001. Since becoming a publicly listed company in 1994, we have consistently delivered value to shareholders through cash dividends, maintaining a strong balance sheet, and keeping one of the highest credit ratings among technology companies.

In order to serve investors and the investment community, TSMC has established a highly effective communication system to disseminate information.

Stakeholder	Responsibilities	Communication Measures and Channels
Customer	<ul style="list-style-type: none"> • Provide safe, high-quality products and services • Raise satisfaction • Cooperate to fulfill product environmental and social responsibility 	<ul style="list-style-type: none"> • Customer satisfaction survey • Technical forum • Cooperate with customers' product environmental and social responsibility surveys and improve where necessary
Employee	<ul style="list-style-type: none"> • Respect human rights • Fair evaluation and reward • Employee Development • Employee Wellness 	<ul style="list-style-type: none"> • Incentives • Total communication framework • Employee satisfaction survey • Silicon Garden Magazine
Stockholder & Investor	<ul style="list-style-type: none"> • Provide accurate information • Provide reasonable return on investment 	<ul style="list-style-type: none"> • Communication meetings • Annual Shareholder Meeting • Quarterly Institutional Investors' Conference
Suppliers	<ul style="list-style-type: none"> • Fair trading • Communication of TSMC CSR policy and approaches • Assist in CSR practices 	<ul style="list-style-type: none"> • Supplier information platform • Supply chain management forum • Supplier and contractor management including annual audit
Community	<ul style="list-style-type: none"> • Respect local culture and customs • Prevention of incidents and accidents • Assist in disaster rescue • Participate in public welfare activities 	<ul style="list-style-type: none"> • Association of Science Park Industries • TSMC Education & Culture Foundation • Internal charity associations
Government	<ul style="list-style-type: none"> • Comply with regulations • Pay taxes • Provide legislative consultation • Support promotion of new regulations 	<ul style="list-style-type: none"> • Association of Science Park Industries • Taiwan Semiconductor Industry Association, World Semiconductor Council • Chinese National Federation of Industries • Public legislative hearings
Non-profit Organization	<ul style="list-style-type: none"> • Participate in social welfare activities 	<ul style="list-style-type: none"> • Taiwan Business Council for Sustainable Development • Taiwan Corporate Sustainability Forum • Carbon Disclosure Project • Dow Jones Sustainability Index



The TSMC IR Team's Many "Best IR" Rewards

Each quarter, our management holds an investor conference, followed by a conference call, to report and discuss company performance with investors worldwide. On a daily basis, our Investor Relations team holds investor and analyst meetings worldwide. In 2008, more than 550 meetings were held either at the headquarter of TSMC or at financial conferences and institutional investors' offices. All these efforts are focused on serving investors with accurate, timely, and transparent information and financial data regarding TSMC business, operations and performance. In addition, E-mail updates covering all business activities and key events are regularly sent out to thousands of members of the investment community. Information regarding TSMC's business fundamentals and significant filings with regulatory authorities are posted on TSMC's corporate website in a timely manner.

As a result, investors surveyed annually by *IR Magazine* and other media have recognized the transparency of TSMC's disclosure policies, corporate governance commitment, and equitable treatment to shareholders. In 2008, awards and recognitions received by TSMC include:

AsiaMoney Magazine

- Overall Best Company in Taiwan for Corporate Governance
- Best for Disclosure and Transparency in Taiwan
- Best for Responsibilities of Management and the Board of Directors in Taiwan
- Best for Shareholders' Rights and Equitable Treatment in Taiwan
- Best Executive in Taiwan—Dr. Morris Chang
- Best Investor Relations Officer in Taiwan

The Asset Magazine

- The Asset Triple A Corporate Governance Awards 2008
- Corporate Governance Asia
- Corporate Governance Asia Annual Recognition Award 2008

FinanceAsia Magazine

- Best Managed Companies
- Best at Corporate Governance
- Best at Investor Relations
- Best for Most Committed To Strong Dividend Policy
- Best CFO

Institutional Investor

- Asia's Most Shareholder Friendly Company in the Technology/Semiconductors Sector

IR Magazine

- Grand Prix for Best Overall Investor Relations by a Taiwanese Large Cap Company

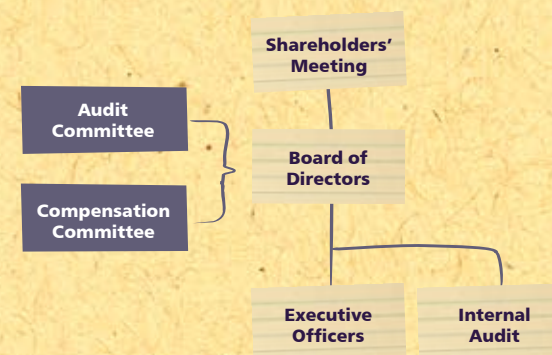
2.11 Corporate Governance

TSMC advocates and acts upon the principles of operational transparency and respect for shareholder rights. We believe that the basis for successful corporate governance is a sound and effective Board of Directors. In line with this principle, TSMC's Board of Directors established an Audit Committee in 2002 and a Compensation Committee in 2003.

TSMC has established the "Rules and Procedures of Board of Directors Meetings", "Audit Committee Charter", and "Compensation Committee Charter" to govern the operation and process of the Board of Directors, Audit Committee and Compensation Committee.

2.11.1 Governance Structure

TSMC's governance structure is as follows:



2.11.2 Board of Directors

TSMC's Board of Directors consists of eight distinguished members with a great breadth of experience as world-class business leaders or scholars. Four of the eight members are independent directors: former British Telecommunications Chief Executive Officer, Sir Peter Bonfield; Professor Lester Thurow from the Massachusetts Institute of Technology; former Acer Group Chairman, Mr. Stan Shih; and former Hewlett-Packard Chairman and CEO, Ms. Carleton (Carly) Fiorina (Note). Under the leadership of Chairman Morris Chang, TSMC's Board of Directors takes a serious and forthright approach to its duties and is a serious, competent and independent Board.

Note: All eight directors had been elected at the 2009 Annual Shareholders' Meeting. The newly elected directors are: Mr. Morris Chang, Mr. F.C. Tseng, Sir Peter Bonfield (independent director), Mr. Stan Shih (independent director), Ms. Carly Fiorina (independent director), Mr. Thomas J. Engibous (independent director), Mr. Tain-Jy Chen (representative of National Development Fund, Executive Yuan), and Mr. Rick Tsai.

In the spirit of Chairman Chang's approach to corporate governance, a board of directors' primary duty is to supervise. The Board should supervise the Company's: compliance with relevant laws and regulations; financial transparency; timely disclosure of material information, and maintaining of highest integrity within the company. TSMC's Board of Directors strives to perform through the Audit Committee and the Compensation Committee, the hiring of a financial expert for the Audit Committee, coordination with the Internal Audit department, and through the ombudsman reporting system.

The second duty of the board of directors is to provide guidance to the management team of the Company. TSMC's management quarterly reports to the TSMC Board on a variety of subjects, which also include the management of economic, environmental, and social performance, including relevant risks and opportunities, and adherence or compliance with internationally agreed standards, codes of conduct, and principles. The management also reviews the Company's business strategies with the Board. Furthermore, the management often reviews with and updates TSMC's Board on the progress of the strategies, obtaining Board guidance as appropriate.

The third duty of the board of directors is to dismiss officers of the company when necessary and to evaluate the management's performance. TSMC's management has maintained a healthy and functional communication with TSMC Board of Directors, has been devoted in executing guidance of TSMC Board of Directors, and is dedicated in running the business operations, all to achieve the best interest for TSMC shareholders.

The Board meets at least once every quarter. The Chairman convened four regular meetings and one special meeting in 2008.

2.11.3 Audit Committee

The Audit Committee assists the Board in carrying out its financial oversight responsibilities and other duties as set forth in the R.O.C. Company Act, the Securities and Exchange Act, and other applicable laws and regulations. Matters required to be reviewed by the Audit Committee include the Company's financial reports; auditing and accounting policies and procedures; internal control systems; material asset or derivatives transactions; offering or issuance of any equity-type securities; hiring or dismissal of an attesting CPA, or the compensation given thereto; and appointment or discharge of financial, accounting, or internal auditing officers. Furthermore, the Risk Management Division also reports to the Audit Committee on enterprise risk management activities on a regular basis.

TSMC's Audit Committee is empowered by its Charter to conduct any study or investigation it deems appropriate to fulfill its responsibilities. It has direct access to TSMC's internal auditors, the Company's independent auditors, and all employees of the Company. The Committee is authorized to retain and oversee special legal, accounting, or other consultants as it deems appropriate to fulfill its mandate, and meets at least four times a year.

The Audit Committee is comprised of all four independent directors and has engaged a financial expert consultant. Sir Peter Bonfield is Chairman of the Audit Committee, and convened four regular meetings and three special meetings in 2008.

2.11.4 Compensation Committee

The Compensation Committee assists the Board in discharging its responsibilities related to TSMC's compensation and benefits policies, plans and programs, and in the evaluation and compensation of TSMC's executives. The Committee meets at least four times a year.

The Compensation Committee is comprised of five members. All four independent directors serve as voting members of the Committee and the Chairman of the Board, Dr. Morris Chang, is a non-voting member. Mr. Stan Shih is Chairman of the Compensation Committee, and convened four regular meetings in 2008.

2.11.5 Corporate Compliance

For many years, TSMC has had an Ethics Code that has guided employees, officers and non-employee directors. TSMC's Ethics Code is designed to promote honest and ethical conduct, as well as support compliance with applicable laws and regulations. The principles embodied in this code express TSMC's policies regarding environment, health and safety, discrimination, bribery and corruption, conflicts of interests, and protection of company assets and reputation.

TSMC's management team closely monitors both domestic and foreign government policies and regulatory developments that could have a material impact on TSMC's business and financial operations, and have established related risk management procedures. As of today, TSMC has never been subject to any significant monetary fines and/or non-monetary sanctions for noncompliance with any statutory laws and regulations.

2.11.6 Anti-Corruption

Under TSMC Ethics Code (the "Code"), all employees should comply with all applicable laws, rules, regulations, and in-house regulations in every aspect of the Company's corporate activities at all times; all employees should strive to ensure that all corporate activities are in compliance with normal business practices and social ethics; all employees should maintain impartial, fair, and open relationships with all the stakeholders of the Company and will conduct business in a fair manner with them. TSMC's business practices are based on objective norms and integrity, and we do not accept gifts or special favors. The Code requires that:

- TSMC employees must observe high business ethics standards when dealing with suppliers, vendors, subcontractors, customers, competitors, and other relevant parties, including the government. employees or their family members and close relatives must not give or accept any gift, money, or entertainment to or from any TSMC suppliers, vendors, subcontractors, customers, competitors. Any form of bribery is strictly prohibited.
- When it is a required courtesy to accept gifts, gratitude or any form of hospitality, or where it is in accordance with accepted courtesy to maintain and promote normal business relationships by giving gifts to relevant parties, employees must abide by the principles set forth in the code.
- All employees should follow common business etiquette and refrain from frequent and excessive business hospitality when entertaining or being entertained. Employees should not give customers or vendors the impression that any form of hospitality, or gift giving is required to establish or maintain a relationship with TSMC.

- Gift giving and entertaining between managers and their subordinates should also follow the above principles, and should be based on the principle of simplicity.

To comply with this Code is the responsibility of every TSMC employee, officers, non-employee directors. To prevent any actual or apparent conflict of interest, the Code requires that all non-executive directors, officers, and employees working in sensitive departments make an annual conflict of interest declaration to the Company. The Company will take disciplinary action, including termination of employment, against employees who violate this Code. TSMC has also put in place various internal control systems to monitor and detect any actual or apparent irregularities within the Company's daily corporate activities so as to protect TSMC from the risk of fraud or corruption.

TSMC also established whistleblowing channels for complaints relating to major management, financial, and auditing issues. Employees may report any violations or suspicions of violations to the Chairman of the Independent Audit Committee, which is under the Broad of Director, or the Ombudsman headed by a vice president.

The Code is the highest principle when employees conduct business activities. The content of the Code has been reviewed by the highest level Operating Committee of the Company. All employees who newly join TSMC are educated and reminded to comply with the Code.

2.11.7 Political Contributions

TSMC has consistently remained politically neutral, but encourages employees to fulfill their duties as citizens and actively participate in politics and vote for the candidates the employees believe to be the best public servants. TSMC executives have also expressed concern and made public comments on political matters affecting industry and the economy. In the past, TSMC made legitimate political donations to local political parties between 2000 and 2004 to support the development of democracy in Taiwan. Due to a recent revision in Taiwan legislation, TSMC is now prevented from making political contributions as it is over 50 percent owned by foreign investors. TSMC has fully complied with such newly enacted law.

Human capital is one of the invaluable assets that support our business success. TSMC is committed to creating a corporate culture embracing innovation and diversity, and strives to build a challenging, yet enjoyable and rewarding work environment. In 2008, TSMC was awarded the "Most Admired Company in Taiwan" by *CommonWealth Magazine* for the twelfth consecutive year.

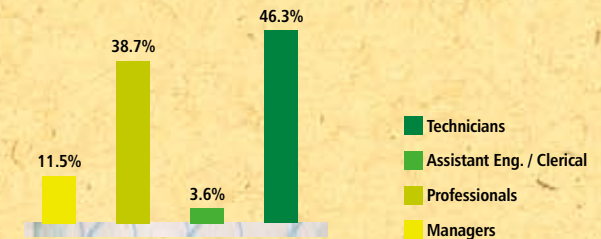
3.1 Employment

At the end of 2008, TSMC had 22,843 employees, including 2,618 managers, 8,830 professionals, 824 assistant engineer/clerical, and 10,571 technicians. Female managers comprised 11.2% of all managers. Non-Taiwanese employees comprised 11.6% of all TSMC managers and professionals.

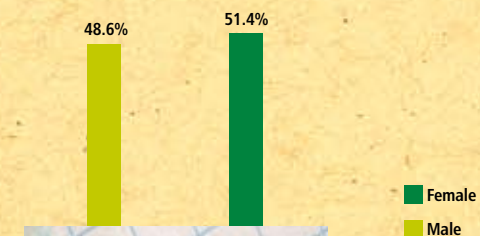
TSMC hires all employees equally based on his or her job qualifications regardless of gender, religion, race, nationality or political affiliation. Our employment policy is well-defined to ensure candidates and employees are treated equally in recruitment, deployment, development, evaluation and reward, and in engagement as well.

3.1.1 TSMC Workforce Structure

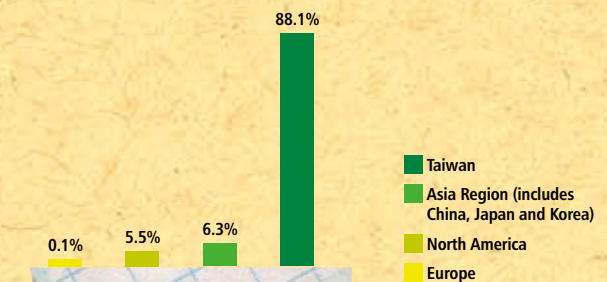
Employees by Job



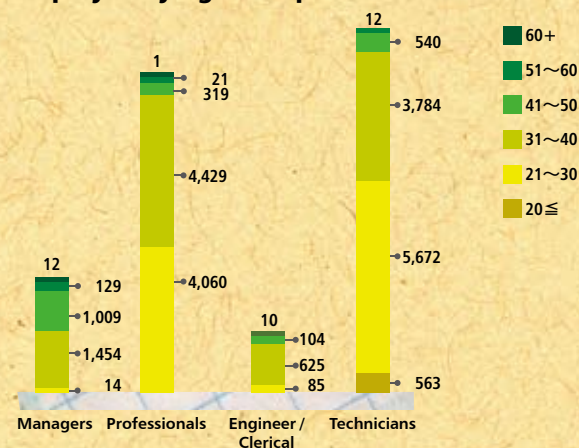
Employees by Gender



Employees by Geography



Employee by Age Group



3.1.2 Employee Retention

TSMC has focused on retention programs that provide employee career development opportunities, promote work-life balance, and enhance managers' capabilities. The average annual turnover rate of the past three years has been less than 10%. In 2008, turnover rate of male employees was 9.5% and female employees was 8.2%. By geography, turnover rate in Taiwan was the lowest (7.2%) and Asia region (includes China, Japan and Korea) turnover rate was the highest (30.8%) among all regions. 80 percent of turnover came from employees below age 20 and employees above age 50. The annual average turnover was about 8.9%.

By the end of the first quarter of 2009, TSMC's total turnover rate was 4.6% which includes more than 700 employees dismissed by the Company after 2008 performance appraisals. In this process, regrettably, the Company did not appropriately handle the dismissal, and did not fully consider the difficulty of

finding jobs under severe economic conditions. This led to dissatisfaction among many former employees. Therefore, the Company asked these former employees to return to TSMC in the middle of May 2009. For those who decided not to return, beyond the severance package set by Taiwan's "Labor Standards Law", TSMC distributed additional severance and goodwill payments hoping to provide certain financial support to ex-employees.

Turnover Rate by Gender

Gender	%
Male in Avg.	9.5
Female in Avg.	8.2
Total in Avg.	8.9

Turnover Rate by Location

Location	%
Taiwan in Avg.	7.2
Asia Region in Avg. (includes China, Japan and Korea)	30.8
North America in Avg.	10.3
Europe in Avg.	14.4
Total	8.9

3.1.3 Recruitment

TSMC is an equal employer and values employee diversity. Throughout 2008, TSMC offered more than one thousand job vacancies to attract talents around the world to participate in the company's growth. Even under the impact of the current economic downturn, TSMC continues to recruit research and



TSMC employment branding attracts talents with similar values and beliefs

development staff to build the Company's technology competitiveness. Recruitment is conducted via an open and fair selection process for external hiring as well as for internal job rotations. Recruiters and hiring managers are carefully trained to ensure the fairness and quality of recruitment.

In 2008, TSMC employed 77 individuals with disabilities, representing 0.35% of TSMC's total workforce of in Taiwan. In addition, TSMC has carried out a special "Academic and Corporate Collaboration Program" and has recruited and supported about 300 students from economically disadvantaged families to continue their education.

3.1.4 Abolition of Child Labor

Taiwan's "Labor Standards Law" states that no workers below the age of 15 shall be employed, and that children between the age of 15 and 16 are not permitted to perform heavy or hazardous work. To comply with the law, TSMC never hires employees less than 16 years old.

3.1.5 Performance Management and Development

TSMC's performance management system aims to integrate and improve the performance of individual employees and the organization as a whole. The five principles of our system are: personal accountability for individual performance, partnership and co-operation between supervisors and employees, ongoing engagement & communication, equal importance given to performance appraisal and development, and performance differentiation.

3.2 Employee Development

TSMC provides comprehensive learning opportunities to all employees with a wide range of general, professional and management training programs. During 2008, TSMC conducted 618,015 training hours with a total of 311,950 attendees. The average training hours were 26.20, 44.64 and 14.01 respectively for managers, indirect labor, and direct labor.

To help employees enhance the capabilities required for business success, TSMC continued to focus on diversified employee development initiatives and resources through well-rounded programs and approaches, as detailed below.

3.2.1 Development and Training Programs

Newcomers entering TSMC begin with New Employee Orientation, consisting of classroom learning and job orientation that shapes a simulated scenario of the job, people, objectives, and the road ahead. In 2008, 1,991 newcomers participated in new employee orientation totaling 21,901 training hours. Rather than leaving newcomers to work alone, managers and our well-established Buddy System are actively involved in the assimilation process. By the end of 2008, TSMC developed 2,317 buddies to help newcomers quickly adapt to our environment and culture.

Comprehensive Training Programs



The Individual Development Plan is tailor made for each employee according to the employees' development needs along with business needs. TSMC has General training Programs and Professional/ Functional Training Programs to comply with government regulations, and provides technical and professional training required by various functions, including TSMC's unique Personal Effectiveness Training series. In addition, TSMC also offers Direct Labor Training that enables production line employees to acquire the knowledge, skills, and attitudes they need to perform their job well and helps employees gain certification for operating equipment.

TSMC has developed both corporate-level and function-level talent development processes to nurture future leaders. These processes are led by the CEO and respective function heads, and are powered by development programs including leadership assessment, job/project experience, executive coaching, mentoring by senior managers and training courses. The CEO and senior executives meet regularly to review leadership development progress and discuss opportunities and plans. TSMC has implemented specific Management Training

	2006	2007	2008
(A) Headcount as of 12/31	21,302	22,166	21,868
(B) Training Hours	703,053	698,564	618,015
(C=B/A) Average Training Hours per Employee	33.00	31.52	28.26

*WaferTech is excluded.

	Manager	Indirect Labor	Direct Labor	Total
(A) Headcount as of 12/31/2008	2,550	9,160	10,158	21,868
(B) Training Hours	66,818	408,884	142,313	618,015
(C=B/A) Average Training Hours per Employee Category	26.20	44.64	14.01	28.26

*WaferTech is excluded.

roadmaps, including a mandatory New Manager Program for first-time managers, an Experienced Manager Program for middle-level managers, and a Senior Manager Program for senior-level managers, to equip them with skills for managing people, managers, and business to act as future leaders.

To facilitate knowledge sharing and leverage internal know-how, TSMC cultivates internal trainers through a well-established internal trainer development system. In 2008, 47 internal trainers were developed to accelerate knowledge, skills, and attitude delivery through diversified training programs. By the end of 2008, there were a total of 533 employees certified as internal trainers to foster TSMC employee training

3.2.2 Diversified Development and Learning Approaches

Employees access rich resources through diversified development and learning approaches, including on-the-job training, coaching, mentoring, job rotation, on-site courses, e-learning, external learning opportunities, seminars and speeches.

In order to speed up knowledge sharing and fully leverage learning technology, TSMC has a customized e-learning system to provide varied training courses. By the end of 2008, 1,304 e-learning courses had been offered, covering Engineering and Technical courses, Functional and Professional courses, Management courses, and others. A total 209,627 attendees participated in 179,950 hours of e-learning.

As for external training, employees are encouraged to participate in various development programs. In 2008, a total of 702 employees took short-term courses totaling 9,860 training hours, 535 employees took advanced studies totaling 168,740 training

hours, and 614 employees took language courses totaling 16,722 training hours.

Diverse Means for Learning



3.2.3 Training Effectiveness

TSMC takes care to ensure the quality and effectiveness of training programs, and evaluate programs in multiple ways.

First, TSMC evaluates results of on-site training programs through trainee questionnaire feedback, which focuses on the relevance of training objectives and contents, the delivery quality of the trainers and the trainees' perceived return on investment. TSMC sets a specific score standard for every program evaluated and reviews the ones that do not meet the criteria defined as OOS (Out of Spec). When training programs fail to meet standards, serious review and improvement actions are taken for improvement. In 2008, the overall feedback score was close to 90 out of a possible 100.

To further ensure that training is applied to key skills and supports effective on-the-job performance, TSMC tracks training results through behavior-based observation feedback and post-course application competitions.

For behavior-based observation feedback, TSMC selects certain programs to ask for feedback from

trainees, as well as trainees' subordinates and supervisors, after a certain period from the training course to see if trainees apply the knowledge, skills, and attitude they learn from the training course to daily work.

For post-course application competitions, TSMC took the Personal Effectiveness Training series as pilot in 2008 to encourage learning application. During the campaign, trainees first applied the learned skills and knowledge in their job and then presented the application results to demonstrate the linkage between training and their job performance. Along with the competition, a post-course survey was conducted and over 99% of participants reported that they had applied what they learned in class to daily tasks.

3.3 Compensation and Benefits

TSMC values every employee, and entitles employees to a comprehensive compensation and benefits program above the industry average. TSMC's compensation policy is based on the following principles:

- Must be in the interests of both shareholders and employees.
- Must be able to attract and retain good employees.
- The company's success should create moderate wealth for high-level, long-term managers.

TSMC does not discriminate on the basis of gender in starting salary, and the ratio of men's starting salary to women's is 1:1. TSMC not only complies with local regulations but also offers a variety of competitive compensation programs to motivate employees by aligning their personal development and contributions with the company's long-term business achievements. TSMC is committed to pay-

for-performance incentive programs that reward employees for the value they add to the company. Award criteria are based on a combination of corporate, team, and individual performances.

All employees are offered benefits programs including insurance programs and leave programs. The insurance programs include labor insurance, national health insurance, and group insurance. In addition, paid annual leave, sick leave, maternity leave, and flexible floating holiday arrangements are granted to employees via leave programs.

Employees in Taiwan are eligible to participate in pension plans as below:

• Defined Benefit Plan

TSMC has a defined benefit plan under the Labor Standards Law that provides benefits based on an employees' length of service and average monthly salary for the six-month period prior to retirement.

• Defined Contribution Plan

TSMC has made monthly contributions equal to 6% of each employee's monthly salary to employees' pension accounts starting from July 1, 2005

3.4 Employee Relations

TSMC is committed to creating an open communication environment and fostering a dynamic and fun work environment. Various programs have been launched to facilitate communication between the company and employees, develop employee recognition, and sustain harmonious labor relations.

3.4.1 Open Communications

TSMC values quality two-way communication between employees and management levels for conveying management policies to employees and

encouraging employees to voice their opinions. We believe that long-term success depends on employees' understanding of corporate business strategies, technologies, and financial results. TSMC communicates with employees through diversified channels on a regular basis, such as face-to-face communication meetings hosted by the CEO or senior executives. The web-based *e-Silicon Garden* magazine is another channel to engage with employees and their families.

Keeping communication channels open is one of TSMC's Business Principles. The employee survey and the Ombudsman channel aim to collect voices on significant management or financial related issues/concerns.

The Employee Suggestion Box, HR Call Center and Fab Caring Circle are designed for communication on working environment, HR-related or personal issues. Through the above channels, the company has received hundreds of suggestions and certain complaints for improving the working environment. The majority of the suggestions are related to management, Proprietary Information Protection, and employee benefits. Most employee complaints are regarding canteen/transportation/dormitory services and job rotation opportunities related issues.

Annually, TSMC conducts an Employee Survey with the aim of evaluating corporate culture, individual awareness and management conditions. Survey results are provided for line managers to improve management excellence, revitalize the organization, and create open communication workplaces.

Communication Structure



TSMC has delivered world-class business results for many years with the collaborative efforts of management and employees. Our numerous communications channels on employee benefits, employee opinions, and our ombudsman system have been recognized as enterprise benchmarks. However, we regret that a few labor disputes occurred after our 2008 annual performance appraisal. After the company's sincere communication with these former employees, the decision was made to invite them to resume work in the company. For those who chose not to return, economic assistance has been provided. Furthermore, the company has offered them the greatest consideration and assistance, to put an end to the dispute.

In this unpredictable environment, we firmly believe that solid labor relations provide strong backing to the company's sustainable development. The company's management team has learned important lessons from this dispute. To harmonize labor relations and create a win-win situation for the company and its employees, execution of the Performance Management and Development system (PMD) should be positive and constructive, and mutual and timely employee communication based on existing platforms should be enforced.

3.4.2 Employee Recognition

TSMC has a tradition of recognizing noteworthy performance in support of organizational goals, openly commending outstanding team and individual accomplishments. All awards encourage employees to aggressively pursue continuous improvement, attain high levels of excellence, and increase overall competitiveness. The recognition programs include:

- The Innovation Award and Customer Partnership Award, established by the Chairman Dr. Morris Chang in 2003, aims to cultivate innovation and customer partnership culture. Individuals or teams who are the original sources of exceptional innovations in TSMC as well as those who have made significant contribution in strengthening customer partnership are nominated and selected as award winners. In 2008, twelve outstanding teams were rewarded Innovation Awards and six outstanding teams were rewarded Customer Partnership Awards.
- Employee Role Model Awards, Outstanding Engineer Award and the Total Quality Excellence Conference aim to honor and stimulate employees who have applied specialized technology and knowledge to create enhanced value for TSMC.
- Our Service Year Recognition aims to appreciate employees' long term commitment and contribution.
- TSMC encourages and supports employees to compete for external awards. TSMC employees have been granted many national awards such as: the Taiwan Role Model Award; the Taiwan National Management Excellence Award; the Taiwan Outstanding Young Engineer Award; the Taiwan Distinguished Engineers Award; the Hsinchu Science Park Outstanding Labor Award.

3.4.3 Human Rights

TSMC believes that all employees should be treated with dignity and respect. TSMC's Human Rights Policy aims to communicate our social and ethical values to our customers, suppliers, investors, employees

and the communities in which we operate. TSMC is committed to upholding the internationally recognized human rights of workers and respects internationally proclaimed human rights, namely, the United Nations Universal Declaration on Human Rights, and the International Labor Organization's fundamental conventions on core labor standards. There were complaints filed by employees through company's ombudsman system in 2008. None were related to discrimination, and all were appeals against unfair performance appraisals, which were settled satisfactorily.

The company not only offers equal opportunities to job applicants and employees, but also ensures the basic human rights of employees and families. Senior executives are required to sign an annual declaration confirming no breaches of the policy occurred during the course of the year.

TSMC has established and actively advocated policies and measures for ensuring gender equality and a fair working environment in accordance with employment laws and sexual harassment prevention policy.

At the same time, TSMC conducts regular training to all employees in sexual harassment awareness and prevention, and holds a learning session during newcomer orientation programs. The company also holds annual promotional activities for the awareness and prevention of sexual harassment.

3.4.4 Freedom of Association

The company respects the employee's rights entitled by the law, and never impedes the employee's freedom of association.

3.5 Work and Life Integration Program

TSMC provides thorough health services in four areas: health care; health promotion; occupational health; and an employee assistance program to maintain and promote the quality of employees' health and life.

3.5.1 Health Care and Health Promotion

TSMC offers annual employee health examinations, consultation services as well as on-site clinics and a dental clinic for convenient employee medical service. Health promotion activities for employees include fitness programs, women's care programs, mother's rooms, body weight control programs, massage and chiropractic services, hepatitis and flu vaccinations, and health lectures. All these contributions were recognized by the Bureau of Health Promotion with the Accredited Healthy Workplace badge and smoke-free workplace badge.



On-site Outpatient Services

3.5.2 Occupational Health

TSMC Health Centers operate 24 hours a day to implement corrective and preventive actions for occupational injuries. Emergency medical teams are given 28 hours of training to respond to emergencies. TSMC's occupational injury rate has shown a significant decrease of 1.5‰ over the past three years, and there have been no controversies, fines or settlements relating to health and safety cases in recent years. TSMC also promotes correct ergonomics with preventive programs for healthy posture and environment.

3.5.3 Employee Assistance Program

The TSMC Employee Assistance Program provides individual counseling, group sharing, workshops, mental assessment, as well as lectures about personal and family issues for employees' multidimensional well being.

3.5.4 Comfortable Working Environment

TSMC provides on-site services such as travel agents, convenience stores, dry cleaning, coffee shops, fitness centers, a barbershop and bookstores.



Bakery and book store provide employees with nourishment

3.5.5 Employee Accommodation, Dining, and Transportation Services

TSMC cafeterias offer a wide variety of meals such as Japanese, Cantonese, and Taiwanese cuisine, as well as many healthy options. The company also provides comfortable dormitories and shuttle buses for convenient transportation to work.

3.5.6 TSMC Employee Welfare Committee- Recreation, Sports & Community for Both Employees and Families

The TSMC Employee Welfare Committee (EWC) was established under the requirements of Taiwan's Employee Welfare regulations. Its key mission is to provide comprehensive welfare services to all employees, and help to keep a good balance between work and life. The EWC organizes employee activities, provides in-house recreational facilities and amenities, and extends these services to employees' families.

The committee consists of 24 members who are appointed by the management team and elected representatives from each function. The EWC is led by a Chairman and a Secretary General for daily operations.

In 2008, EWC expenditures amounted to about NT\$210 million. Expenditures included subsidies for special occasions, holiday gift vouchers, emergency aid, artistic/recreational activities and departmental outings.

Activities promoting work-life balance in 2008 included:

- Company-Wide Events: TSMC Sports Day and TSMC Family Days. A total of 57,000 participants including employees and family members attended.

- Sports Activities: Over 100 sports competitions (basketball, ping-pong, badminton, swimming, etc.) were carried out and attracted 8,000 employees' participation.
- Arts and Literature Activities: Over 42 expert talks, 18 family-oriented arts programs, and 234 movies were presented to the employees and their families with a total of 18,000 participants.



2008 TSMC Sports Day



Swimming contest at TSMC Sports Center

- Social Clubs: Sponsored over 50 social clubs (eg. chorus group, cycling club, triathlon club, swimming club, aerobics club, belly dance club, calligraphy club, Tai-Chi club, etc). Approximately 6,000 employees participated in various club activities.
- Departmental Outings: Promoted relationship-building and interaction between colleagues and within departments by subsidizing group outing expenses. Some 18,000 employees and family members enjoyed the benefit of various outings.
- TSMC Sports Center/Fitness Center: Two large sports centers located in Hsinchu and Tainan and five on-site fitness centers promote regular exercise and employee health. We provide facilities and equipment competitive with gyms and health clubs. In 2008, the centers received a total of 15,000 visits including employees and family members, and served over 6,000 employees every month on average.



Members of Biking and Triathlon club enjoyed their work-and-life balance activities

3.6 Corporate Security and Risk Control

The COSD department is in charge of the company's security control, including proper classification and management of TSMC confidentiality, physical security of workplaces and facilities, individual security consultation for employees, and police contact when needed. If violations against Proprietary Information Protection (PIP) policies occur, warnings or punishments will be delivered depending upon severity. At the same time, all security personnel are strictly certified and well trained to ensure effective implementation of related affairs. In 2008, COSD held a total of 18 "anti-fraud" campaigns to promote specialized knowledge. In addition, an exclusive security consultation website has been set up to provide personal and household security tips. These efforts successfully help achieve the goal of "zero victims" among employees.

3.7 Safety and Health

3.7.1 Safety and Health Management

TSMC's Environmental, Safety, and Health Policy clearly states that the company's highest priority is protecting the safety of employees, followed by protection of the environment, property, and production. TSMC believes that good safety and health management is an important part of the company's commitment to take care of employees and their families, and a way of giving back to society and the community. In practice, TSMC's safety and health management is based on the framework of the OHSAS 18001 management system, and uses information technology to continually improve our "Plan-Do-Check-Act" (P-D-C-A) cycle to prevent accidents, improve employee safety and health, and protect company assets. All TSMC fabs passed the 2007 version of OHSAS 18001 certification in 2008.

For TSMC's safety and health management organization, please review "6.1 Green Management Organization and System". The current safety and health management operations can be divided into several areas as below:

Hardware Safety and Health Management

The effectiveness of a facility's hardware safety and health performance is largely determined in the design phase. TSMC follows local regulations, international codes, and internal standards when planning, designing, and building new facilities or rebuilding existing facilities for production, IT, general services or other purposes. A designated team takes responsibility for safety and health management using the procedures below:

- New tool and chemical management procedure: TSMC's New Tool and Chemical Committee (NTCC) ensures that all new tools and chemicals meet international codes such as SEMI-S2 as well as local regulations and TSMC standards. In order to reduce risks before operation, the committee not only reviews tool safety, but also evaluates the related safety issues of location, accessory equipment, and facility system connections. To comprehensively evaluate the safety of new tools and chemicals, the NTCC includes experts in a broad variety of fields, including process, equipment, facility and safety specialists. In 2008, the NTCC reviewed 51 new tools and 89 new chemicals.
- Safety management of change (SMOC): All new TSMC fab designs and changes in design or operation procedure in existing TSMC fabs that could alter safety or fire prevention conditions are required to follow SMOC procedure. SMOC cases

undergo strict review by facilities, equipment, ISEP, and ESHP departments before implementation. There were 642 SMOC reviews in 2008.

- New tool installation and new facility system safety sign-off procedure: All production-related tools and new facility systems must follow a three-phase safety sign-off procedure before operation. In phase 1, the tool sponsor must confirm interfaces between facility systems and the new tool are under safe conditions before turning on non-HPM (Hazardous Production Materials) related utilities. In phase 2, the tool sponsor must verify hazardous gases and chemical supply systems, fire protection, toxic gas monitoring, tool safety interlocks, laser and radiation protection, the tool's local gas or chemical delivery system, and exhaust abatement before turning on the tool. In phase 3, the tool sponsor must remedy any shortcomings found in phase 1 and phase 2, execute IR scans for electrical utilities, and put all safety requirements into the new tool's regular maintenance procedures. In TSMC's Fab 14, for example, there were more than 19 process tool sign-offs per month in 2008.
- Used tool safety control: In addition to new tool safety controls, TSMC has also set up a procedure for used tool safety management. All used tools purchased by TSMC are required to go through this safety control procedure, which uses tool configuration inspection data and a safety interlock verification checklist to confirm that tool settings and safety interlocks are functioning correctly. After these basic checks, the tool must also go through tool installation safety signoff procedures to ensure it is safe for use after release. TSMC installed a total of 38 used tools in 2008.

Operation Safety and Health Control

In TSMC's daily operations, we not only prevent accidents through strict controls on high-risk work, contractor management, chemical safety controls, and routine audits, but also maintain emergency response plans and hold regular drills to minimize the impact of potential accidents on the environment, society, employees and property.

- High-risk work control: TSMC's high-risk work management procedure classifies any work that may cause serious injuries, casualties or major property damage as level-1 high-risk operations. In total, TSMC has identified 21 high-risk tasks, including the assembly or dismantling of scaffolding over five meters in height, which was identified in 2008. Before beginning high-risk work, the sponsor must obtain a high-risk work permit and approval by relevant managers. In addition, TSMC requires case sponsors and contractors' supervisors to supervise critical tasks such as disconnection of gas piping or tank entry from beginning to end.
- Contractor management: TSMC values the safety of our contractors just as we value the safety of our own employees. Before placing purchasing orders, TSMC requests that contractors list a fixed-rate safety management fee and provide qualified safety staff. In addition, TSMC requires contractors intending to provide high-risk work services to have OHSAS 18001 certificates and also requires their employees performing such services to pass TSMC's high-risk work skill certification. To help contractors understand hazards, all contractors' workers must take a "Contractor ESH Training" course before entering job sites. All projects must perform a Job Safety Analysis (JSA) to identify risks, and the scope

of the work, hazards, and safety requirements are reconfirmed at contractor meetings. The specific risks and safety requirements of daily work are announced to all workers at a “tool box” meeting. The TSMC sponsor must perform on-site audits to find out potential risks. Any unsafe behavior or environmental conditions are immediately rectified. TSMC disciplines contractor violations with a record of the violation, fines, or suspension of the contractors’ eligibility to work for TSMC. The record of the violation will serve as a reference to TSMC’s facilities and procurement departments when issuing future purchase requests.

- **Personal protective equipment (PPE):** TSMC requests that employees use PPE to reduce exposure to hazards to an acceptable level. Each department using PPE cooperates with the ISEP department to develop a PPE program that addresses the hazards they face, the selection, maintenance, and use of PPEs, the training of employees, and monitoring of the program to ensure its ongoing effectiveness. In TSMC, all PPEs can be acquired at any time. Each site also exhibits PPEs and displays posters in periodically to heighten employee awareness.
- **Enhancement and promotion of ergonomics:** TSMC takes action to prevent musculoskeletal injury that is caused by equipment design, heavy loads and improper posture. On equipment design, TSMC requires that all new tools must meet SEMI-S8 requirements and take some supplementary measures to reduce ergonomic risk. TSMC endeavors to automate 300mm front-opening unified pod (FOUP) transportation due to the innate

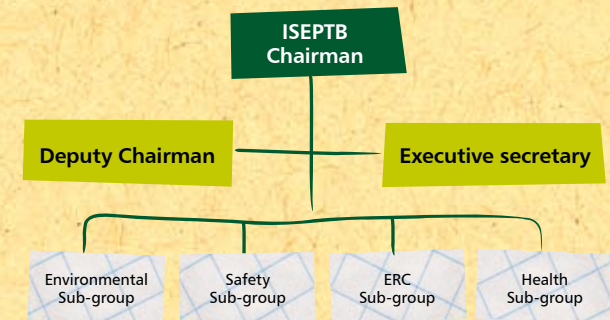
weight of 300mm wafers in order to eliminate accumulative damage caused by long-term manual carrying. TSMC 300mm fabs have achieved 99.9% in automatic transportation.

To address the issue of improper posture, TSMC offers instructional videos on exercises that can be performed in the office, as well as ergonomics evaluation software for office staff. TSMC also includes ergonomics in our technicians’ one-hour training programs to enhance employee’s awareness and prevention of musculoskeletal injury.

- **Workplace environment assessment:** TSMC performs semi-annual workplace environment assessments which include physical hazards such as CO₂ concentration, illumination, noise, and chemical factors that are identified by domestic law. If the assessment finds abnormal measurements, ISEP performs job observations and engineering improvement until exposure risk reaches acceptable levels.
- **Special health examinations:** TSMC arranges annual special health examinations for employees performing special tasks, such as those involving radiation, noise, and certain chemicals. If the result of the health examination is classified as level-2 or above, the Wellness Center will provide historical health examination records and workplace environment assessment results for review by an occupational therapist. In 2008, a total 2,414 employees took special health examinations, and the results were tracked and submitted to the Science Park Administration.

- **ISEP Technical Board:** TSMC has set up a cross-fab function technical board (TB) to coordinate and integrate cross-fab operation needs. The TB consists of four subgroups responsible for safety, emergency response, health, and environmental protection respectively. Site ISEP department managers are selected to lead the subgroups, which include site section managers and related engineers, in monthly meetings. Agenda at the meetings include items from operation alignment to abnormal events at individual fabs and common conclusions and/or solutions for cross-fab execution. In addition, there is a TB-level meeting held by TB chairmen to review the conclusions reached in each subgroup and gain the support of each site ISEP department manager.

ISEP Technical Board Organization



- **Programs in 2008**

- Arsenic exposure risk assessment and improvement**

In 2008, all TSMC sites performed a cross-fab arsenic risk assessment and improvement program. The program tracked arsenic usage and disposal covering IMP tools, PR strip tools, parts cleaning, local scrubber PM and house vacuums which may involve arsenic contamination. Using data from the assessment, TSMC created a comprehensive arsenic operation management procedure and risk assessment model.

- Tool parts clean risk assessment and improvement**

Risks caused by the cleaning of tool parts are often neglected in the industry, and TSMC performed a cross-fab review to understand and lower potential risks. ISEP departments at all sites performed data investigation, job observation (JOP), and on-line by-products measurement to identify process tools with potential high exposure risk. After TSMC identified eight tools with high risk exposure in parts cleaning, it corrected the standard operating procedure in cleaning those tools, and deployed the procedure to all fabs. TSMC also executed an audit of all outsourced parts cleaning vendors to verify their operational risk controls.

ESH E-platform: TSMC established a total ESH management (TSM) system in 2008. This web-based platform integrates five ESH IT systems covering planning, doing, checking, acting and information such as safety management of change, contractor management, accident/incident CAR, conclusion tracing, ESH indicators, and others. TSMC aims to reduce costs and risks while improving management efficiency and effectiveness through cross-fab implementation of this platform.

- GHS system implementation**

To meet regulatory requirements of the Globally Harmonized System of Classification and Labeling of Chemicals (GHS), TSMC requested all chemical suppliers to modify their chemical MSDS on TSMC's eMaterial online database. By the end of 2008, 95% of chemical MSDS on the database had been updated. In addition, in order to minimize the possibility of employee exposure to carcinogenic, mutagenic and reproduction-toxic chemical materials, TSMC set up a task force to study the risk, observe site operations, assess protection of employees, and to draft a document to control chemical usage.

- Safety and health awareness promotion**

To improve employee ESH, TSMC performed a series of promotions regarding safety and health in 2008. Through e-mails, posters, quiz competitions, and displays, we educated employees in topics ranging from knowledge of on-job and off-job safety, PPEs, traffic safety, use of firefighting equipment, principles of emergency response, ergonomics, and fitness.

- Social Engagement**

TSMC's outstanding ESH team dedicates itself to minimizing risks to TSMC, shares its rich management experience, and uses its influence in the semiconductor industry to make contributions to society.

- **Supply chain:** TSMC reduces accidents and improves contractor ESH management through audit and assistance programs. We hold an annual Supply Chain Management Forum as well as an ESH and Risk Management Forum to improve TSMC's green supply chain by sharing management experience and discussing important topics such as RoHS, PFOS, and Climate Change. Our close cooperation with companies in our supply chain over the past

several years has begun to yield results as some suppliers have started to embed ESH management models into their own systems, providing additional protection to laborers.

- **High-tech Industries:** We believe safety and health are universal values in society. TSMC openly shares its safety and health experience through the Association of Industries in Science Park Safety and Health Committee.

3.7.2 Emergency Response

The first priority of TSMC's disaster response policy is to ensure the safety of personnel, followed by avoiding pollution of the environment, and finally to reduce property losses and maintain normal production. We believe that when natural disasters or accidents occur, proper treatment in the incipient stage of the event not only minimizes the chance of personnel injury and environmental pollution, but also significantly reduces losses and lowers the difficulty of recovery to production. TSMC therefore pays considerable attention to emergency response. From emergency equipment setup, creation of emergency procedures, training, drills, and other preparations, TSMC follows the process of "planning, implementation, evaluation and improvement".

- Emergency Response Center Hardware**

All TSMC fabs maintain an emergency response center, or ERC. Two full-time ERC staff are on duty around the clock. If any accident or abnormal event occurs, ERC staff on duty will be informed immediately through monitoring systems. An emergency response team will be promptly and effectively assembled by staff on duty to handle the event. The following systems are equipped at each ERC:

- Rescue Procedure and information: includes plant layout, tool maps, and emergency response flowcharts
- Life safety system: includes fire and gas monitoring systems, emergency ventilation systems, CCTV systems, gas and chemicals shutdown EMO, and paging systems
- Emergency response equipment: includes various types of protective clothing, personal protective equipment, self-contained breathing apparatus, portable detectors, and leak handling equipment

In addition, to continue emergency response if the ERC is affected by natural disasters and to facilitate the rapid establishment of a command post, each factory has designated a second ERC outside of the fab equipped with appropriate emergency response equipment. Monitoring systems in the first ERC can be accessed through wireless networks while ERC on-duty staff evacuate to the second ERC.



Emergency Response Center

Software in Emergency Response

TSMC has detailed emergency response organizations, handling procedures and business continuity plans for a variety of unexpected situations such as earthquakes, fires, chemical spills, toxic gas leaks, sudden interruption of utilities and natural disasters. Emergency response team members are trained in communications, disaster relief operation, factory systems, on-site control, rescue, and logistic support. Types of training include the following:

- ERT training: includes ERT basic and advanced training, and incident commander training
- Fire fighting training: Professional fire fighting skill training at the Hsinchu Fire Bureau training base
- Quarterly ERT drill: A quarterly drill is requested for each production-related department to build familiarity with emergency response skills, equipment and factory surroundings.



Emergency Response Drill

Emergency Response in WaferTech

In 2008, WaferTech held a county-wide Hazardous Materials Drill at its facility. The drill involved both private and public emergency responders with the goal of being prepared to work together to respond to hazardous materials emergencies. In addition to WaferTech staff, participants included the Camas Fire Department, Vancouver Fire and HazMat, Camas Police Department, Clark Regional Emergency Services Agency, Linde Gas, local schools and school districts, Southwest Washington Medical Center, Legacy Hospital, Clark County Public Health and the Washington Department of Ecology. More than 30 people participated in the drill.

Participants worked out how to respond to a gas release just outside of the WaferTech property. Schools and hospitals were closely involved and in the end there was a great sense of accomplishment of working together, so that in a real emergency all would be better prepared.



WaferTech Emergency Response Drill

WaferTech also participates in the Camas Fire Department's annual Open House, where EH&S staff share their Safety, Emergency Response and Environmental programs with the local community.

Social Engagement

Each TSMC factory performs annual emergency response and evacuation drills to train TSMC employees as well as contractors and vendors. In 2008, the drills included a wide range of scenarios such as fire, gas leaks, chemical spill, earthquakes, power outage, and confined space accidents. Our experts also participate in community emergency response exercises from time to time and serve as judges. Examples are as follows.

- Hsinchu County toxic substances disaster response drills: TSMC Fab 8 worked with the Hsinchu County Environmental Protection Bureau to host an annual toxic substance leak drill in 2008. In total, eleven companies and 94 people joined the drill, while 208 people from around the Hsinchu area were observers.
- Tainan Science Park Earthquake Disaster Drill: TSMC Fab 6 and Fab 14 worked with the South Taiwan Science Park to host an earthquake response drill in 2008. This drill simulated an earthquake with a magnitude higher than level seven, or affecting more than two plants at the same time. The purpose was to practice and become familiar with the most rapid and effective disaster handling procedures and skills.

3.7.3 Corporate Contagious Disease Prevention Project

Novel Influenza has the potential to mutate into a disease transmissible from human to human, and the World Health Organization (WHO) estimates that such a mutation would be highly contagious and severely impact global health. To control this major potential risk, TSMC drafted the "TSMC Novel Influenza Prevention Plan" and established a task force in 2005. The plan is based on our SARS prevention experience and also integrates the SARS experience of the Taiwan Center for Disease Control's "Novel Influenza Combat Plan", Singapore's "Novel Influenza Preparedness and Emergency Response Plan", and consultations with domestic epidemiological experts and distinguished medical doctors.

The "TSMC Novel Influenza Response & Prevention Plan" includes global information collection, employee disease prevention education, stockpiles of disease prevention materials, kitchen disease prevention management, leave and travel management, case management, notification and medical assistance, procedures for mask wearing and hand washing, supplier/contractor and visitor restrictions, body temperature measurement procedures, work-at-home plans, routine disinfection of the work environment, reduced meeting frequency, medical waste treatment, and other preventive measures. TSMC's Senior VP of Materials and Risk Management also holds regular meetings to review disease prevention preparations. If Novel Influenza cases occur in Taiwan, TSMC will

initiate different plans in accordance with the stage of the epidemic to lower its impact on employees and operations.

In addition, TSMC invited government health authorities to visit our semiconductor cleanroom environment and discuss quarantine measures for suspected cases of Novel Influenza. The goal of the visit was to set correct and efficient procedures to prevent contagious diseases, ensure employee health, and minimize impact on operations. TSMC also shared its "Contagious Disease Prevention Plan" with the government and industrial partners.

In addition, TSMC accepted an invitation from Taiwan's Disease Control Bureau to participate in a May 2008 APEC Health Taskforce E1 Net meeting to share our experience in cooperating with the government to set up our "Contagious Disease Prevention Plan".

Following worldwide outbreaks of Novel Influenza A (H1N1) in 2009, TSMC convened related departments immediately to announce the company's response measures in order to protect employee health and company operations. In line with our existing procedures, TSMC will continue to update its measures in response to further developments in the H1N1 pandemic.

3.7.4 Occupational Injury and Illness Statistics

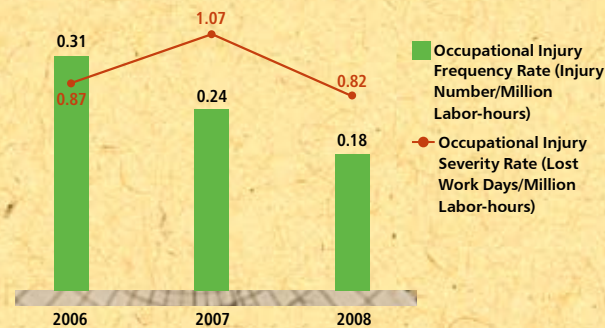
TSMC uses the Disabling Injury Frequency Rate (FR, cases of disabling injuries and illness per million labor-hours) defined by Taiwan's Council of Labor Affairs (CLA) to evaluate the effectiveness of the Company's occupational health and safety programs. TSMC's FR has consistently been significantly lower than Taiwan's national average.

TSMC strives to maintain a safety culture that ensures a safe and healthy workplace. The causes of all occupational injuries are analyzed and improvement programs are implemented based on the data. Our program further requires us to regularly collect and analyze data by departments and types of high-frequency occupational injuries. In particular, these reviews focus on interdepartmental incidents or repeated incidents as first priority.

Disabling Injury Frequency Rate (FR) and Severity Rate (SR)

The FR and SR of TSMC fabs in Taiwan were 0.18 and 0.82 respectively in 2008 -- much lower than Taiwan's semiconductor industry FR of 0.62 and SR of 33.5.

TSMC Fabs in Taiwan Occupational Injury Statistics



3.7.5 Disaster Risk Management Earthquake Protection

Disaster Risk Management and Earthquake Protection

Taiwan, a densely-populated island located on the seismically active "ring of fire" circling the Pacific Ocean, is one of the world's most high-risk regions for earthquakes. As a multinational corporation based in Taiwan, TSMC believes that while earthquakes cannot be avoided, its risks can be assessed and controlled. TSMC's strategy is to simultaneously enhance the seismic resistance of facilities and emergency response skills.

• Seismic Resistance of Hardware and Facilities

Following the September 21, 1999 Chi-Chi earthquake in Taiwan, TSMC conducted a comprehensive investigation and improvement program based on the technologies available at that time. In addition to repairing damaged buildings, facility systems and process tools, the company also enhanced the seismic anchorage of equipment and facilities. In recent

years, the company has also adopted new anti-seismic concepts and methodologies and carried out a series of earthquake protection projects. Based on the semiconductor industry's special requirements, a project team studied both international and Taiwanese standards, assessed and improved facility firmware including buildings, raised floors, facility systems, process tools, automated materials handling systems (AMHS), laboratory equipment, and IT equipment as well as measures such as personnel training, emergency response, and management systems.

TSMC's anti-seismic projects in the past several years included analysis of the most likely potential earthquake fault lines, building seismic durability evaluation, quick earthquake damage assessment, post-earthquake risk evaluation, reinforcement of existing buildings, and reinforcement and anti-seismic design for equipment. In 2008, TSMC conducted studies and evaluations of the earthquake resistance of raised floors, evaluated the seismic resistance of cable trays and improved the seismic resistance of furnace tube equipment design. We also continued our analysis of the most likely potential earthquake fault lines and established an earthquake evacuation procedure.

TSMC has established an anti-seismic design review process and set up related procedures, as well as procedures for certification of professional engineers. TSMC also performs regular site inspections and improvements, and holds training classes. At the same time, the company closely cooperates with external experts such as structural engineers, the National Center for Research on Earthquake

Engineering (NCREE), the Industrial Technology Research Institute (ITRI), academic organizations, and the Constructions and Planning Agency, Ministry of the Interior (CPAMI) to efficiently enhance the anti-seismic capabilities of facilities and equipment. The knowledge accumulated from all these projects is used to improve existing factories and form the basis for the design of new factories.

• **Establishment of Response Procedures to Strengthen the Emergency Response of Personnel**

TSMC has clearly defined its post-earthquake emergency response organization and procedures, and conducts periodic drills to minimize casualties, reduce property loss and shorten operation recovery time. At the same time, TSMC has also established business continuity plans to guide support and recovery for the entire company.

• **Earthquake Insurance**

TSMC's properties are appropriately insured to distribute business losses if worst-case scenarios occur. TSMC has developed an earthquake loss evaluation system taking into account both construction enhancement and insurance strategy.

Fire Loss Control

The primary goal of TSMC's fire loss control strategy is prevention. The second goal is containment of potential fires to minimize losses. The final goal is to strengthen emergency response and disaster recovery during and after the event. Based on these principles, TSMC pays close attention to fab fire protection planning and design, maintenance of fire protection

equipment, personnel training, and development of emergency skills.

• **Fire Risk Control at the New Fab Design Stage**

New fab fire protection planning and design not only follows local fire protection and construction regulations but also takes international codes such as NFPA and FM into consideration. The key points for fire control at this stage are:

1. Fire loading of buildings, equipment, and piping materials
2. Fire separation between buildings
3. Fire alarm and extinguishing systems, particularly automatic fire alarm and extinguisher systems
4. Personnel evacuation routing

Fire loading decreases the likelihood of fires and limits incipient fires. Fire separation between buildings contains maximum damage to the company's assets.

Automated fire extinguishing systems are a necessity for modern cleanrooms, and good personnel evacuation routes can save lives.

• **Fire Risk Control for Equipment Installation**

Fire control at the equipment installation stage is a core part of industrial safety. The Site Safety and Environment Department is responsible for supervising engineering units and contractors in this stage.

The New Tool and New Chemical Committee is responsible for verifying that all new tools and chemicals introduced comply with international semiconductor equipment safety standards such as SEMI-S2, national fire protection, and other safety regulations, and TSMC's internal safety and health requirements.

Fire Loss Control Flow



• **Fire Risk Control at the Mass Production Stage**

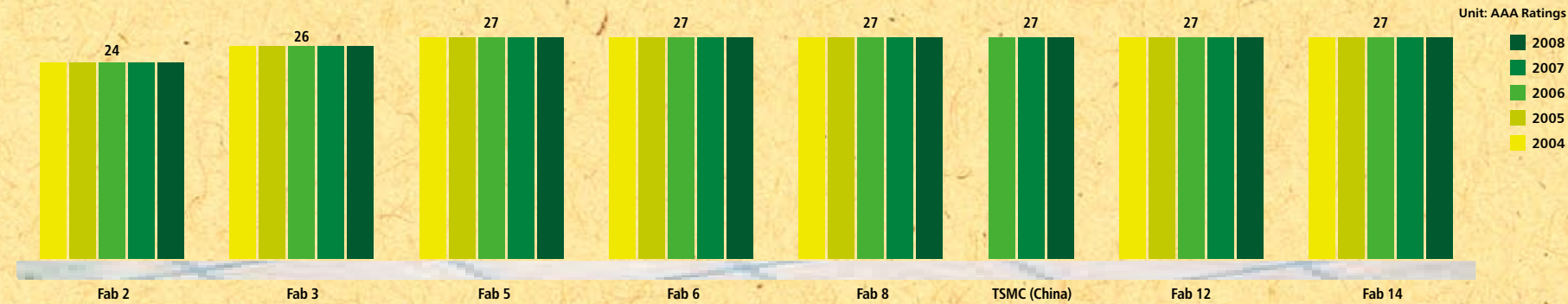
At the mass production stage, it is often necessary to relocate, add, or remove equipment to meet production demands. All of these changes must carefully follow change management procedures to assure that existing fire protection systems, emergency evacuation routes, fire breaks, detection systems, and standard operating procedures remain functional.

• **AAA Property Loss Control Risk Evaluation Program**

To assure the effectiveness of fab fire loss protection, TSMC adopted the AAA property loss control evaluation program in 1995 to augment internal audits by site safety departments. This program covers

overall fire prevention, fire extinguishing equipment, and related maintenance management. Through regular external audits, we can identify weak points in fire management, give personnel an opportunity to keep abreast with international developments in the field, and meet our goal of continuous improvement and sustainable management. TSMC’s earlier fabs, such as Fab 2 and Fab 3, scored below 27 points due to the potential engineering risk in rebuilding facility systems. However, TSMC designs and builds new fabs using the most up-to-date fire damage prevention technology, and these fabs can achieve a full score of 27 within one year of operation.

AAA Ratings Summary



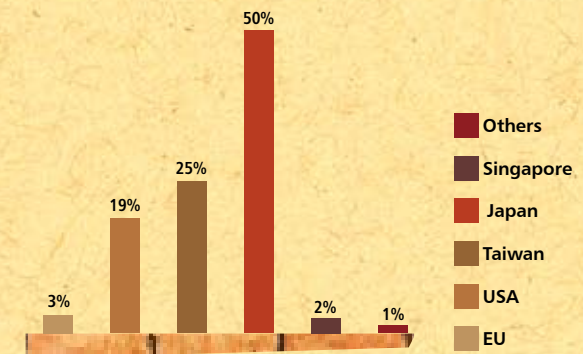
Note: Full score is 27.

TSMC cooperates with suppliers to meet our corporate social responsibilities by building a reliable and sustainable supply chain, which supports protection of the environment, human rights, safety, and health. Our committees and managing teams responsible for aligning corporate direction in supply chain management execute a complete "Plan-Do-Check-Act" (P-D-C-A) cycle.

4.1 Supply Chain Risk Management

In 2008, TSMC brought together fab operations, materials management, risk management, and quality system management in an internal committee dedicated to managing our supply chain. The focuses of the committee are risk mitigation and supply chain improvement. The steering team, including a senior vice president and managers, directs annual goals and reviews progress each quarter. The committee's working team assists suppliers in lowering production and transportation risks by sharing risk management practices and helping suppliers improve quality systems, green procurement, protection of the environment, and safety. At the same time, we monitor the financial situation of key suppliers through regular communication or public information, and draft backup plans. The working team holds monthly meetings to monitor progress and actively handle suppliers' issues.

2008 TSMC Suppliers Allocation



4.2 Environmental, Safety, and Health (ESH) Standards

4.2.1 Supply Chain ESH Risk Control

TSMC believes that helping suppliers improve environmental, safety, and health standards both reduces risks to our supply chain and gives TSMC an opportunity to contribute to society. In 2005, TSMC began regular audits of critical local assembly, testing, and raw materials suppliers and conducted questionnaire surveys of overseas suppliers with the goal of reducing environmental, safety, and health risks in our supply chain, reducing the possibility of supply chain disruption, and enhancing partnership with suppliers.

In 2008, in addition to covering fire, natural disaster, ESH management, environmental performance, and business continuity plans, the questionnaire and site audit also evaluated carbon inventory and reduction, suppliers' supply chain risk management, transportation, and human right requirements. These survey and audit results are combined with delivery, quality, service, and finance data and developed into a risk map of suppliers, which serves as a reference for our procurement strategy. In 2008, TSMC surveyed 39 raw material suppliers, which covered 85% of total purchasing amount.

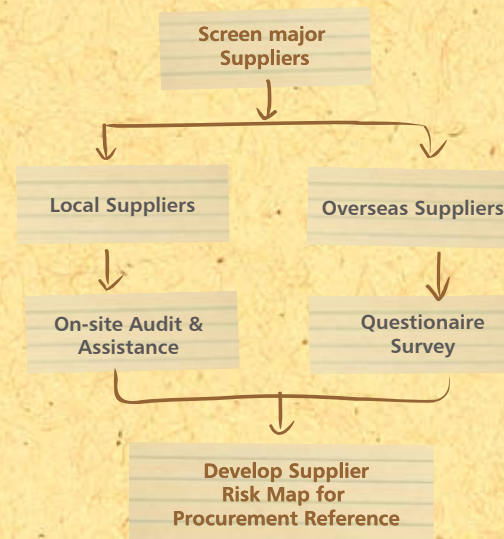
When TSMC discovers major shortcomings in our suppliers' goods or services, we work directly with their top managers on improvement. If they lack the resources or ability to make improvements, we offer support through experience sharing and on-site assistance.

In 2008, TSMC conducted 24 site audits of supply chain partners. The audit rated 13 suppliers as "good", and we continue to assist others for further

improvement. TSMC held its second supply chain environmental, safety, and health risk management forum on September 23, 2008 to promote its environmental, safety, and health requirements, and also invited partners to share their experience in supply chain management. A total of 64 professionals from our suppliers joined our forum, and response has been highly positive.

Since TSMC began to manage environmental, safety, and health risks in our supply chain, we have not only significantly reduced our own supply chain risks but also improved the employee safety and property protection of our suppliers. We believe this is a "win-win" strategy that enhances the competitiveness of TSMC and members of our supply chain, and we will continue to meet our commitment to environmental, safety, and health risk management to meet our responsibility to customers, investors, and society.

Supply Chain ESH Risk Control Flow



4.2.2 Supplier Annual Business Continuity Plan Drill

One of TSMC's chemical suppliers, BASF, held its annual business continuity plan drill on December 2008, and TSMC was invited to act as an observer at BASF's Taoyuan plant. This cooperation through exchange of professional experience and co-drills with TSMC's procurement department enhances inter-company awareness in the event of business interruptions caused by accidents, and marks a closer partnership relationship between TSMC and suppliers.

In addition, TSMC also held a hydrogen gas breakdown drill with its gas supplier BOC on December 2008. This enhancement of BOC's understanding of our business continuity plan has strengthened mutual cooperation.

4.2.3 TSMC Green Supply Chain

TSMC not only strives to prevent pollution, conserve energy and resources, and minimize waste and hazardous substances in its own manufacturing processes, but also actively leads its upstream raw material suppliers and downstream assembly and testing facilities to establish a green supply chain, collaborating to improve environmental and carbon reduction performance of products. We implement our green supply chain from a product life cycle point of view to reduce the environmental impact of manufacturing at each stage of the supply chain and minimize the environmental impact of end products used by consumers.

As a leader in semiconductor manufacturing and services, and to meet our corporate social responsibilities, TSMC began to implement the QC 080000 hazardous substances process management system in 2005, and all TSMC fabs including WaferTech and TSMC (China) were certified for QC 080000 by July 2007.

TSMC also maintains “green procurement” procedures, requiring raw materials suppliers to declare that the materials they supply to TSMC do not contain any prohibited substances. This ensures that products manufactured by TSMC comply with customer requirements and the regulatory requirements of the European Union’s RoHS directive. TSMC also requests critical subcontractors, such as assembly facilities, to obtain QC 080000 certificates.

TSMC’s leadership in guiding upstream supply chain partners and downstream companies to adopt QC 080000 demonstrates TSMC’s willingness to take action and improve the semiconductor industry’s environmental social responsibility. Our goal is to embed the “green product” concept in all suppliers and assembly and testing subcontractors.

4.3 Managing Contractors’ ESH

TSMC endeavors to be a good corporate citizen and meet its social responsibilities. We believe in going beyond providing a safe workspace for employees to establish a higher ESH standard with our partners in all industries. TSMC is committed to communicating with suppliers and contractors on environmental, safety, and health issues and encouraging them to improve their ESH performance. TSMC treats contractors like our employees and works together with them to adopt good safety protection, and leads members of our supply chain to reduce their environmental impact.

4.3.1 Identifying High-risk Work for Priority Management

TSMC has established standards for high-risk work to strengthen contractor safety management. TSMC began adopting high-risk work management and self-management to govern work performed by contractors in 2005. TSMC’s high-risk work management classifies work that may cause injuries, casualties or major property damage as level-1 high-risk operations. These include work in confined spaces, work with electrical shock risk, hot work, or disconnection of gas or chemical piping. Work that may result in system shutdowns or production interruptions are classified as level-2 high-risk operations. TSMC explicitly defines safety precautions and control procedures to be taken by personnel according to different operations.

4.3.2 Request Contractor to Establish OHSAS 18001 Management System and Worker Skill Certification

In terms of self-management, TSMC requires that contractors performing level-1 high-risk work must complete worker certification before July 1, 2006, and establish their own OHSAS 18001 safety and health management system before July 1, 2007 before they are eligible to bid on contracts. This self-management is aimed at increasing contractors’ sense of ownership and responsibility with the goal of promoting safety awareness and technical improvement for all contractors in the industry. In 2008, an additional six high-risk work contractors received OHSAS 18001 certificates, and over 2,400 workers passed working skill certification.

In 2008, in addition to routine audits by third party certification agencies, TSMC also conducted audits of OHSAS 18001-certified contractors. TSMC plans to audit at least 24 contractors every year to ensure the quality of contractor OHSAS 18001 and worker skill certification. If an audit finds that a contractor is not qualified, the contractor’s level-1 high-risk work qualification may be revoked. TSMC also communicates with contractors through regular safety notices for updates on contractor safety & health requirements, accident experience sharing and safety & health regulations.

TSMC plans to continuously promote its contractor safety certification program in the future, perform regular audits and recognize outstanding contractors. In addition, TSMC holds an annual “Contractor ESH Forum” to announce ESH requirements and share safety management experience. TSMC believes that we can help the community and the environment by leading our contractors to reach higher standards of environmental, safety, and health protection and create a better workplace.

4.4 Helping Suppliers Improve Delivery and Quality

4.4.1 Supplier Web Site

TSMC’s “Supplier Online” is an integrated website containing detailed information about our ethics, environmental, safety, and health requirements for suppliers. The secure area of the site promotes effective communications and ensures that proper data is collected.

4.4.2 Lean Supply Chain

TSMC works closely with raw material suppliers to exchange inventory information, so that in-bound supply chain inventories are transparent and demand fluctuations can be detected early. We collaborate with our suppliers to build a strong and lean supply chain together to mitigate the risk of supply interruption and avoid making surplus materials.

4.4.3 Collaborating for Continuous Improvement

TSMC evaluates key supplier performance each quarter for delivery, quality, and safety, and the results of the evaluation are delivered to supplier's top manager. TSMC also works closely with its suppliers to improve weaknesses through regular meetings. In certain projects, TSMC provides special technical supports to suppliers through open communication meetings.

4.5 Ensuring Supplier Compliance

4.5.1 Quarterly Business Review

TSMC conducts quarterly meetings with our suppliers' senior managers to review performance, including quality, delivery and sustainability performance. We ensure suppliers comply with TSMC requirements and through semi-annual or quarterly monitoring of key indicators through a scorecard and checklist.

4.5.2 Site Audit

TSMC visits our suppliers and performs audits according to an annual plan. When special concerns arise from these audits, we work with suppliers to develop appropriate solutions for fulfilling our expectations. These solutions are executed by specified sponsors with a clear goal and timeframe.

4.5.3 Certification

TSMC encourages its suppliers to be certificated by ISO 14001 and OHSAS 18001. Furthermore, we conduct site audits to ensure suppliers' factories are well protected by fire protection systems and measure supplier safety performance through accident counts.

4.6 SCM Forum and Excellent Supplier Award

TSMC held its eighth annual TSMC Supply Chain Management Forum on November 14, 2008 to recognize the support and contributions of its suppliers and to award outstanding suppliers for their excellent performance over the past year. In addition, TSMC arranged breakout sessions on green supply chain, transportation risk management, and safe working environment. Nearly 410 companies around the world in the fields of equipment, materials, packaging, testing, facility, IT, export/import service, and environmental and waste management services participated in the forum.



2008 TSMC Supply Chain Management Forum

4.7 Customer Service and Satisfaction

4.7.1 Customer Partnership

Customer partnership is one of TSMC's core values. At TSMC, customers come first. Their success is our success, and we value their ability to compete as we value our own. We strive to build a deep and enduring relationship with our customers, who trust and rely on us to be part of their success over the long term. Customer partnership is also one of TSMC's trinity of strengths to support its value proposition.

Trinity of Strengths



4.7.2 Customer Service

TSMC is committed to providing the best service to our customers and believes that customer service is critical to enhancing customer loyalty. In turn, customer loyalty leads to higher levels of customer retention and to expansion of business relationships. TSMC's goal is to maintain its position as the most advanced and largest provider of semiconductor manufacturing technologies and foundry services. TSMC believes that achieving this goal will help retain existing customers, attract new customers, and further strengthen customer partnerships.


To facilitate customer interaction and information access on a real-time basis, TSMC has established a wide range of web-based services covering applications in design, engineering, and logistics collaboration. They are collectively branded as eFoundry®. TSMC also has a dedicated team or interface or champion throughout the management chain for serving our customers.

4.7.3 Customer Satisfaction

TSMC regularly conducts surveys and reviews to ensure that customers' needs and wants are adequately understood and addressed. Continual improvement plans supplemented by customer feedback are an integral part of our business processes.

An Annual Customer Satisfaction Survey is carried out by an unbiased third party consulting firm with the goal of:

- Understanding customers' specific needs and expectations from TSMC
- Obtaining formal and direct feedback from our customers to measure TSMC's performance and identify TSMC's weaknesses for development of improvement strategies. Improvement initiatives are generated and actions are taken based on customer issues. A final wrap-up letter will be sent to each customer to address those matters.



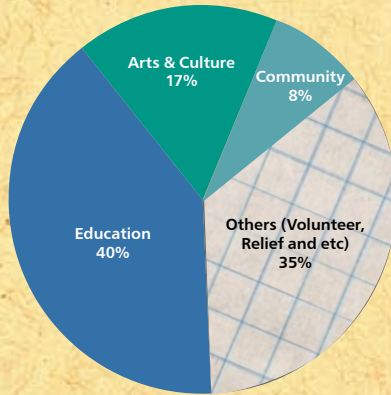
Founded in 1998, TSMC Education and Culture Foundation coordinates the company's sponsorship of cultural and educational activities as part of our comprehensive CSR effort. The Foundation focuses on commitment to education, sponsorship of the arts, contribution to local communities and the employee volunteer program.

In addition to continuing our long-term commitment to education and culture, TSMC also launched a major energy saving and environmental protection initiative as global warming becomes urgent. In 2008, TSMC Foundation invited major corporations to initiate the Taiwan Corporate Sustainability Forum and initiated an "energy-saving volunteer" program.

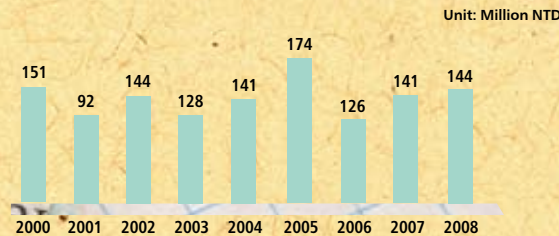
TSMC established the TSMC Education and Culture Foundation in 1998 to coordinate the company's sponsorship of cultural and educational activities as part of our comprehensive CSR effort. To maximize impact, the TSMC Education and Culture Foundation focuses on four core objectives: commitment to education, sponsorship of the arts, contribution to local communities and the employee volunteer program. The sponsorships and their goals are diligently planned, managed and monitored to ensure the most efficient utilization of resources. As a leader in corporate citizenship, TSMC is committed to fulfill its social responsibility in a professional, constructive and long-term approach, independent of any commercial concern.

In 2008, the Foundation contributed a total of NT\$144 million to support various public programs. In addition to continuing our long-term commitment to education and culture, TSMC also launched a major energy saving and environmental protection initiative as global warming becomes urgent. Last year, the TSMC Education and Culture Foundation invited major corporations to initiate the Taiwan Corporate Sustainability Forum. At the same time, we also initiated an "energy-saving volunteer" program. We hope these projects will help advance environmental awareness and build a framework for concrete actions.

Sponsorship by TSMC and TSMC Foundation in 2008 (NTD 144,267,053 in Total)



Donation Made by TSMC and TSMC Foundation since 2000



5.1 A Platform for Sharing Sustainability

Pollution is becoming an increasingly serious issue with the advance of industrialization and technology, causing rapid global warming and triggering natural disasters. Global attention has turned to urgent actions in energy saving and carbon emission reduction. Devoted to green industry practices, TSMC has always pursued environmentally conscious improvements in its business operations and manufacturing. In 2005, TSMC adopted green building technology, and using this technology, our Fab 14, Phase 3 facility received LEED NC Gold Certification and Taiwan's EEWH Diamond Certification in 2008.

In response to global trends, there have been growing domestic efforts in promoting environmental protection. However, it will take more than the resources of a single company to achieve tangible improvements. The TSMC Foundation, wishing to pool together the strength of a broad segment of society, initiated a Taiwan Corporate Sustainability Forum in 2008. The forum, joined by 20 Taiwan enterprises, was led by the Chairman of TSMC Foundation, Dr. F.C. Tseng, and received enthusiastic responses from over 300 representatives of industry, academia, research institutes and government. It aims to provide a framework through which participants within the same industry can share information and technical know-how, while communication and integration can be facilitated between different industries.

The joint forum was launched in October 2008 by the first "TSMC Green Forum". We invited Dr. Ho Ming-chi, The Director-General of the Architecture and Building Research Institute of the Ministry of Interior, and Dr. Kath Williams, the Former Vice President of the United States Green Building Council, to join the forum. They introduced the current status of promoting green buildings in Taiwan and the world. As the first Taiwan company to receive international certification by LEED (Leadership in Energy and Environmental Design), TSMC shared with hundreds of participants the practical know-how of building a green semiconductor fab. We hope the forum will motivate and assist more companies to join in the development of corporate sustainability in Taiwan.



Led by the Chairman of the TSMC Foundation, Dr. F.C. Tseng, a platform for sharing sustainability was formed.

5.2 Commitment to Education

Talented people are essential to the development of our economy. As a leader of Taiwan's knowledge-based industry, TSMC is committed to help cultivate talented people for society.

The TSMC Education and Culture Foundation tailors various programs to target a whole range of education at different age levels. At primary schools, our focus is on aesthetic education, with the goal of exposing children to arts as early as possible. For secondary schools, we concentrate on developing students' potential in science and humanities, hoping to nurture talents in both aspects. At the college level, we foster global perspectives so that the students can compete in a globalized economy.

5.2.1 Cultivating Aesthetic Education

At the primary-school level, TSMC's focus is on aesthetic education. The TSMC Education and Culture Foundation organized tours for children from rural areas throughout Taiwan to visit the National Palace Museum and the Millet Exhibition. These projects expose children to arts as early as possible and bridge the gap between rural and urban areas.

The Sponsorship of Millet Exhibition

In 2008, "Millet and his time: Masterpieces from Musée d'Orsay" was held in the National Museum of History. The exhibit consisted of 65 masterpieces, including Millet's well-known "Gleaners" and "The Angelus". The exhibit gained national attention and attracted over 670,000 visits.

To give children in remote townships opportunities to appreciate fine art, the TSMC Education and Culture Foundation sponsored 1,200 students from rural areas, including Penghu Island, to visit the Millet Exhibit. Through classes and professional guides, children learned the historic background of each work and the styles of paintings.

TSMC Aesthetic Education Tour

Since 2003, The Foundation has been running the TSMC Aesthetic Education Program to provide students from remote school districts with educational tours to museums, art galleries, and local historic sites. In total, over 50,000 students have been invited to take the tour. In 2008, TSMC Aesthetic Education Program arranged advanced tours for young art students to visit art sites. TSMC hopes to plant a seed of artistic appreciation in the heart of students and develop their aesthetic potential.

An Enchanted Journey through National Palace Museum—A Television Program

As an extension of the Aesthetic Education Program, in 2008, TSMC continued to sponsor Taiwan's Public Television Service in producing and broadcasting a children's television program—An Enchanted Journey through the National Palace Museum. The lively and in-depth TV program brings the richness of the museum to every family and makes the precious artifacts more accessible to young viewers. The first season's episodes gained an overwhelmingly positive response nationwide. The TV program was also recognized with numerous awards, including the Best Children's TV Program Award from the TICTFF (Taiwan

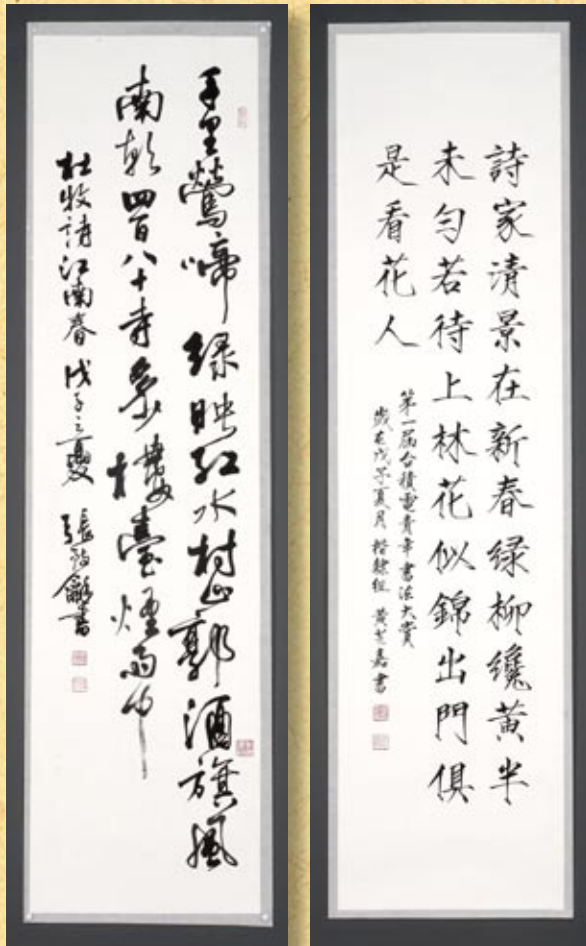
International Children's TV & Film Festival) and the Certificate of Excellence of Animated TV Program from the CICFF (Chicago International Children's Film Festival). With a contemporary tone and sophisticated 3-dimensional animation, the second season continued to guide children to appreciate the beauty of Chinese traditional arts and crafts.

5.2.2 Nurturing Science and Humanities

For secondary schools, the TSMC Education and Culture Foundation concentrates on developing students' potential in both science and humanities. In addition to continuing sponsorships of science talent camps to stimulate students' potential in science, the TSMC foundation organized the "TSMC Youth Calligraphy Contest" and the "TSMC Literature Award" to encourage students to compete and learn from each other and enrich their love of the humanities.

TSMC Youth Calligraphy Contest

To enhance public recognition and awareness of the art of Chinese calligraphy, the TSMC Foundation organized the "TSMC Youth Chinese Calligraphy Contest" with the China Times. The event provided high school students an opportunity to compete and learn both from masters and peers. There were more than 400 contestants registered, and the 16 winning pieces were selected by master judges. In addition to being collected to an album, the winning works were exhibited in several cities in Taiwan and gained positive responses nationwide. This newly-launched event successfully raised the public appreciation of Chinese traditional culture.



To enhance public recognition and awareness of the art of Chinese calligraphy, the TSMC Foundation organized the "TSMC Youth Chinese Calligraphy Contest" in 2008. The left is the winning work of cursive, and the right is the winning work of regular script.

Calligraphy is part of Chinese culture, but this art is decaying as technology advances. However, I will work on it for the rest of my life. Not because calligraphy is a precious cultural treasure, but because it can strengthen myself to have a better personality.

--TSMC Calligraphy Winner, Chang Chi-ho from Wesley Girls High School

The meaning of calligraphy is developing myself toward a correct life attitude. Perseverance is the core value of practicing calligraphy.

--TSMC Calligraphy Winner, Su Yu-fen from Keelung Girls High School

TSMC Youth Literature Award

The Foundation continued to hold the TSMC Youth Literature Award in 2008. In addition to encouraging our youth in the creation of literary works at an early age, and cultivating an appreciation of literature in the community, the TSMC Youth Literature Award has developed numerous talented young writers.

Compared to past events, the entries for the fifth annual TSMC Youth Literature Award not only expressed themselves, but also showed their concern for society. Moreover, some previous contestants entered new work that won higher grades with even better writing. That has shown that the contest has made an impact, and is now an important stage for encouraging young students to read and write.

Science Talent Camps

Part of the Foundation's mission is to cultivate talented young scientists. In 2008, the Foundation continued to sponsor the Wu Chien-Shiung Science Camp and the Wu Ta-Yu Science Camp. The Wu Chien-Shiung Science Camp invited 4 world-class scientists in the fields of biology, physics and electrical engineering to engage in dialogue with 45 science teachers and 156 gifted youths from Taiwan and China. Through lectures, dialogues, and competitions, the potential of these young scientists was inspired and nurtured.

Wu Ta-Yu Science Camp provided 89 outstanding students with a chance to enjoy dialogues and discussions with Nobel laureates and other noted scholars on the subject of "Resource Sustainability". Through forums and lectures, the students learned the current situation of resource exhaustion and new trends in technology. We wish to see the participants become the pioneers of energy saving in the near future.

5.2.3 Developing Talents with a Global Perspective

TSMC has long been committed to offering support for top-notch research and facilitating the development of highly educated people. To support that commitment, the TSMC foundation directs our resources towards donations for university scholarships, chair professorships and facilities, while emphasizing an international perspective. We hope it will promote cross-border cooperation in academic research and develop outstanding students with a global perspective.

TSMC Chair Professorship and International Exchange Student Scholarship

TSMC believes that in the face of global competition, only talented young people with a global perspective can keep Taiwan on the world stage. To help Taiwan college students broaden their horizons, the TSMC foundation sponsors outstanding students from National Tsing Hua University and National Chiao Tung University to study abroad for one year.

In order to enhance academic research and to help Taiwanese universities recruit top-notch overseas scholars, the Foundation has endowed TSMC Chair professorships at National Tsing Hua University, National Chiao Tung University, and National Central University. With their academic abilities and vision, these scholars have led students and researchers at these top universities into the most advanced research.

Donating Facilities

The Foundation made donations for the construction of new facilities at the University of California, Berkeley, National Taiwan University, and National Tsing Hua University to better develop talented people. The TSMC Hall at Tsing Hua University, donated by the TSMC Foundation, has been completed in 2008. The Foundation has also endowed the Morris Chang Chair at the College of Technology Management and recruited the former President of ITRI, Mr. Chin-tay Shih, to serve as Dean. TSMC Hall will be the base for cultivating the next generation of leaders in technology management.

5.2.4 Aid for Underprivileged Students **TSMC Scholarship for Students with Financial Needs**

To encourage and support outstanding students with financial needs and to help bridge the gap in educational resources caused by disparities in

wealth, the Foundation continued to provide the TSMC Scholarship for students with financial needs. In 2008, the scholarship helped some 50 students from National Taiwan University, National Cheng Kung University, National Tsing Hua University, National Chiao Tung University, and National Central University. TSMC hopes to help develop talents for our society by offering support to students with financial needs and expects these students to contribute their expertise to society in the future.

The Hope Reading Program

To narrow the gap in educational resources between rural and urban areas, the TSMC foundation continued to sponsor the Hope Reading Program initiated by the Common Wealth Educational Foundation. In 2008, the TSMC foundation has provided two hundred rural schools with 20,000 books. Since 2004, we have provided the students with 75,000 books in total. By providing books

TSMC Hall began construction in 2004 and was completed in April of 2008. The total cost of construction was NT\$500 million, out of which TSMC donated NT\$180 million. The Chairman of the TSMC Foundation, Dr. F.C. Tseng, personally donated NT\$15 million to build the lecture hall of the main building, "Sun Yun-suan Hall". To appreciate TSMC's support, Tsing Hua University named the building TSMC Hall. Located at the South Campus of Tsing Hua University, the nine-story TSMC Hall with its classic facade has become a new landmark for Hsinchu.



Donated by the TSMC Foundation, the TSMC Hall at Tsing Hua University has been completed in 2008. The Chairman of TSMC, Dr. Morris Chang, delivered a speech at the opening ceremony.

to 25,000 children in remote and underprivileged areas of Taiwan, TSMC hopes to promote literacy and inspire interest in reading among these children so that they will have good books to read and the opportunity to one day leave poverty.

In addition to donating books, the Hope Reading Program organized the “Little Internet Writer” campaign. The campaign encourages children not only to read books, but also transfer their own thoughts to words. There are 106 schools in remote townships participating in this contest. 41 winning pieces, picked from 159 registered works, showcased these students’ rich reading experience.

5.3 Promotion of Arts and Culture

The TSMC Education and Culture Foundation has been devoted to the promotion of arts and culture for years. In addition to providing support for inviting prestigious international artists to Taiwan, the foundation actively assists prominent Taiwanese art groups. The foundation pioneered collaboration between corporations and arts groups in Taiwan by sponsoring the Cloud Gate Dance Theater. In 2008, a fire destroyed their rehearsal studio, and the foundation joined in the efforts to assist the internationally renowned dance group to rebuild the studio. In 2008, the TSMC foundation was presented with the ninth Arts and Business Special Award, the Grand Jury Prize, by the Council for Cultural Affairs. It is recognition of TSMC’s long-term commitment and achievement in supporting art and culture activities.

5.3.1 Analects of Confucius in Hsin’s View—A Broadcasting Program

To promote the Chinese classics and culture, the TSMC Foundation invited a master in Chinese philosophy, Professor Hsin Yih-yun, to lecture on the

Analects of Confucius on IC Radio, a Hsinchu radio station. The Analects of Confucius, composed by the dialogues between Confucius and his pupils, is one of the most important Chinese traditional classics. Through this radio program, the foundation hopes to revive the old wisdom of Confucius to the modern world. By proving vibrant examples, Professor Hsin guides the audience to easily understand the wisdom of the Analects.



To promote Chinese classics and culture, TSMC invited a master in Chinese philosophy, Professor Hsin Yih-yun, to lecture on the Analects of Confucius on IC Radio.

5.3.2 Taiwan Literature Camp

Taking over from the Council for Cultural Affairs from 2007, TSMC continues to support the Taiwan Literature Camp, which provides workshops and lectures by distinguished authors to literary enthusiasts. In 2008, over 500 literature devotees from all across Taiwan convened at TSMC Hall of National Tsing Hua University for opportunities to meet with authors one-on-one and for three days of training and pure inspiration. At the same time, the

2008 Taiwan Literature Camp added a new course, Chinese poetry and painting, and provided devotees with a chance to meet masters from China and Taiwan. TSMC hopes that by continuing to hold the camp we will infuse Hsinchu, a city of technology and industry, with the humanities.

5.4 Community Building

TSMC’s major manufacturing facilities are based in Hsinchu and Tainan. Facilitating a better living environment and active community for our workers is a responsibility that TSMC takes very seriously. In order to contribute to local communities and bring the arts to these high-tech cities, the Foundation began to focus its funding for fine arts on activities in Hsinchu and Tainan from 2003. By organizing exquisite exhibits and performances in these cities and packaging them into the “TSMC Hsinchu Arts Festival”, we hope to encourage a greater appreciation of arts. In addition, the Foundation supports various long-term projects to provide assistance to disadvantaged women and youth in these communities.

5.4.1 TSMC Hsinchu Arts Festival

In 2008, the TSMC Hsinchu Arts Festival contained a number of marvelous art events, including Traditional Theater, Classical Music, Children’s Arts, and Community Building. A concert performed by Les Petits Chanteurs De Saint-Marc continued our tradition of opening the festival with a charity performance. All the proceeds of the concert were donated to the “Youth Shelter House-Blue Sky” to support school dropouts in Hsinchu.

As promoting Chinese Theatre is an important feature, the festival brought the Contemporary Legend Theatre to Hsinchu and Tainan. Also, we invited another Chinese traditional theatric group “Taipei Qu Yi Tuan” to present the beauty of Chinese performing arts. At the same time, the master violinist Midori, performing with the National Symphony Orchestra, and Philharmonia Moment Musical were invited to bring the local audience wonderful concerts.

TSMC continued to hold the “TSMC Youth Piano Competition” offering talented young musicians the opportunity to perform on stage. Furthermore, we invited the well-known English pianist, Stephen Hough, to hold a master class to inspire all the participants of the competition.

Entering its sixth year, the more than 40 performances of the Hsinchu Arts Festival have drawn over 40,000 people from the community and the response has been overwhelmingly positive.



The 2008 Hsinchu Arts Festival have drew over 40,000 people from Hsinchu and Tainan.

I am honored to participate in Mr. Stephen Hough’s master class. Within 30 minutes of class, I could fully feel Mr. Hough’s perfection of playing technique and body language, and that was my goal. Only by combining technique and emotion can we turn playing into music.

--TSMC Youth Piano Competition Winner,
Ho Bin-wei from Chien Hua Junior High School

Mr. Hough offered me with very precious opinions on interpreting and constructing music. From that I understand more about the specific styles of music between different eras.

--TSMC Youth Piano Competition Winner,
Gui Bin from Chien Hua Junior High School

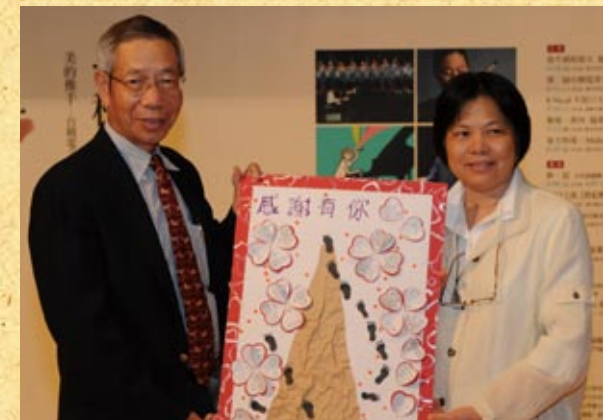


The TSMC Foundation invited the well-known English pianist, Stephen Hough, to hold a master class for all the participants of “TSMC Youth Piano Competition”.

5.4.2 Caring for the Underprivileged

Besides hosting a charity concert as part of the TSMC Hsinchu Festival to give the general public an opportunity to participate in caring for Underprivileged youth in the community, TSMC has also collaborated with the Modern Women’s Foundation to care for battered women in the community.

The Youth Shelter House “Blue Sky” is located at Bao-shan Township of Hsinchu County, and serves teenage school dropouts. Blue Sky provides teens with a wide array of services and a warm, safe environment that allows them to explore their potential, rebuild their lives, and begin again. In 2008, the TSMC Hsinchu Arts Festival hosted a charity concert, performed by Les Petits Chanteurs De Saint-Marc, to inspire the community to care for these underprivileged teens.



The TSMC Foundation hosted a charity concert as part of the TSMC Hsinchu Arts Festival to support school dropouts in Hsinchu.

In 2008, TSMC continued to support the Hsinchu Help Center of the Modern Women's Foundation, providing battered women with legal consulting and social welfare resources to protect them from sexual attacks or domestic violence. Through seminars, the help center also educates women in self-protection. We hope to enhance neighborhood communication and strengthen the community's security network to provide security to women and their families.

We don't know each other, but you have done so much for us without return. What you have done makes us feel the warmth from every corners of society. We feel we are cared for indeed. Thank you for your kindness. When I grow up, I will give back to the society.

-- Harry from Blue Sky

Thank you for your encouragement. I will cherish the time when I staying at Blue Sky. I will quit all my bad habits and be a decent man.

-- Yu-Shu from Blue Sky



The TSMC Foundation initiated three employee volunteer programs, which are the TSMC Guide Volunteer, the TSMC Book Reading Volunteer, and the Energy-saving Volunteer.

5.5 TSMC Employee Volunteer Program

The most valuable asset of TSMC is the talents and enthusiasm of its employees. In addition to sponsoring education and arts programs, the Foundation encourages TSMC employees to devote themselves to society as volunteers. TSMC employees have served as guides to introduce the electronics industry at the National Science Museums during weekends, and read books to elementary students in remote townships on weekdays. In 2008, a new team of Energy-Saving Volunteers was formed to help the local community in pursuing energy-saving measures.

5.5.1 Energy-saving Volunteers and Energy Saving in the Community

To support environmental protection, the TSMC foundation has recruited employees with technical knowledge to provide the community with their experience in reducing power consumption. The new Energy-Saving Volunteer team was formed by 26 air-conditioner technicians, electric engineering technicians and telecommunications professionals. They use their personal time to promote energy-saving concepts. In their first year, the team members helped two public high schools to evaluate the safety and efficiency of their power usage. The TSMC volunteers also provided the schools with counseling in energy-saving programs. It is the team's goal to convey to high school students concepts and habits to help reduce carbon emissions and to build a better and safer community.

It was great fun to be a TSMC Energy Saving Volunteer. I was able to share energy saving knowledge and experiences with people of other institutions who care about the environment and know the importance of energy conservation. At the same time, it is an honor to contribute in promoting the corporate image of TSMC by joining the volunteer group.

--TSMC Engery-saving Volunteer Chen Wu Chung

It is my pleasure to join the TSMC Energy Saving Volunteers. Combining our team member's expertise with TSMC's experience in energy conservation, we were able to promote energy conservation concepts at schools. Last year, we assisted schools in saving electricity, water, and cutting their expenses, and in the future, we aim to plant this concept of energy conservation into the minds of the younger generation.

--TSMC Engery-saving Volunteer J.H. Ou

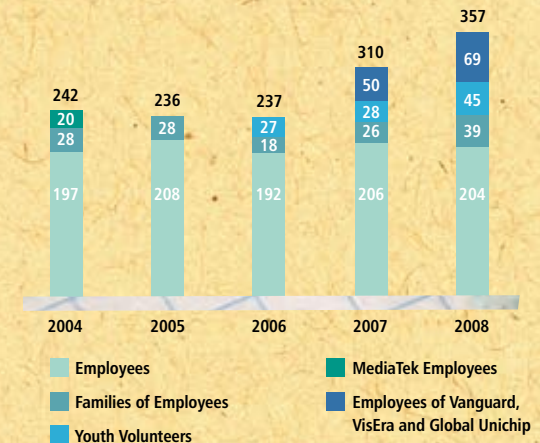
5.5.2 TSMC Volunteer Guide Program and Promotion of Science Education

To promote science education, the Foundation donated to renovate an exhibition hall in the National Museum of Natural Science (Taichung) and set up an exhibition titled "The World of the Integrated Circuit". We organize employees to serve as volunteer guides at the exhibition on weekends. In 2008, with the TSMC Foundation's support, the TSMC Employee Relations Department organized the recruitment of new volunteers. The number of volunteers reached record high 470 members. The enthusiastic TSMC volunteers will continue to devote their time and effort to guide visitors to promote science education.

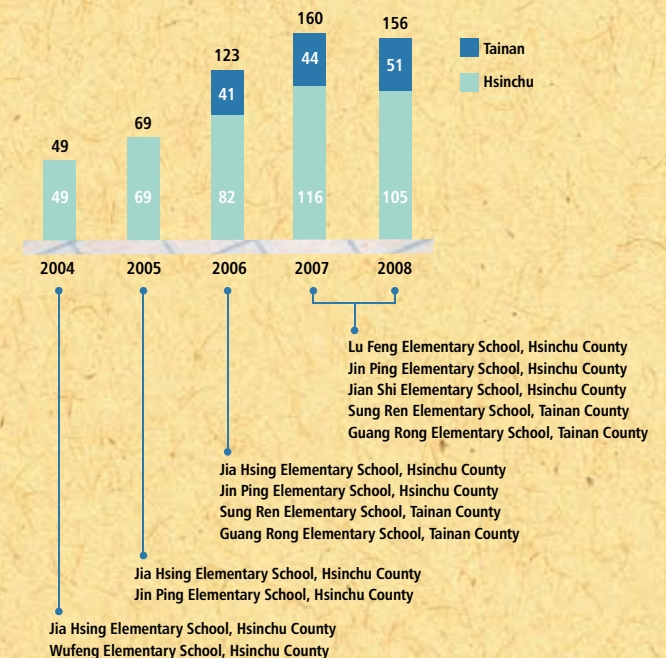
5.5.3 TSMC Book Reading Volunteer Program and Support for Education of the Underprivileged Students

Beginning in 2003, the Foundation has sponsored the Hope Reading Program organized by the renowned *CommonWealth Magazine*, donating 20,000 books to children in two hundred schools in remote rural areas in Taiwan. In order to further develop these children's interest in reading, the foundation launched a book reading volunteer program. Employees travel to read stories to the students of five remote rural schools in Hsinchu and Tainan. We hope the reading experience for students will build their interest in learning and launch them onto a continuous path of self-education. TSMC Reading Volunteers have already served for five consecutive years. 156 Volunteers continue to read to the children and open doors for their future.

Number of TSMC Guide Volunteers since 2004



Number of TSMC Booking Reading Volunteers and Schools since 2004



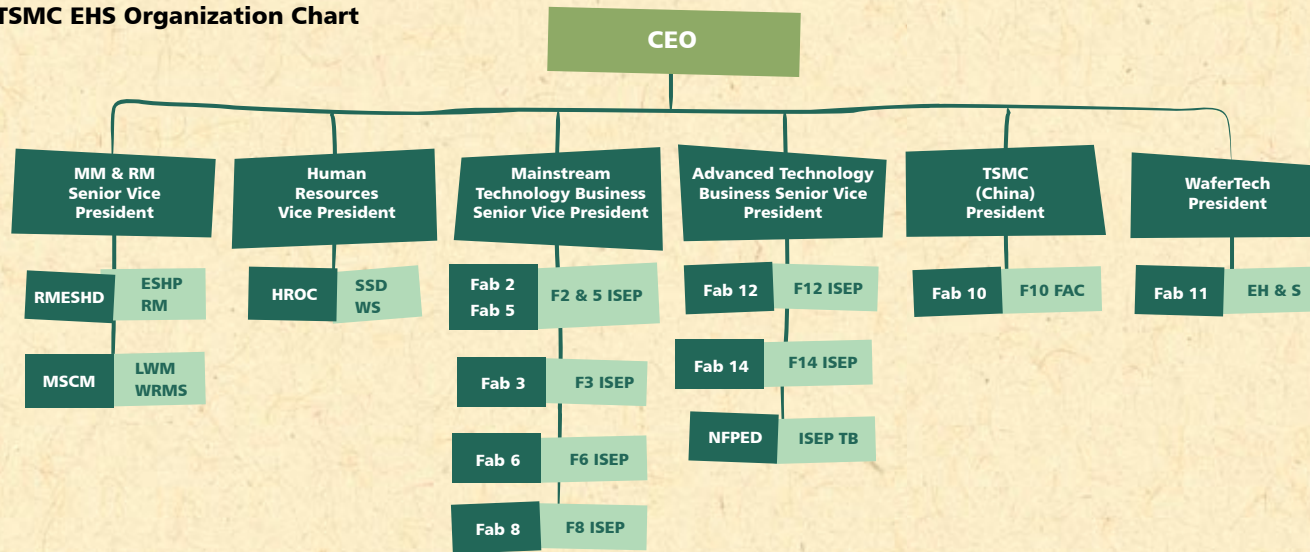


TSMC and all its employees acknowledge their responsibility for environmental protection. We not only comply with the environmental regulations of the locations where we operate, but also track new developments in global environmental issues, and take the lead in adopting new environmentally-friendly measures. In addition to protecting the environment of our manufacturing sites in Taiwan and around the world, we lead our suppliers to establish a green supply chain. TSMC actively seeks to raise the environmental consciousness of all employees, and through social engagement and dialogue with industries, we encourage the industry to contribute to the environment of the globe.

6.1 Green Management Organization and System

TSMC's environmental, safety, and health (ESH) management organization can be divided into the central planning unit, the Operational Organization Technical Board, and the designated department in each fab, which have defined responsibilities and operate in cooperation. The Risk Management and Corporate ESH Division (RMESHD) is responsible for ESH policies, establishing standards, auditing, and external activities with suppliers, customers, the community and governmental authorities. The Operational Organization Technical Board is in charge of integrating the standards and procedures for fab operation and tracking the status of execution. Fab directors are responsible for fab ESH. The on-site ISEP departments are in charge of planning, supervising, and implementing the ESH operations of each fab. The ISEP departments report to fab directors and must identify ESH risks of daily operations, plan for environmental management programs, and submit annual environmental goals. The fab directors host monthly ESH committee meetings, and also host annual management review meetings to ensure the achievement of continuous improvement goals.

TSMC EHS Organization Chart



ESH: Environment, Safety & Hygiene Strategic Planning
 FAC: Facility Department
 HROC: Human Resources Operations Center
 ISEP: Industrial Safety and Environmental Protection
 ISEP TB: Industrial Safety and Environmental Protection Technical Board
 LWM: Logistics & Warehouse Management Department
 MSCM: Material Supply Chain Management Division
 NFPED: New Fab Planning and Engineering Division
 RM: Risk Management
 RMESH: Risk Management & Corporate ESH Division
 SSD: Shared Service Department
 WRMS: Waste Resources Management Section
 WS: Wellness Section



ISO 14001 Certificate



OHSAS 18001 Certificate



QC 080000 Certificate

6.1.1 ESH and Hazardous Substance Management System Certificate

All TSMC manufacturing facilities in Taiwan, China, and United States have received ISO 14001 certification for environmental management systems, OHSAS 18001 for occupational safety and health, and QC 080000 certification for hazardous substance management systems, and new facilities will be certified as well. In line with ISO 14001 and OHSAS 18001's concept of continuous improvement, TSMC diligently carries out its responsibilities of pollution prevention, power and resource conservation, waste reduction, accident prevention, and establishment of a safe and comfortable work place. By practicing QC 080000 for hazardous substance management, TSMC ensures its processes and products comply with the requirements of the Stockholm Convention. TSMC

continues to identify ESH risks, drafting feasible control measures and carrying them out to reduce ESH and hazardous substance risks.

6.1.2 Environmental Accounting

Environmental accounting categorizes a company's environmental costs, and is useful in implementing cost-efficient environmental programs and aiding external communication about environmental efforts. Environmental costs are often hidden in normal expenses and can be difficult to identify; for example, maintenance fees for environmental equipment are often categorized as production equipments costs, and the cost of management, such as certification or salaries of environmental protection staff is often neglected. Environmental accounting is necessary for collecting accurate information on environmental costs.

TSMC established its environmental accounting system in 2002 and integrated environmental accounting practices with the Environmental Management System (EMS) in 2003. The integrated system not only helps each fab to implement environmental management programs, but also evaluates their economic efficiency at the same time. In addition, each department has improved their performance in using correct environmental account codes for annual budget planning, enhancing the accuracy of future statistics. In 2008, the total benefit for promoting environmental management programs, including waste recycling and industrial waste reduction, amounted to NT\$66 million. Environmental accounting has helped TSMC assure that environmental protection measures also produce major economic benefits.

TSMC's environmental expenditure in 2008 was approximately NT\$1.7 billion.

TSMC 2008 Environmental Cost

Unit: NT\$ thousands

Classification	Description	Investment	Expense
1. Direct costs for reducing environmental impact			
(1) Pollution Control	Fees for air pollution control, water pollution control, and others.	125,634	1,299,365
(2) Resource Conservation	Costs for resource (e.g. water) conservation.	59,241	39,498
(3) Waste Disposal and Recycling	Costs for waste treatment (including recycling, incineration and landfill)	0	83,784
2. Indirect costs for reducing environmental impact (managerial cost)	(1) Cost of training (2) Environmental management system and certification expenditures (3) Environmental measurement and monitoring fees (4) Environmental protection product costs (5) Environmental protection organization fees	7,323	93,259
3. Other environment-related costs	(1) Costs for decontamination and remediation (2) Environmental damage insurance and environmental taxes (3) Costs related to environmental settlement, compensations, penalties and lawsuits	0	0
4. Total		192,198	1,515,905

TSMC environmental efficiency in 2008 was about NT\$66 million.

TSMC 2008 Environmental Efficiency

Unit: NT\$ thousands

Items	Description	Efficiency
Recycling of industrial waste	Recycling of waste pallets, packaging materials, wafer boxes, wafers, computers and accessories, fluorescent lamps, metals, empty toner cartridges, and other waste	66,066

6.2 Climate Change and Greenhouse Gas (GHG) Reduction

Global climate change is major environmental concern for TSMC. The U.N. Intergovernmental Panel on Climate Change (IPCC) has declared that greenhouse gas emissions are the primary cause of global climate change, which may have a catastrophic impact on the world economy and human life. TSMC is dedicated to reducing not only its own carbon emissions, but to serving as a benchmark in environmental protection by leading our supply chain members in emission reduction.

TSMC acknowledges that, as a member of the global village, it is necessary to reduce the GHG emissions of our facilities. Besides continued energy conservation to reduce indirect CO₂ emissions, TSMC also spends funds and manpower to conduct reduction programs for GHG used in manufacturing processes. At the same time, we offer a wide variety of environmental protection training courses and promotional programs encouraging all employees to conserve energy and protect the environment in their daily life.

TSMC's past climate change strategy was to actively carry out energy conservation measures, implementing voluntary PFCs emission reduction projects, and conducting GHG inventories and verification every year. In 2008, we adopted climate change as an Enterprise Risk Management (ERM) item to be evaluated and controlled, with regular reviews by senior executives and the Board of Directors.

Carbon Disclosure Project (CDP)

TSMC has publicly disclosed climate change information every year since 2005 through participation in an annual survey held by the non-profit Carbon Disclosure Project (CDP). TSMC also

takes further actions to review the regulatory, natural disaster, financial, and operational risks and opportunities created by global climate change. In 2008, TSMC was selected as the first Taiwan company to be included in the "Carbon Disclosure Leadership Index" (CDLI). The related information is disclosed in CDP website (www.cdpproject.net).

6.2.1 Greenhouse Gases Inventory

Reducing GHG emissions is a key method for mitigating global warming and climate change while inventory provides supporting data for reduction. An accurate inventory allows us to set priorities and reduction goals, raises the efficiency of the reduction process, and confirm reduction results.

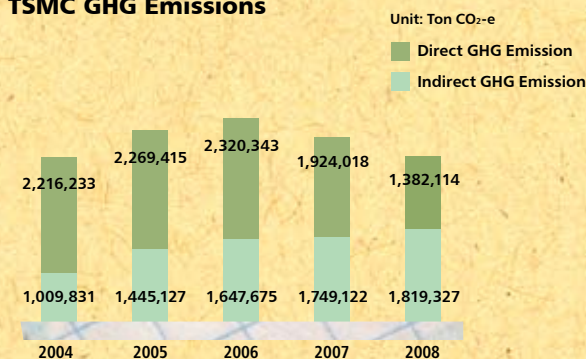
In 2005, TSMC was the first semiconductor company in Taiwan to make a thorough inventory of GHG emissions and to receive official certification. The purpose of the inventory was to serve as a reference for TSMC's GHG reduction strategy, to meet future domestic regulatory requirements, and to prepare for future carbon dioxide trading and corporate carbon asset management. We distributed inventory information to related departments in order to build a basic understanding and common language to build consensus for later environmental protection activities.

In 2006, the Taiwan Semiconductor Industry Association (TSIA) began a GHG inventory project for all members, including TSMC. This project followed the ISO 14064 standard to conduct a GHG inventory for 2000 to 2008, and acquired verification by an accreditation agency. TSMC will use these established systems to coordinate with the Taiwan Environmental Protection Agency (EPA) and TSIA to update GHG inventory data and proceed with third

party verification. TSMC (China) and WaferTech have also adopted the same methodology for their GHG inventory.

TSMC's GHG emissions can be categorized into direct and indirect sources. Direct emissions include process gases (PFCs, N₂O, CH₄ and CO₂), fuel such as natural gas, LPG (Liquefied Petroleum Gas), gasoline and diesel used for boilers, power generators, vehicles, fork lifts and kitchen stoves, as well as fugitive emissions from septic tanks and fire fighting equipment. Indirect sources include purchased electricity, product and raw material transportation, suppliers' manufacturing, employee business travel, waste disposal and employee commuting (note: purchased electricity is the only source of indirect emissions included in this report). Annual GHG inventories for TSMC fabs in Taiwan are as below.

TSMC GHG Emissions



In 2008, WaferTech joined the U.S. EPA Climate Leaders program (<http://www.epa.gov/climateleaders/>) which involved the development of a formal inventory management plan and undated inventory, which was submitted to an EPA consultant for review. WaferTech expects an onsite review in early 2009 to finalize its audited GHG inventory.

Because WaferTech was not yet manufacturing in the baseline year of 1997, it is not participating in the US SIA voluntary reduction. WaferTech is actively tracking regulatory activities in the USA and the State of Washington related to greenhouse gases. The State of Washington is writing new regulation to reduce GHG emissions. WaferTech will be part of a Cap and Trade program to start in 2012. WaferTech is working with the state to make sure we get credit for our early emission reductions in 2009.

6.2.2 GHG Emission Reduction—PFCs Emission Reduction

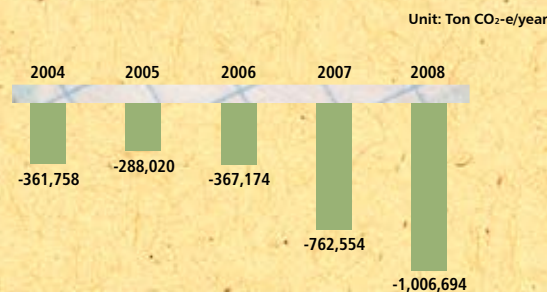
In response to the GHG emission reduction requirements of the Kyoto Protocol, many developed countries have set reduction goals. Taiwan is not a UN member and cannot ratify the Kyoto Protocol. However, many corporations in Taiwan and around the world have decided to voluntarily lower GHG emissions to act as good global citizens.

TSMC is committed to environmental protection and actively participates in international environmental protection programs. In particular, TSMC takes active measures to reduce greenhouse gas emissions. The semiconductor manufacturing process generally uses perfluorinated compounds (PFCs) such as CF_4 , C_2F_6 , SF_6 , NF_3 , CHF_3 , C_3F_8 , and C_4F_8 . TSMC and the TSIA have signed a memorandum of understanding with the Environmental Protection Agency of the Executive Yuan of the R.O.C. to set a PFCs emission reduction policy and implementation plan. Under the plan, TSMC voluntarily commits to reduce PFCs emissions to 10% below the average emission level of 1997 and 1999 by 2010. This emission target remains fixed as TSMC continues to grow and construct new fabs. We have achieved significant results in the past several years and we expect to reduce more than 70% of

PFCs emissions and to reach our target as scheduled. TSMC is actively taking the following steps to reduce emissions:

- Accurate measurement of PFCs gas production by chemical vapor deposition (CVD) process equipment and effectiveness of PFCs treatment equipment to calculate actual emission coefficients and volume of PFCs emitted.
- Evaluation of the feasibility of using C_3F_8 as a cleaning gas during the CVD process. The feasibility study reached a positive conclusion and by the end of 2008, 90% of this project has been completed.
- To evaluate and make effective use of combustible and catalytic PFCs abatement systems. TSMC will install the systems from 2008 to 2010; installation was 25% complete at the end of 2008.

TSMC PFCs Emission Reduction



Energy Conservation

TSMC's primary source of energy is electric power, followed by natural gas. Consumption of other types of energy is negligible. Taiwan's electric power comes primarily from coal-fired generators, which emit large amounts of CO₂, and therefore energy conservation is an important part of CO₂ emission reduction for industries in Taiwan. TSMC consistently promotes

energy conservation at all its facilities, reducing CO₂ emissions while saving costs at the same time.

TSMC uses energy-conserving designs when building new fabs, and continues to implement energy-saving measures on production equipment in operation. Although energy-saving efforts in office areas make a smaller impact than conserving energy used in production, TSMC believes such programs can raise employees' awareness of environmental protection. TSMC manages its conservation performance through an energy management organization and energy audit measures.

TSMC has made significant achievements in its many years of energy conservation at all fabs. TSMC estimates to have reduced electricity consumption by 430 MKWH per year, enough to power a city of 54,000 people for one year and equivalent to 270,000 tons of CO₂ emissions.

TSMC Energy Saving Measures

Energy-saving measures are integrated in TSMC fabs at the design phase, including adoption of heat recovery chiller systems, a mini-environment design for cleanrooms, dual-temperature chilled water systems to enhance the efficiency of heat exchange, inverters in air conditioning, exhaust and process cooling water systems, Variable Air Volume (VAV) controls in office air-conditioning systems, selection of high-efficiency electrical equipment (Off-line UPS, lighting), optimization of natural lighting and ventilation in office buildings, and adoption of natural gas instead of diesel in VOC abatement and boiler systems.

At the operational stage, the energy-saving measures of TSMC fabs include: heat exchange of cleanroom makeup air and indoor exhaust temperature;

reduction of cleanroom outdoor air leakage; process tool exhaust reduction; lighting reduction in office areas; and saving energy by placing computers in standby mode. A dedicated team communicates with employees through TSMC's internal website and through promotional posters to help workers develop energy-saving habits.

A total of six of TSMC's seven fabs in Taiwan have won the Ministry of Economic Affairs' "Energy Conservation Award".

In 2008, TSMC's Fab 8 replaced diesel with natural gas as boiler fuel, which reduced CO₂ emission by 30%, SO_x emission by 90% and NO_x emission by 40%, and also increased burn efficiency.

In 2008, TSMC's Fab 14, Phase 3 facility based in Southern Taiwan Science Park won certification from the U.S. Green Building Council's Leadership in Energy and Environmental Design – New Construction (LEED-NC) green building rating system with a "gold class" score. Fab 14, Phase 3 is the first building in Taiwan to receive certification from the U.S. Green Building Council. This is TSMC's new approach for factory energy conservation, which has achieved significant results.

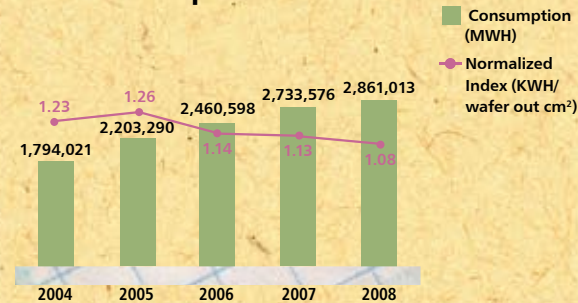


TSMC Fab 14 Phase 3's "U.S. LEED gold class certification"

Power Consumption Records

TSMC reduced average power consumption per wafer out area (square centimeter) from 1.23 KWH in 2004 to 1.08 KWH in 2008, continuing our gradual reduction in energy consumption. In 2008, energy consumption declined by 4.4%.

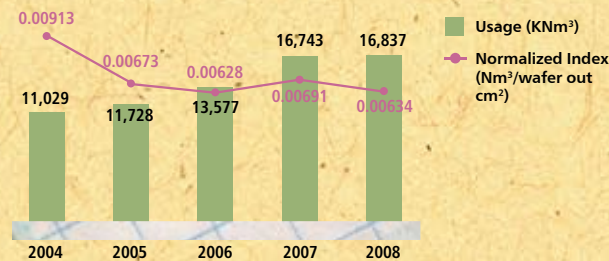
Power Consumption



Natural Gas Consumption Records

TSMC reduced average natural gas consumption per 8-inch wafer out area (square centimeter) from 0.00913 in 2004 to 0.00634 NM³ in 2008, also extending a gradual reduction. In 2008, average natural gas consumption declined by 8.2%.

Natural Gas Usage



6.3 Green Building

Company-wide Initiative

TSMC initiated a "green building" program in 2006 to improve environmental performance. The program covers design and construction of new fabs, enhancement of existing fabs, internal training, and encouraging partners to gain "green building" certification. To reach our targets, TSMC established a Green Building Task Force, which will certify new fabs and existing office buildings according to the U.S. Leadership in Energy and Environmental Design (LEED) standard and Taiwan's Ecology, Energy Saving, Waste Reduction, Health (EEWH) standard. In 2008, TSMC's newly-constructed Fab14 Phase 3 won EEWH diamond level and LEED gold level certification. For this project, TSMC invited Dr. Kath Williams, former vice president of the United States Green Building Council (USGBC) to serve as a consultant, and also consulted experts from leading Taiwan universities.



TSMC Fab14 Phase 3's "Taiwan EEWH diamond level certification"

Achievements of TSMC's Green Building Program

Green buildings and their facilities aim to reduce the ecological damage of construction, operation, and dismantling by reducing consumption of scarce resources and decreasing harmful emissions. Green buildings seek to achieve a balance between cost and environmental protection through green design and environmentally friendly construction procedures, lowering energy and water consumption to improve operation cost, reducing waste production and emissions of greenhouse gases to provide a healthy and comfortable environment. These concepts are already broadly used in the construction of factories, shopping centers, offices, hospitals, and schools and can be applied to construction, remodeling, and interior design.

Both the U.S. LEED and Taiwan's EEWB are aimed at improving a site's sustainability, enhancing resource recycling and water conservation, raising energy efficiency and reducing impact on environment. TSMC has gained the following ten capabilities since beginning its green building program:

- Building energy use simulation and conservation analysis
- Vegetated roofs and use of high-reflectance roofing materials
- Use of glass curtain walls, evaluation of sunlight and heat transmission for energy savings
- Use of daylight and energy-saving lighting
- Integrating the control of lighting and air conditioning

- Recycling and reusing low temperature condensate for outside air conditioning systems, and reusing energy from reheating coils
- Integrating renewable energies
- 95% recycling ratio of construction waste
- Reusing energy recycled from hot gas exhaust
- Recycling water from rainfall and sewage

Fab 14 "Green Building" Project

TSMC's Fab 14 Phase 3 gained LEED NC (New Construction) gold level and EEWB diamond level certification in 2008.

TSMC has taken the following measures to meet various LEED and EEWB requirements:

- Sustainable Site: providing construction pollution prevention plans; evaluating site conditions; evaluating development density and community connectivity; installing bicycle parking and changing rooms; providing parking space for carpools and vanpools; cultivating domestic plants on 53.5% of vacant ground; ensuring that post-development water permeability of the site was greater than pre-development; moving all parking spaces underground; using high-reflectance roofing materials; and planting vegetated roof.
- Energy and Atmosphere: simulating and optimizing buildings' energy performance; confirming that HVAC systems use no CFCs; enhancing refrigerant and firefighting CFC management; achieving energy efficiency 20% higher than standards set by The American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)

- Water Efficiency: using only recycled rainwater for irrigation and increasing sewage (kitchen and toilet) equipment efficiency by 30% through use of high-efficiency fixtures; future operation process water recycling rates are expected to exceed 90%
- Materials and Resources: classifying and appropriate storage of wastes; establishing collection points for recyclable materials; reducing construction waste by 95% by reusing construction materials; using local materials.
- Indoor Environmental Quality: use of HVAC system meeting ASHRAE 62.1-2004 IAQ standard; forbidding indoor smoking; locating smoking space away from building openings (entrance, outdoor air intakes, operable windows); monitoring CO₂ concentrations within all densely occupied spaces; increasing outside air ventilation rates; developing and implementing indoor air quality management plans in the construction and pre-occupancy phases; using low-emission materials; controlling indoor chemical and pollutant sources; controlling lighting, temperature and humidity; investigating thermal comfort satisfaction.

TSMC hopes that its efforts to build and promote green buildings will encourage the industry to take conservation and pollution reduction into consideration when building new fabs to reduce both damage to the environment and waste of resources, and to leave a better future for generations to come.

6.4 Green Product

6.4.1 Product Life Cycle Assessment

As the concept of sustainable development gains acceptance, product environmental impact evaluation has taken a more comprehensive approach of examining product life cycles, including raw material mining, transportation, product manufacturing, use, and disposal to thoroughly evaluate environmental impact. A product life cycle assessment can produce dramatically different results from a traditional product environmental impact analysis for products that would have relatively little environmental impact in the production or disposal stage, but a large impact in other stages.

TSMC cooperated with the Industrial Technology Research Institute (ITRI) for a "Product Life Cycle Assessment (LCA) Project" on wafer production in 2002, using ITRI's Do-It-Pro model to analyze data such as energy, raw materials consumption, and pollutants from the entire manufacturing chain, starting from raw materials to shipment from TSMC. TSMC has completed "Eco-profiles" for all TSMC fabs in Taiwan, which will help the company meet regulations such as the European Union's "Energy-Using Product" directive. These Eco-Profiles can also be provided to customers who require such documentation.

Product life cycle data shows that water is the most heavily consumed raw material for TSMC and its suppliers, followed by air, coal, and petroleum. Air is considered a renewable resource and effectively inexhaustible. According to a weighted analysis, the most significant environmental impact of wafer manufacturing is water consumption, followed

by energy consumption, aquatic toxicity, and the greenhouse effect. The LCA results helped TSMC to recognize the importance of resource conservation and waste reduction, and to place these as the first priority for environmental protection, achieving significant results.

In 2008, TSMC invited its integrated circuit assembly subcontractor Advanced Semiconductor Engineering Inc. (ASE Inc.) to complete a packaging and assembly LCA with the assistance of ITRI. Combined with our wafer LCA, this offers a complete Eco-Profile of a finished integrated circuit (IC).

6.4.2 Design for Low Power Consumption and Green Products

"Green Products" are environmentally friendly products that conserve energy, have low toxicity, and can be recycled. As a major wafer foundry, TSMC provides power-efficient design platforms to its customers, and using such design platforms, TSMC's customers can develop energy saving products to be manufactured by TSMC. TSMC cooperates with one of its third-party IP partners to integrate their patented energy saving technology and TSMC's advanced manufacturing technology to provide a "Power Trim Service" to our customers.

In 2008, TSMC added new high voltage features to our advanced 0.13-micron processes aimed at high resolution display drivers. The high-yield process features an Aluminum Copper (AlCu) backend metal scheme and is designed to meet energy reduction targets, while responding to the market's demand for smaller line width options, reducing die size in next-generation high-resolution display driver ICs.

6.4.3 Hazardous Substance Restriction Management

QC 080000 Hazardous Substance Process Management System

International regulations such as RoHS (Restriction of Hazardous Substances), PFOS (Perfluorooctane Sulphonate), ODS (Ozone Depleting Substances), Halogen, and others focus on hazardous substances in electric and electronic end-products, but do not detail how a corporation can become "hazardous substance free". To offer guidance, the International Electrotechnical Commission (IEC) Quality Assessment System for Electronic Components (IECQ) developed the QC 080000 hazardous substance process management system based on the ISO 9001 framework. QC 080000 establishes a hazardous substance management mechanism for all operational procedures, such as R&D, procurement, outsourcing, production, and testing to help companies become "hazardous substance free".

As a leader in semiconductor manufacturing and services, and to meet our corporate social responsibilities, TSMC began to implement the QC 080000 hazardous substances process management system in 2005, and in June 2006 became the first semiconductor company to earn certification for one of its fabs. TSMC's U.S. fab, WaferTech, obtained certification in September 2006, and all TSMC fabs including TSMC (China) were certified for QC 080000 by July 2007. In addition, TSMC has also shared its QC 080000 policies and experience with affiliated companies, and requested those use critical substances to receive the QC 080000 certification.

So far, Vanguard International Semiconductor, SSMC in Singapore, ASE, SPIL, and STAS ChipPAC in Korea have received QC 080000 certification in 2008. All TSMC fabs in Taiwan and overseas, as well as major subcontractors, are QC 080000 certified.

By practicing QC 080000, TSMC not only ensures that products comply with the EU RoHS, PFOS, ODS, Halogen regulations, we are also able to better understand and implement new regulations and customer requirements.

6.4.4 Product Packing Materials Reduction

TSMC uses recyclable plastic and paper as packing materials for shipping products. These packing materials comply with EU regulations requiring lead, cadmium, mercury and chromium (IV) concentration of less than 100 ppm, and also contain no polyvinylchloride (PVC).

TSMC recycles packing materials from products shipped to customer and testing and assembly facilities for reuse after cleaning. Packing materials from raw wafers are also reused in product shipping, reducing both packing material consumption and waste generation. In 2008, TSMC reused 46% of packing materials.

6.5 Water Resource Management

As global climate change becomes more severe, development and allocation of water resources has become a key issue in many countries. It is particularly vital in Taiwan, a highly industrialized and densely populated island with mountainous terrain that does not retain water easily. Development of water resources and balancing ecology with economy has become an important issue for both government and the private sector.

Our first principle of water use is reduction, followed by recycling. TSMC recognizes that water resources are limited, and new factories will be subject to environmental impact assessments. TSMC therefore promotes water saving programs and recycles as much as cost allows.

TSMC's sole source of water is the Taiwan Water Corporation. In addition to water use reduction, TSMC works with the local water utility and other semiconductor companies through the Association of Science Park Industries to improve the quality of the water supply. Together, we have successfully resolved many issues, including Total Organic Carbon (TOC) contamination, water dam eutrophication research, and others.

6.5.1 Water Conservation and Recycling Status

Internal Water Saving Status

Taiwan has limited water resources, and in addition to government efforts to develop water resources, TSMC also promotes many water conservation practices to continually reduce water net usage. The primary method of reducing water net usage is to raise the efficiency of process equipment in using ultra-pure water by adjusting its operation parameters. The primary method of raising our water-recycling rate is water quality categorization management, followed by innovative process wastewater recycling technology.

TSMC's facilities collect process water discharges through independent drainages, and reuse the water for the manufacturing process or secondary uses. These secondary uses including cooling tower make-up water, wet scrubber make-up water, cleaning

water for sludge de-watering filter in wastewater treatment systems, or toilet water, which does not come into human contact. Secondary uses of water are also optimized to reduce make-up water quantity.

TSMC also works with industry experts continually to implement new technology for water reuse, such as reclaiming slurry wastewater into ultra pure water systems, and adopting reverse osmosis and Electro Dialysis Reversal to reclaim wastewater containing fluorine.

We also regard rainwater as a precious resource. TSMC modified existing rainwater drainage systems to collect about 32,000 tons of rainwater for reuse every year.

In 2008, some TSMC fabs' process water recycling rates were higher than 90%, leading the global semiconductor industry, while the total average process water recycling rate was 84%, meeting or exceeding standards set by the Science Park Administration, and also exceeding the worldwide semiconductor industry standard. Total water usage has not increased along with production growth; in contrast, water usage decreased by 1.6% and water use per wafer area decreased by 10.16% compared to 2007. Maximizing water use efficiency can reduce purchasing costs while reducing wastewater, so it is economical and environment friendly.

The major water saving approaches are:

- Optimization of water usage for process tools, air pollution control wet scrubbers, cooling towers, ultrapure water systems, and wastewater systems

- Installation of organic/acid water recycling systems, separated collection according to water quality, recycling water to ultra-pure water systems or secondary uses such as cooling towers
- Installation of general and copper-containing CMP wastewater recycling systems, recycling wastewater to ultra-pure water systems or secondary water use
- Installation of wet scrubber water recycling systems to recycle wet scrubber effluent after treatment
- Recycling of air conditioning condensation for cooling tower use
- Establishment of rainwater storage system on roofs to supply plant irrigation systems, toilets, and wet scrubber water use
- Use of water saving faucets for employees
- 100% use of recycled water for toilet flushing
- Controlled water use for external wall cleaning and irrigation to avoid unnecessary water use

In 2008, we saved a total of 26,370,000 tons of water, which can provide a town with population of 240,000 with 1 year of water, or 4.93 times the volume of Hsinchu's Paoshan Reservoir.

TSMC Water Conservation Performance

Item	2005	2006	2007	2008
Average process water recycling rate (%) ¹	76%	79%	82%	84%
Water saved (10,000 tons)	1,849	2,144	2,314	2,637
Water saved, measured in standard swimming pools ²	7,396	8,575	9,255	10,549
Water saved, measured in the full capacity of Paoshan Reservoir ³	3.46	4.01	4.32	4.93

Note:

1. Average process water recycling rate is defined by the Science Park Administration.

2. A standard 50 x 25 x 2m swimming pool contains up to 2,500 tons of water.

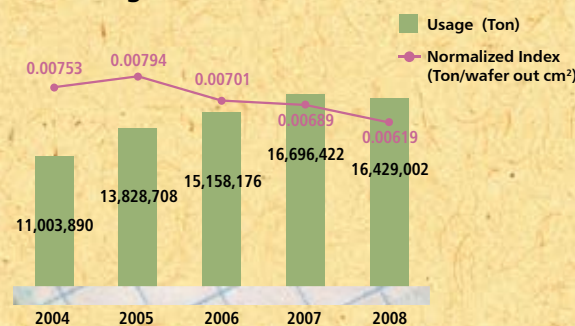
3. Paoshan Reservoir is the major reservoir that supplies water to Hsinchu Science Park. The full capacity of Paoshan Reservoir is 5.35 million tons.

External Cooperation in Water Saving Activities

Since water resources are inherently local, TSMC shares its water saving experience with other semiconductor companies through the Association of Science Park Industries to promote water conservation. At the same time, TSMC collaborates with the Science Park Administration to assist small facilities in the Science Park in well-water resource management to achieve the Science Park's goals and ensure long-term balance of supply and demand.

A total of six out of TSMC's seven fabs in Taiwan won the Ministry of Economic Affairs' "Water Saving Award".

Water Usage



6.6 Pollution Prevention

TSMC believes that pollution prevention is one of a corporation's most important responsibilities. TSMC's pollution prevention is based on the ISO 14001 environmental management system and uses the "Plan-Do-Check-Act" management model to promote continuous improvement. We believe that conserving raw materials, energy, and resources and reducing waste and pollutants both saves production costs and protects the environment. TSMC has established comprehensive management and operations procedures for pipe-end treatments such as air and water pollution controls, and ensures these procedures are carried out precisely. TSMC has also installed monitoring systems on the discharging sides of pollution control facilities for on-line monitoring. Facility personnel follow emergency response and reporting procedures to take proper actions if operating conditions diverge from preset limits. For waste management, TSMC has transitioned from traditional "treatment and disposal" to a concept of effective resource management and implements this concept in daily operations. We manage waste as a resource, categorize and collect waste at the source, raise waste recyclability, and also collaborate with waste treatment and recycling facilities to search for or develop possible recycling measures. With this waste resource management model, TSMC has successfully raised its waste recycling rate each year.

6.6.1 Raw Materials Usage Reduction

TSMC seeks to optimize processes to minimize raw material use and waste production, protecting the environment while reducing costs at the same time. TSMC has a designated unit that periodically reviews raw materials reduction performance.

6.6.2 Water Pollution Control

TSMC's ultra-pure water system turns raw water into ultra-pure water mainly used in process tools for cleaning chemical residue on wafer surfaces. To reduce total water usage, TSMC's effluent water from ultra-pure water systems and process tools are graded by purity. The cleanest is reused by in the manufacturing process; the second grade taken from the recycling treatment is employed in secondary uses such as cooling-tower water. Wastewater that cannot be recycled is discharged to treatment facilities for final wastewater treatment.

TSMC adopts a strict front-end wastewater categorization strategy to improve treatment efficiency. Wafer fabs' wastewater can be divided into fluoride, general acid, and various polishing

wastwaters. All kinds of wastewater are strictly categorized at process tools, and collected to wastewater treatment facilities through separated piping, carefully operated and maintained by professional teams to comply with the standards of the Science Park Administration (SPA). The water is then discharged to the SPA wastewater treatment plant for further treatment after professional teams ensure the discharge complies with SPA standards. The treated wastewater is discharged to rivers from the SPA's wastewater treatment plants in compliance with river discharge standards. SPA also will conduct random measurement of the discharges of each company in Science Park.

In addition to complying with SPA standards, TSMC continually works with industries and universities to improve discharge quality in areas such as COD (Chemical Oxygen Demand) and TMAH (Tetra-methyl ammonium hydroxide) to reduce hazards to water bodies. For example, we reduced Chemical Oxygen Demand (COD) for 12-inch fab discharge by 62.5%.

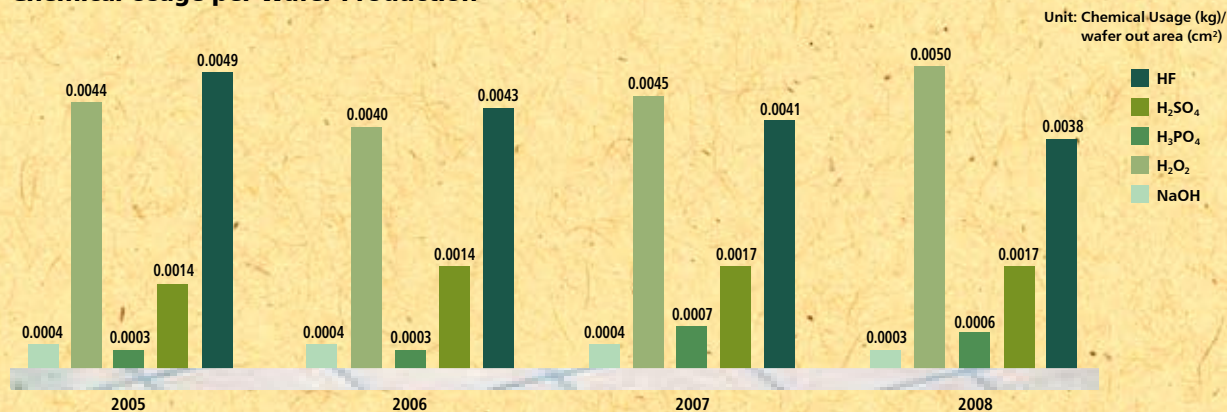
TSMC operates only after ensuring that the environment will not be polluted. Each fab is

equipped with effective wastewater treatment systems including complete backup systems, such as emergency power supplies, to reduce the likelihood of abnormal discharge. Operating status of all of TSMC wastewater treatment systems are monitored 24 hours a day by shift personnel. If operating conditions diverge from the preset limits, a warning signal is sent and wastewater discharge is halted. Data gathered for monitoring system effectiveness have been designated an important tracking item to ensure the effluent's quality.

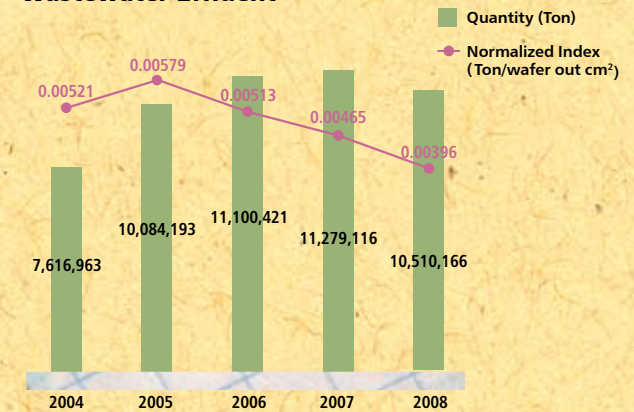
Wastewater Effluent Monitoring

All TSMC fabs are equipped with continuous monitoring equipment to monitor and record changes in water quantity and quality, such as acidity and fluoride ion concentration, in order to take appropriate responses when abnormal situations occur. We also conduct off-site sampling and analyze wastewater effluent quality at least four times a year, which also provides a calibration reference for on-line analyzers, ensuring that TSMC complies with water quality standards.

Chemical Usage per Wafer Production



Wastewater Effluent



6.6.3 Air Pollution Control

TSMC fabs emit three major types of exhaust: acid exhaust, base exhaust, and volatile organic compounds. Heat exhaust emitted by process equipment does not cause air pollution.

TSMC installs local scrubbers behind process tools in order to treat toxic, flammable and PFCs gases. First, high temperatures or other physical and chemical measures are used to significantly reduce the concentration of pollutants in tool exhaust. The gas is then inducted to central waste gas treatment equipment for end-point treatment. End-point treatment includes zeolite-rotary-wheel absorbing equipment for volatile organic chemical (VOC) treatment and wet scrubber equipment for acid or base gases. All TSMC fabs are equipped with VOC zeolite-rotary-wheel treatment systems. In 2008, the average removal efficiency of VOC exhaust in Taiwan's TSMC fabs was 95%.

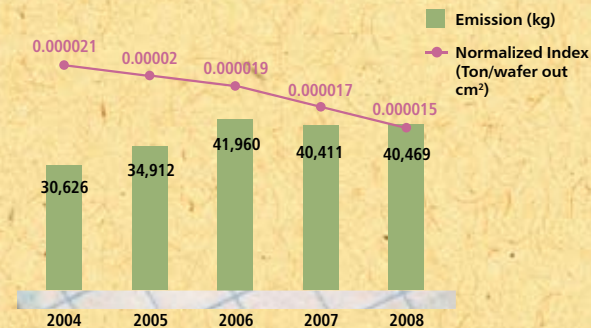


TSMC Air Pollution Control

Performance of all TSMC air pollution systems meet Taiwan air pollutants emissions standards. Overseas fabs are also compliant with or better than the local regulations.

Air pollution control systems of TSMC fabs are highly stable, and all TSMC fabs continuously monitor the real-time concentration of VOCs and conduct annual emission measurements as required by environmental laws. Emissions have been far below EPA standards every year.

VOC Emission



TSMC has installed effective air pollution control equipment, including backup systems, for all pollution control equipment to continue waste gas control in the event of equipment breakdown and lower the risk of air pollutant emission. To ensure normal equipment operations, TSMC has installed backup fuel supply systems for VOC pollution control equipment that will engage if the original fuel supply system experiences difficulties. Operational status of all of TSMC air pollution control systems is monitored 24 hours a day by shift personnel. Data collected by system efficiency monitoring have been classified as an important tracking item in order to ensure air exhaust quality.

6.6.4 Waste Management and Resource Recycling

Establishment of a Designated Unit

TSMC has transitioned from traditional "treatment and disposal" to the concept of effective resource management, and treats waste as valuable resource to be managed. To apply the concept of waste resource management, TSMC led the Taiwan semiconductor industry in 2001 in establishing a designated unit, the "Waste & Resources Management Section", responsible for planning and management of waste recycling and disposal.

Waste Reduction

To reach the goal of sustainable resource utilization, TSMC balances feasible technology with economic cost and then sets its priority on process waste reduction and pollution prevention to continuously minimize waste production. TSMC has made great efforts in raw material usage reduction with significant achievements that not only reduce waste, but also save costs for the company.

Recycling and Reuse

In waste treatment, TSMC first considers material recycling, followed by energy recycling and finally proper disposal such as incineration or sanitary landfills. TSMC's R&D, manufacturing, facility, ESH and waste management departments have all participated in continuous improvement programs and have made significant achievements.

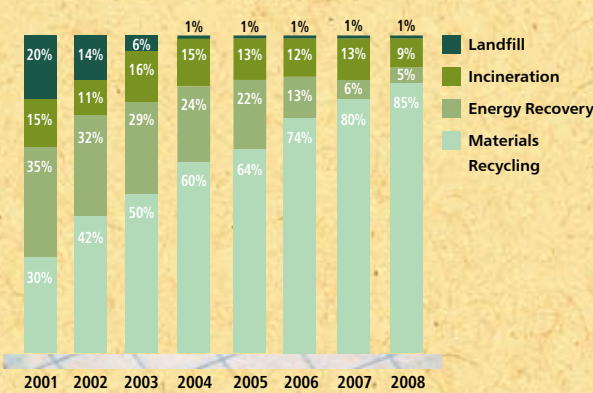
Ensuring Final Disposal Destination

To effectively track disposal of waste materials, TSMC carefully selects waste treatment and recycling contractors, and sets annual audit plans using regular and spot audits of certification documents, site operations, and transportation routes to ensure legal and appropriate treatment of waste to be recycled. TSMC requires waste disposal contractors to take preventive and corrective actions according to audit findings, and will disqualify contractors with incidences of environmental pollution. In addition to the self-management described above, TSMC also complies with related legal requirements.

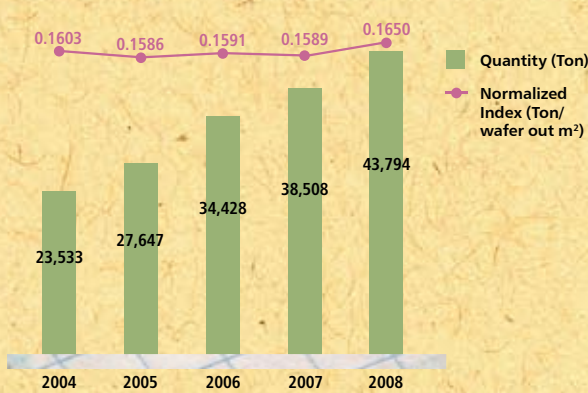
TSMC continued to carry out waste reduction and recycling programs in 2008, improving its waste recycling rate from 65% in 2001 to 90% in 2008, not including office general waste. The improvement in TSMC's waste recycling rate both reduces its waste treatment cost and also increases income from resource recycling.

TSMC's recyclable waste and post-recycling products are detailed below. TSMC was the first company in Taiwan to receive approval from the Ministry of Economic Affairs and National Science Council for recycling: calcium fluoride (CaF₂) sludge into cement additive; recycling residual polishing liquid into potassium silicate; converting waste hydrofluoric acid into calcium fluoride (flux); and recycling aluminum & plastic in waste anti-static bags.

TSMC Waste Recycling Rate



Total Waste



Recyclable Waste	Post-recycling Products	Recycled Amount in 2008 (Tons/year)
Scrap wafer	Reproduced solar cells	16
	Reproduced control or dummy wafer	78
Waste Sulfuric acid	Turned into Aluminum Sulfate	12896
Calcium fluoride (CaF ₂) sludge	Cement Additive	9449
Residual Polishing Liquid	Potassium Silicate	28
Waste Cupric Sulfate	Industrial Grade Cupric Sulfate	1780
Waste Cupric Liquid	Recycled for production of new etching liquid	2662
Photo resist thinner	Distilled for Reuse	4820
Waste Isopropyl Alcohol (IPA)	Distilled for Reuse	732
Stripper used to remove photo resistant layers	Distilled for Reuse	732
Solvent used to remove photo resistant layers	Cement kiln supplementary fuel	4091
Waste Phosphoric acid	Industrial Grade Phosphate, Calcium Phosphate	93
Empty chemical drum	Refilled by suppliers	1698
Empty Toner/Cartridge	Recycled Toner/Cartridge	1
Kitchen scraps	Animal feed	1445
Waste Hydrofluoric acid	Turned into Calcium Fluoride (Flux)	422
Waste photo mask	Raw material for quartz	12

6.7 Ecological Preservation

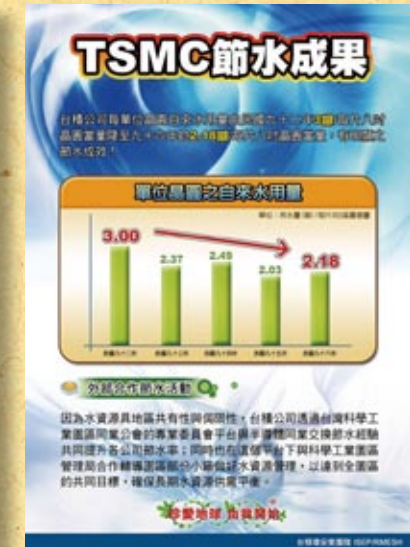
All TSMC wafer fabs in Taiwan and Shanghai are located in industrial parks, which conducted environmental impact assessment (EIA) before development, and continue to meet EIA commitments for environmental protection after development. Therefore, all TSMC wafer fabs in Taiwan and Shanghai are operating under the industrial parks' or its own EIA commitments, and do not have a significant environmental impact on their local ecological environments. Although TSMC's U.S. subsidiary fab WaferTech is not located in an industrial park, it maintains a designated department to take responsibility for monitoring and maintaining on-site ecological preservation.



WaferTech Wetland Preservation



Green promotion posters



WaferTech has successfully completed a 10-year wetlands mitigation project, where 29 acres of wetlands are in a permanent preservation, including 8 acres of enhanced wetlands. This project preserves valuable habitat for local wildlife and is home to beavers, deer, rabbits, coyotes and a variety of birds.

6.8 Green Promotion Activities

TSMC communicates the most up-to-date environmental concepts to its employees, collaborates closely with scholars, communities, industries and governments in the countries where we operate, and is systematically building a green supply chain. These activities are all aimed at using our influence as a corporation to protect the environment and meeting our corporate social responsibilities. The following section details TSMC's environmental promotion programs in 2008:

Enhancement of Employee Environmental Awareness

TSMC frequently holds environmental training courses and promotional activities. Besides professional environmental education courses, TSMC also makes good use of designated environmental bulletin boards in each fab as well as promotional materials in elevators, restrooms, and employee publications to embed environmental concepts in employees' everyday work and life.

In the second quarter of 2008, TSMC promoted understanding of the effects of global warming, energy consumption, and the office and home environmental activities to support "Earth Day" and "World Environmental Day", raising environmental awareness, and emphasizing that environmental protection must begin with individuals.

In the third quarter, TSMC held a “work and personal” environmental promotion campaign among employees. On the “work” side, we showcased TSMC’s achievements in reducing greenhouse gases, waste reduction, green purchasing, green buildings, and energy conservation. On the “personal” side, we introduced environmental concepts to employees through film shows, book exhibitions, and other activities.

In order to give employees easy access up-to-date environmental knowledge, we maintain an internal environmental protection website which files related information and links to global environmental protection-related websites.

Promotion of Energy Conservation in Office

To help employees understand the importance of conserving power in daily life, TSMC promoted energy-saving activities in 2008, including switching off computers after work, shutting off lights, lighting conservation, and copy paper reduction. We received enthusiastic participation from employees in each fab.

Keeping in Touch with the Most up-to-date Developments in Global Environmental Protection

TSMC actively keeps abreast of international environmental protection information and developments, and often sets policies and takes actions on environmental issues before domestic regulations are established. TSMC also participates in international semiconductor industry organizations and uses the environmental protection actions of top global semiconductor companies as a reference for its own policies, such as energy saving, PFC reduction and hazardous substance management.

Participation in External Environmental Protection Activities

Besides focusing on its own environmental protection work, TSMC also interacts closely with local governments, academia, and communities to act as a positive influence in environmental protection. TSMC actively participates in organizations such as the environmental protection committee of the Association of Science Park Industries, the ESH Committees of the Taiwan Semiconductor Industry Association (TSIA), the Taiwan Electric and Electrical Manufacturers’ Association (TEEMA), and the Taiwan Business Council for Sustainable Development (BCSD-Taiwan; TSMC is one of BCSD-Taiwan’s founding companies, and has been a board member since it was launched in 1997.). TSMC is connected with the latest in environmental thinking and shares its experience with local industries.

Taiwan’s First Cross-Industry Organization on Environmental Sustainability – the Taiwan Corporate Sustainability Forum

TSMC believes that improving the environment should begin with industry. While individual enterprises have limited influence on their own, companies working together can have a strong positive impact. We believe that environmental protection is a cooperative effort, not a competition, and leading companies have a responsibility to lead the way.

Guided by these concepts, TSMC visited 20 major Taiwan enterprises, and invited them to create the “Taiwan Corporate Sustainability Forum”, which was founded on October 16, 2008. The forum also invited the Taiwan Business Council for Sustainable Development (BCSD-Taiwan) as the executive secretariat, and welcomes more enterprises to participate in future.

In the next two years, the forum’s activities will focus on energy conservation, carbon reduction and community care. Members have committed to hosting experience-sharing sessions, and as of December 2008, the forum has held three experience-sharing sessions, hosted by TSMC, Asustek Computer Inc, and Acer Inc. Members also plan to hold regular meetings on sustainability topics with a focus on cross-industry sharing and learning, as well as working together to solve environmental problems. Fang-Ming Hsu, the deputy director of RMESHD TSMC, has been elected as convener for the next two years.

The first event of the Taiwan Corporate Sustainability Forum was the “2008 Green Forum – The Present and Future of Green Factories” hosted by TSMC. At this meeting, TSMC shared its hands-on experience in obtaining the U.S. Green Building Council’s Leadership in Energy and Environmental Design (LEED) certification, and applying for Taiwan’s Ecology, Energy Saving, Waste Reduction, and Health (EEWH) certification for its Fab 14 Phase 3 facility. TSMC also proposed working with green building experts to draft guidelines for green industrial buildings in Taiwan, helping more domestic companies construct their own green factories and promote green manufacturing.

External invitations to Speak on Environmental Subjects

TSMC environmental managers also accept invitations from government agencies and academic organizations to share TSMC’s environmental policy experience. Each speech has attracted a large and enthusiastic audience. In 2008, there were five times external invitation for ESH sharing.

Hosting Factory Visits

TSMC actively shares its environmental management experience by hosting factory visits by government agencies and academic organizations such as the Taiwan Ministry of Economic Affairs (MOEA) and the Environmental Protection Agency (EPA). TSMC personnel showed visitors our environmental equipment and facilities and answered related questions. Visitors in 2008 included:

- Visitors from the EPA visited Fab 2 and 5
- Visitors from the National Taiwan University Environmental Engineering Department visited Fab 14

Science Park "ESH Month" Activities

TSMC is an active participant in community environmental protection activities, such as the "ESH Month" held by the Science Park Administration and the Association of Science Park Industries. The goal of "ESH Month" is to give Science Park Employees a deeper understanding of workplace safety and sustainable development. It brings together companies around the Science Park as well as residents living in the communities around the science park.

In 2008, TSMC took charge of the green building ecological tour for the Hsinchu Science Park "ESH Month". The theme of this activity was to bring energy conservation and carbon reduction concepts into building design. First, a TSMC specialist introduced the differences between Taiwan's EEWB and the U.S. LEED, and shared experience on TSMC Fab 14 Phase 3's LEED gold level certification. Second, TSMC held a site tour to let the participants understand green building application procedures and gain confidence to apply for certification.

Continued Participation in the Tainan Science Park River Patrol and Guard Team

TSMC led the establishment of the Tainan Science Park river patrol and guard team, and works together with environmental authorities to control and rectify activity that may endanger environmental water quality. The team patrols waterways upstream and downstream from the Science Park once a month and makes random inspections for water effluents. If pollution incidents are discovered, the team will take pictures and report to the Science Park Administration and Tainan Environmental Protection Bureau.

TSMC (China) Environmental Protection and Energy Saving Activities

To ensure the effectiveness of energy-saving programs, TSMC (China) has established an energy saving and environmental protection committee. The Vice President of Public Relation chairs the committee and members include representatives of FAC, Module, HR, MM, MFG and IT units. The committee holds quarterly meetings to review environmental protection and energy-saving performance and programs.

TSMC (China) environmental protection activities in 2008 include:

- Set up monthly environmental protection promotion topics to strengthen employees' environmental awareness.
- Set up paper reduction goals and conducted paper reduction training and other activities, which reduced paper consumption by 28%, or the equivalent of saving 432 trees.

- Promoted shutting off desktop computers after work through labeling and audits, which has raised the shut-off rate from 32% to 98%, and saved 1,175,300 KWH and 8,462,400 RMB per year, equal to 1,172 tons CO₂ emission reduction.
- Optimized office air-condition on-off time, which saved 2,833,000 KWH and 170,000 RMB per year, equal to 2824.5 tons CO₂ emission reduction.
- Promoted cleanroom cloth, plastic bag and meal box reduction. In 2008, 900 packs of cleanroom cloth were saved, which was a 22% reduction. Used paper bags to replace plastic bags one month ahead of China's plastic bag prohibition regulations, and saved 30,000 plastic bags per month, which was a 97% reduction. Meal box consumption has been reduced by 8,700 per month, which was a 76% reduction.

6.9 Environmental Compliance Record

There were no significant spills, environmental penalties or fines in 2008.

Appendix

This section shows the compliance of this report to GRI G3 guidelines and the AA1000 Assurance Standard for the principles of inclusivity, materiality and responsiveness. It includes an Independent Assurance Opinion Statement and a GRI G3 Content Index.

Independent Assurance Opinion Statement

2008 TSMC Corporate Social Responsibility Report

The British Standards Institution is independent to Taiwan Semiconductor Manufacturing Company, Ltd. (hereafter referred to as TSMC in this statement) and has no financial interest in the operation of TSMC other than for the assessment and assurance of this report.

This Independent assurance opinion statement has been prepared for TSMC only for the purposes of assuring its statements relating to its corporate social responsibility (CSR), more particularly described in the Scope, below. It was not prepared for any other purpose. The British Standards Institution will not, in providing this independent assurance opinion statement, accept or assume responsibility (legal or otherwise) or accept liability for or in connection with any other purpose for which it may be used, or to any person by whom the Independent assurance opinion statement may be read.

This Independent assurance opinion statement is prepared on the basis of review by the British Standards Institution of information presented to it by TSMC. The review does not extend beyond such information and is solely based on it. In performing such review, the British Standards Institution has assumed that all such information is complete and accurate.

Any queries that may arise by virtue of this independent assurance opinion statement or matters relating to it should be addressed to TSMC only.

Scope

The scope of engagement agreed upon with TSMC includes the following:

1. The assurance covers the whole report and focuses on systems and activities during the 2008 calendar year on the TSMC headquarter, all fabs located in Taiwan and all other sites excluded except for partial ESH information in two wholly-owned subsidiaries.
2. The evaluation of the nature and extent of TSMC's adherence to all three AA1000 AccountAbility Principles in this report is conducted in accordance with type 1 of AA1000AS (2008) assurance engagement and therefore, the information/data disclosed in the report is not verified through the verification process.

This statement was prepared in English and translated into Chinese for reference only.

Opinion Statement

We conclude that the 2008 TSMC Corporate Social Responsibility Report Review provides a fair view of the TSMC CSR programmes and performances during 2008. We believe that the 2008 economic, social and environment performance indicators are fairly represented. The CSR performance indicators disclosed in the report demonstrate TSMC's efforts recognized by its stakeholders.

Our work was carried out by a team of CSR report assurers in accordance with the AA1000 Assurance Standard (2008). We planned and performed this part of our work to obtain the necessary information and explanations we considered to provide sufficient evidence that TSMC's description of their approach to AA1000 Assurance Standard and their self-declaration of compliance with the GRI guidelines were fairly stated.

Methodology

Our work was designed to gather evidence on which to base our conclusion. We undertook the following activities:

- review of issues raised by external parties that could be relevant to TSMC's policies to provide a check on the appropriateness of statements made in the report.
- discussion with managers and staff on TSMC's approach to stakeholder engagement. However, we had no direct contact with external stakeholders.
- 10 interviews with staffs involved in sustainability management, report preparation and provision of report information were carried out.
- review of key organizational developments.
- review of the extent and maturity of the relevant accounting systems for financial and non-financial reports

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A detailed review against the AA1000 AccountAbility Principles of Inclusivity, Materiality and Responsiveness and the GRI guidelines is set out below:

TSMC has made a commitment to its stakeholders. The participation of stakeholders has been initiated in developing and achieving an accountable and strategic response to CSR. The 2008 report reflects this. The reporting systems are being developed to deliver the required information. There are fair reporting and disclosures for economic, social and environmental information in this report, so that appropriate planning and target-setting can be supported. In our professional opinion the report

[illegible]

on the scope and confidentiality agreement.

Competency and Independence

The assessment team were comprised of Lead authors and Captain (Flightpath) members experienced in Engineering analysis and worked in a range of sustainability, environmental and social domains including: GHG/CO₂, ISO, efficiency, Emission/Scope 1, 2, 3 and/or ISO 14001. ISO is a leading global standards and assessment body founded in 1987. The assessment is carried out in line with the ISO for Trading Code in Transport.

For paid on contract of BSI:


Dr. Michael O'Connell
Managing Director BSI Taiwan
7 July 2018


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- An explicit CSR vision from top management or Board to lead the future CSR performance and available in the report.

- Establishing a formal CSR committee reporting to CEO to facilitate a mechanism for effective implementation and coordination of CSR vision.

Materiality

- Establishing a methodology to identify and prioritize TSMC's material issues at corporate level.

Responsiveness

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our professional opinion the report covers TSMC's responsiveness issues, however, the future report should be further enhanced by the following areas:

- Completely assuring responsiveness by means of encouraging direct stakeholders' participation.
- Considering the expectations of stakeholders while deciding the methods to respond.

GRI-reporting

TSMC provided us with their self declaration of compliance within GRI G3 Guidelines and the classification to align with application level A+. Based on our review, we confirm that social responsibility and sustainable development indicators with reference to the GRI Index are reported, partially reported or omitted. In our professional opinion the self declaration covers the TSMC's social responsibility and sustainability issues, however, the future report will be improved by the following areas:

- Enabling CSR committee to provide an infrastructure to systematically collect information for supporting their report including performance indicators.
- Disclosure the approach of stakeholders involvement in all stages of investigation, prioritization and response to their concerns and expectations.

Assurance level

The moderate level assurance provided is in accordance with AA1000 Assurance Standard (2008) in our review, as defined by the scope and methodology described in this statement.

Responsibility

This CSR report is the responsibility of the TSMC's CEO as declared in his responsibility letter. Our

responsibility is to provide an Independent assurance opinion statement to stakeholders giving our professional opinion based on the scope and methodology described.

Competency and Independence

The assurance team was composed of Lead auditors and Carbon Footprint Verifiers experienced in Engineering sector, and trained in a range of sustainability, environmental and social standards including AA1000 AS, ISO 14001, OHSAS 18001, ISO 14064 and ISO 9001. BSI is a leading global standards and assessment body founded in 1901. The assurance is carried out in line with the BSI Fair Trading Code of Practice.

For and on behalf of BSI:



Dr. Yi-Min Gao
Managing Director BSI Taiwan
1 July, 2009



Taiwan Headquarters: 5th Floor, No. 39, Ji-Hu Rd., Nei-Hu Dist., Taipei 114, Taiwan, R.O.C.
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Global Reporting Initiative (GRI) Sustainability Reporting Guidelines 2006 and its Content Index



This report discloses all GRI G3 core indicators in compliance with the GRI G3 Guidelines at application level A+.

	GRI Indicators	Related TSMC CSR Report Section	Page(s)	Explanatory Notes
1	Strategy and Analysis			
1.1	Statement from the most senior decision maker of the organization.	1. Message from the Chairman and Chief Executive Officer	3	
1.2	Description of key impacts, risks, and opportunities.	1. Message from the Chairman and Chief Executive Officer 2.2.3 Industry Outlook, Opportunities and Threats	3, 6	
2	Organizational Profile			
2.1	Name of the organization.	2.1 An Introduction to TSMC	4	
2.2	Primary brands, products, and/or services.	2.2 Market/Business Summary	5	
2.3	Operational structure of the organization, including main divisions, operating companies, subsidiaries, and joint ventures.	2.1 An Introduction to TSMC	4	
2.4	Location of organization's headquarters.	2.1 An Introduction to TSMC	4	
2.5	Number of countries where the organization operates, and names of countries with either major operations or that are specifically relevant to the sustainability issues covered in the report.	2.1 An Introduction to TSMC	4	
2.6	Nature of ownership and legal form.	2.1 An Introduction to TSMC	4	
2.7	Markets served (including geographic breakdown, sectors served, and types of customers/beneficiaries).	2.2 Market/Business Summary	5	
2.8	Scale of the reporting organization, including: <ul style="list-style-type: none"> • Number of employees; • Net sales (for private sector organizations) or net revenues (for public sector organizations); • Total capitalization broken down in terms of debt and equity (for private sector organizations); and • Quantity of products or services provided. 	2.1 An Introduction to TSMC 2.4 Financial Highlights	4, 7	
2.9	Significant changes during the reporting period regarding size, structure, or ownership.	2.5 Corporate Development	8	

	GRI Indicators	Related TSMC CSR Report Section	Page(s)	Explanatory Notes
2.10	Awards received in the reporting period.	2.6 Awards Received in the Reporting Period	8	
3	Report Parameters			
3.1	Reporting period (e.g., fiscal/calendar year) for information provided.	Overview	2	
3.2	Date of most recent previous report (if any).	Overview	2	
3.3	Reporting cycle (annual, biennial, etc.)	Overview	2	
3.4	Contact point for questions regarding the report or its contents.	Contact Information	74	
3.5	Process for defining report content, including: <ul style="list-style-type: none"> • Determining materiality; • Prioritizing topics within the report; and • Identifying stakeholders the organization expects to use the report. 	2.9 Stakeholder Identification and Communication	9	
3.6	Boundary of the report (e.g., countries, divisions, subsidiaries, leased facilities, joint ventures, suppliers).	Overview	2	
3.7	State any specific limitations on the scope or boundary of the report.	Overview	2	
3.8	Basis for reporting on joint ventures, subsidiaries, leased facilities, outsourced operations, and other entities that can significantly affect comparability from period to period and/or between organizations.	2.1 An Introduction to TSMC	4	
3.9	Data measurement techniques and the bases of calculations, including assumptions and techniques underlying estimations applied to the compilation of the Indicators and other information in the report.	Overview	2	The financial and environmental data in this report are conducted or verified by third parties.
3.10	Explanation of the effect of any re-statements of information provided in earlier reports, and the reasons for such re-statement (e.g., mergers/acquisitions, change of base years/ periods, nature of business, measurement methods).	Overview 2.1 An Introduction to TSMC	2, 4	
3.11	Significant changes from previous reporting periods in the scope, boundary, or measurement methods applied in the report.			There is no significant changes from previous reporting periods in the scope, boundary, or measurement methods applied in the report.
3.12	Table identifying the location of the Standard Disclosures in the report.	Global Reporting Initiative (GRI) Sustainability Reporting Guidelines 2006 and its Content Index	64	

	GRI Indicators	Related TSMC CSR Report Section	Page(s)	Explanatory Notes
3.13	Policy and current practice with regard to seeking external assurance for the report. If not included in the assurance report accompanying the sustainability report, explain the scope and basis of any external assurance provided. Also explain the relationship between the reporting organization and the assurance provider(s).	Overview Independent Assurance Opinion Statement	2, 61	
4	Governance, Commitments, and Engagement			
4.1	Governance structure of the organization, including committees under the highest governance body responsible for specific tasks, such as setting strategy or organizational oversight.	2.11 Corporate Governance	11	
4.2	Indicate whether the Chair of the highest governance body is also an executive officer (and, if so, their function within the organization's management and the reasons for this arrangement).	2.11 Corporate Governance 2.11.1 Governance Structure 2.11.2 Board of Directors	11	
4.3	For organizations that have a unitary board structure, state the number of members of the highest governance body that are independent and/or non-executive members.	2.11 Corporate Governance 2.11.2 Board of Directors	11	
4.4	Mechanisms for shareholders and employees to provide recommendations or direction to the highest governance body.	2.9 Stakeholder Identification and Communication 2.10 Investor Engagement 3.4.1 Open Communication	9, 10, 18	
4.5	Linkage between compensation for members of the highest governance body, senior managers, and executives (including departure arrangements), and the organization's performance (including social and environmental performance).	2.11.4 Compensation Committee	12	
4.6	Processes in place for the highest governance body to ensure conflicts of interest are avoided.	2.11.3 Audit Committee	12	
4.7	Process for determining the qualifications and expertise of the members of the highest governance body for guiding the organization's strategy on economic, environmental, and social topics.	2.11 Corporate Governance	11	
4.8	Internally developed statements of mission or values, codes of conduct, and principles relevant to economic, environmental, and social performance and the status of their implementation.	2.11.5 Corporate Compliance	12	
4.9	Procedures of the highest governance body for overseeing the organization's identification and management of economic, environmental, and social performance, including relevant risks and opportunities, and adherence or compliance with internationally agreed standards, codes of conduct, and principles.	2.11 Corporate Governance	11	

	GRI Indicators	Related TSMC CSR Report Section	Page(s)	Explanatory Notes
4.10	Processes for evaluating the highest governance body's own performance, particularly with respect to economic, environmental, and social performance.	2.11.2 Board of Directors	11	
4.11	Explanation of whether and how the precautionary approach or principle is addressed by the organization.	2.11.3 Audit Committee	12	
4.12	Externally developed economic, environmental, and social charters, principles, or other initiatives to which the organization subscribes or endorses.	2.9 Stakeholder Identification and Communication 2.10 Investor Engagement	9, 10	
4.13	Memberships in associations (such as industry associations) and/or national/international advocacy organizations.	2.8 Membership in Industry Associations	9	
4.14	List of stakeholder groups engaged by the organization.	2.9 Stakeholder Identification and Communication	9	
4.15	Basis for identification and selection of stakeholders with whom to engage.	2.9 Stakeholder Identification and Communication	9	
4.16	Approaches to stakeholder engagement, including frequency of engagement by type and by stakeholder group.	2.9 Stakeholder Identification and Communication	9	
4.17	Key topics and concerns that have been raised through stakeholder engagement, and how the organization has responded to those key topics and concerns, including through its reporting.	2.9 Stakeholder Identification and Communication	9	
Economic Performance Indicators				
EC1	Economic value generated and distributed, including revenues, operating costs, employee compensation, donations and other community investments, retained earnings, and payments to capital providers and governments.(Core)	2.4 Financial Highlights 5. Social Contribution	7, 35	
EC2	Financial implications and other risks and opportunities for the organization's activities due to climate change. (Core)	6.2 Climate Change and Greenhouse Gas (GHG) Reduction	47	
EC3	Coverage of the organization's defined benefit plan obligations. (Core)	3.3 Compensation and Benefits	17	
EC4	Significant financial assistance received from government. (Core)	2.4 Financial Highlights	7	
EC5	Range of ratios of standard entry level wage compared to local minimum wage at significant locations of operation. (Additional)	3.3 Compensation and Benefits	17	
EC6	Policy, practices, and proportion of spending on locally-based suppliers at significant locations of operation. (Core)	4.1 Supply Chain Risk Management	30	

	GRI Indicators	Related TSMC CSR Report Section	Page(s)	Explanatory Notes
EC7	Procedures for local hiring and proportion of senior management hired from the local community at significant locations of operation. (Core)	3.1 Employment	14	
EC8	Development and impact of infrastructure investments and services provided primarily for public benefit through commercial, in-kind, or pro bono engagement. (Core)	5. Social Contribution	35	
EC9	Understanding and describing significant indirect economic impacts, including the extent of impacts. (Additional)			TSMC does not evaluate indirect economic impacts.
Environment Performance Indicators				
EN1	Materials used by weight or volume. (Core)	6.5.1 Water Conservation and Recycling Status 6.6.1 Raw Materials Usage Reduction	52, 54	
EN2	Percentage of materials used that are recycled input materials. (Core)	6.4.4 Product Packing Materials Reduction 6.5.1 Water Conservation and Recycling Status 6.6.4 Waste Management and Resource Recycling	52, 55	
EN3	Direct energy consumption by primary energy source. (Core)	6.2.1 Greenhouse Gases Inventory 6.2.2.2 Energy Conservation	47, 48	
EN4	Indirect energy consumption by primary source. (Core)	6.2.1 Greenhouse Gases Inventory 6.2.2.2 Energy Conservation	47, 48	
EN5	Energy saved due to conservation and efficiency improvements. (Additional)	6.2.2.2 Energy Conservation	48	
EN6	Initiatives to provide energy-efficient or renewable energy based products and services, and reductions in energy requirements as a result of these initiatives. (Additional)	6.4.2 Design for Low Power Consumption and Green Products	51	
EN7	Initiatives to reduce indirect energy consumption and reductions achieved. (Additional)	6.2.2.2 Energy Conservation	48	
EN8	Total water withdrawal by source. (Core)	6.5 Water Resource Management 6.5.1 Water Conservation and Recycling Status	52	
EN9	Water sources significantly affected by withdrawal of water. (Additional)	6.5 Water Resource Management 6.5.1 Water Conservation and Recycling Status	52	
EN10	Percentage and total volume of water recycled and reused. (Additional)	6.5 Water Resource Management 6.5.1 Water Conservation and Recycling Status	52	
EN11	Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas. (Core)	6.7 Ecological Preservation	57	
EN12	Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas. (Core)	6.7 Ecological Preservation	57	

	GRI Indicators	Related TSMC CSR Report Section	Page(s)	Explanatory Notes
EN13	Habitats protected or restored. (Additional)	6.3 Green Building 6.7 Ecological Preservation	49, 57	
EN14	Strategies, current actions, and future plans for managing impacts on biodiversity. (Additional)	6.3 Green Building 6.7 Ecological Preservation	49, 57	
EN15	Number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk. (Additional)	6.7 Ecological Preservation	57	
EN16	Total direct and indirect greenhouse gas emissions by weight. (Core)	6.2.1 Greenhouse Gases Inventory	47	
EN17	Other relevant indirect greenhouse gas emissions by weight. (Core)	4.2.1 Supply Chain ESH Risk Control 6.2.1 Greenhouse Gases Inventory	31, 47	
EN18	Initiatives to reduce greenhouse gas emissions and reductions achieved. (Additional)	6.2.2 GHG Emission Reduction—PFCs Emission Reduction	48	
EN19	Emissions of ozone-depleting substances by weight. (Core)			TSMC does not use class 1 or 2 ozone-depleting substances.
EN20	NOx, SOx, and other significant air emissions by type and weight. (Core)	6.6.3 Air Pollution Control	55	
EN21	Total water discharge by quality and destination. (Core)	6.6.2 Water Pollution Control	54	
EN22	Total weight of waste by type and disposal method. (Core)	6.6.4 Waste Management and Resource Recycling	55	
EN23	Total number and volume of significant spills. (Core)	6.9 Environmental Compliance Record	59	There were no significant spills in 2008.
EN24	Weight of transported, imported, exported, or treated waste deemed hazardous under the terms of the Basel Convention Annex I, II, III, and VIII, and percentage of transported waste shipped internationally. (Additional)	6.6.4 Waste Management and Resource Recycling	55	TSMC is compliant with environmental laws for hazardous waste disposal.
EN25	Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the reporting organization's discharges of water and runoff. (Additional)	6.6.2 Water Pollution Control	54	TSMC's treated wastewater is discharged to the Science Park wastewater treatment plant, there is no significant environmental impact.
EN26	Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation. (Core)	6.4.1 Product Life Cycle Assessment 6.4.2 Design for Low Power Consumption and Green Products 6.4.3 Hazardous Substance Restriction Management 6.4.4 Product Packing Materials Reduction	51, 52	
EN27	Percentage of products sold and their packaging materials that are reclaimed by category. (Core)	6.4.4 Product Packing Materials Reduction 6.6.4 Waste Management and Resource Recycling	52, 55	

	GRI Indicators	Related TSMC CSR Report Section	Page(s)	Explanatory Notes
EN28	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations. (Core)	6.1.2 Environmental Accounting 6.9 Environmental Compliance Record	46, 59	
EN29	Significant environmental impacts of transporting products and other goods and materials used for the organization's operations, and transporting members of the workforce. (Additional)	6.4.1 Product Life Cycle Assessment	51	
EN30	Total environmental protection expenditures and investments by type. (Additional)	6.1.2 Environmental Accounting	46	
Labor Practices and Decent Work Performance Indicators				
LA1	Total workforce by employment type, employment contract, and region. (Core)	3.1 Employment	14	
LA2	Total number and rate of employee turnover by age group, gender, and region. (Core)	3.1.1 TSMC Workforce Structure 3.1.2 Employee Retention	14, 15	
LA3	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by major operations. (Additional)	3.3 Compensation and Benefits	17	
LA4	Percentage of employees covered by collective bargaining agreements. (Core)	3.4.4 Freedom of Association	19	
LA5	Minimum notice period(s) regarding significant operational changes, including whether it is specified in collective agreements. (Core)			Compliance with the notification process rule across all organizations.
LA6	Percentage of total workforce represented in formal joint management-worker health and safety committees that help monitor and advise on occupational health and safety programs. (Additional)	3.7.1 Safety and Health Management	21	
LA7	Rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities by region. (Core)	3.7.4 Occupational Injury and Illness Statistics	27	
LA8	Education, training, counseling, prevention, and risk-control programs in place to assist workforce members, their families, or community members regarding serious diseases. (Core)	3.7.3 Corporate Contagious Disease Prevention Project	26	
LA9	Health and safety topics covered in formal agreements with trade unions. (Additional)	3.4.4 Freedom of Association	19	
LA10	Average hours of training per year per employee by employee category. (Core)	3.2 Employee Development	16	

	GRI Indicators	Related TSMC CSR Report Section	Page(s)	Explanatory Notes
LA11	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings. (Additional)	3.2 Employee Development 3.2.1 Development and Training Programs	16	
LA12	Percentage of employees receiving regular performance and career development reviews. (Additional)	3.2 Employee Development	16	
LA13	Composition of governance bodies and breakdown of employees per category according to gender, age group, minority group membership, and other indicators of diversity. (Core)	3.1.1 TSMC Workforce Structure	14	
LA14	Ratio of basic salary of men to women by employee category. (Core)	3.3 Compensation and Benefits	17	
Human Rights Performance Indicators				
HR1	Percentage and total number of significant investment agreements that include human rights clauses or that have undergone human rights screening. (Core)			Our site selection criteria include: geography, population & transportation survey, public utility, climate survey, labor regulations, environmental protection regulations, and labor union status.
HR2	Percentage of significant suppliers and contractors that have undergone screening on human rights and actions taken. (Core)	4.2.1 Supply Chain ESH Risk Control	31	
HR3	Total hours of employee training on policies and procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained. (Additional)	3.2 Employee Development 3.4.3 Human Rights	16, 19	
HR4	Total number of incidents of discrimination and actions taken. (Core)	3.4 Employee Relations 3.4.1 Open Communications 3.4.3 Human Rights	18, 19	
HR5	Operations identified in which the right to exercise freedom of association and collective bargaining may be at significant risk, and actions taken to support these rights. (Core)	3.4.4 Freedom of Association	19	
HR6	Operations identified as having significant risk for incidents of child labor, and measures taken to contribute to the elimination of child labor. (Core)	3.1.4 Abolition of Child Labor	15	
HR7	Operations identified as having significant risk for incidents of forced or compulsory labor, and measures to contribute to the elimination of forced or compulsory labor. (Core)	3.4 Employee Relations	18	Operation risks are well-managed and supervised according to government law. No relevant cases were identified.
HR8	Percentage of security personnel trained in the organization's policies or procedures concerning aspects of human rights that are relevant to operations. (Additional)	3.6 Corporate Security and Risk Control	21	

	GRI Indicators	Related TSMC CSR Report Section	Page(s)	Explanatory Notes
HR9	Total number of incidents of violations involving rights of indigenous people and actions taken. (Additional)	3.4.3 Human Rights	19	There were no violations involving rights of indigenous people in 2008.
Society Performance Indicators				
SO1	Nature, scope, and effectiveness of any programs and practices that assess and manage the impacts of operations on communities, including entering, operating, and exiting. (Core)	5.4 Community Building	40	
SO2	Percentage and total number of business units analyzed for risks related to corruption. (Core)	2.11.6 Anti-Corruption	13	
SO3	Percentage of employees trained in organization's anti-corruption policies and procedures. (Core)	2.11.6 Anti-Corruption	13	
SO4	Actions taken in response to incidents of corruption. (Core)	2.11.6 Anti-Corruption	13	
SO5	Public policy positions and participation in public policy development and lobbying. (Core)	2.11.7 Political Contributions	13	
SO6	Total value of financial and in-kind contributions to political parties, politicians, and related institutions by country. (Additional)	2.11.7 Political Contributions	13	
SO7	Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes. (Additional)	2.11.5 Corporate Compliance	12	
SO8	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations. (Core)	2.11.5 Corporate Compliance	12	There were no non-compliance cases with laws and regulations in 2008.
Product Responsibility Performance Indicators				
PR1	Life cycle stages in which health and safety impacts of products and services are assessed for improvement, and percentage of significant products and services categories subject to such procedures. (Core)	6.4 Green Product 6.4.1 Product Life Cycle Assessment 6.4.3 Hazardous Substance Restriction Management	51	
PR2	Total number of incidents of non-compliance with regulations and voluntary codes concerning health and safety impacts of products and services during their life cycle, by type of outcomes. (Additional)			There were no non-compliance cases with regulations and voluntary codes concerning health and safety impacts of products and services during their life cycle in 2008.
PR3	Type of product and service information required by procedures, and percentage of significant products and services subject to such information requirements. (Core)	6.4.3 Hazardous Substance Restriction Management	51	

	GRI Indicators	Related TSMC CSR Report Section	Page(s)	Explanatory Notes
PR4	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labeling, by type of outcomes. (Additional)			There were no non-compliance cases with regulations and voluntary codes concerning product and service information and labeling in 2008.
PR5	Practices related to customer satisfaction, including results of surveys measuring customer satisfaction. (Additional)	4.7 Customer Service and Satisfaction 4.7.3 Customer Satisfaction	34	
PR6	Programs for adherence to laws, standards, and voluntary codes related to marketing communications, including advertising, promotion, and sponsorship. (Core)	2.11.5 Corporate Compliance 6.4.1 Product Life Cycle Assessment 6.4.3 Hazardous Substance Restriction Management	12, 51	
PR7	Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship by type of outcomes. (Additional)			There were no non-compliance cases with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship in 2008.
PR8	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data. (Additional)			There were no substantiated complaints regarding breaches of customer privacy and losses of customer data in 2008.
PR9	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services. (Core).			There were no non-compliance cases with laws and regulations concerning the provision and use of products and services in 2008.

Contact Information



● Corporate Headquarters & Fab 12

8, Li-Hsin Rd. 6, Hsinchu Science Park, Hsinchu 300-78
Taiwan, R.O.C.
Tel: 886-3-5636688 Fax: 886-3-5637000

● Fab 2, Fab 5

121, Park Ave. 3, Hsinchu Science Park, Hsinchu 300-77
Taiwan, R.O.C.
Tel: 886-3-5636688 Fax: 886-3-5781546

● Fab 3

9, Creation Rd. 1, Hsinchu Science Park, Hsinchu 300-77
Taiwan, R.O.C.
Tel: 886-3-5636688 Fax: 886-3-5781548

● Fab 8

25, Li-Hsin Rd., Hsinchu Science Park, Hsinchu 300-78
Taiwan, R.O.C.
Tel: 886-3-5636688 Fax: 886-3-5662051

● Fab 6

1, Nan-Ke North Rd., Tainan Science Park, Tainan 741-44
Taiwan, R.O.C.
Tel: 886-6-5056688 Fax: 886-6-5052057

● Fab 14

1-1, Nan-Ke North Rd., Tainan Science Park, Tainan 741-44
Taiwan, R.O.C.
Tel: 886-6-5056688 Fax: 886-6-5051262

● TSMC North America

2585 Junction Avenue, San Jose, CA 95134, U.S.A.
Tel: 408-3828000 Fax: 408-3828008

● TSMC Europe B.V.

World Trade Center, Zuidplein 60, 1077 XV Amsterdam
The Netherlands
Tel: 31-20-3059900 Fax: 31-20-3059911

● TSMC Japan Limited

21F, Queen's Tower C, 2-3-5, Minatomirai, Nishi-ku
Yokohama, Kanagawa 220-6221, Japan
Tel: 81-45-6820670 Fax: 81-45-6820673

● TSMC (China) Company Limited*

4000, Wen Xiang Road, Songjiang, Shanghai, China
Postcode: 201616
Tel: 86-21-57768000 Fax: 86-21-57762525

*TSMC (Shanghai) Company Limited changed its name to
TSMC (China) Company Limited beginning February 4, 2009.

● TSMC Korea Limited

15F, AnnJay Tower, 718-2, Yeoksam-dong, Gangnam-gu
Seoul 135-080, Korea
Tel: 82-2-20511688 Fax: 82-2-20511669

● TSMC Liaison Office in India

1st Floor, Pine Valley, Embassy Golf-Links Business Park
Bangalore-560071, India
Tel: 91-80-41768615 Fax: 91-80-41764568

● TSMC Design Technology Canada Inc.

349 Terry Fox Drive, Kanata, ON K2K 2V6, Canada
Tel: 1-613-5667011 Fax: 1-613-2713643

● WaferTech, LLC

5509 N.W. Parker Street, Camas, WA 98607-9299, U.S.A.
Tel: 1-360-8173300 Fax: 1-360-8173590

For inquiries regarding this report or TSMC's CSR activities:
Risk Management & Corporate ESH Division
121, Park Ave. 3, Hsinchu Science Park, Hsinchu 300-77
Taiwan, R.O.C.
Tel: 886-3-5636688 Fax: 886-3-5643820

<http://www.tsmc.com>



**Taiwan Semiconductor
Manufacturing Company, Ltd.**

8, Li-Hsin Rd. 6, Hsinchu Science Park, Hsinchu 300-78, Taiwan, R. O. C.

Tel: 886-3-5636688 Fax: 886-3-5637000

<http://www.tsmc.com>