

Corporate Social Responsibility

7.1 Overview

TSMC believes a company's corporate social responsibility is to uplift society. As a result, in addition to actively strengthening TSMC's competitiveness in its core business of dedicated IC foundries, the Company is also continuously active in the economic, environmental and social dimensions of corporate responsibility and attends to the rights of all stakeholders including employees, shareholders/investors, customers, suppliers, and local communities to serve as a positive force in society.

The Scope of Corporate Social Responsibility

TSMC has declared "Uplifting Society" as the Company vision and identified three primary missions: "Acting with Integrity," "Strengthening Environmental Protection," and "Caring for the Disadvantaged" in its Corporate Social Responsibility Policy. The CSR matrix below, set by Chairman Dr. Morris Chang, clearly defines the scope of that responsibility. The horizontal axis shows the seven areas where TSMC aims to set an example: morality, business ethics, economy, rule of law, sustainability, work/life balance and happiness, and philanthropy. On the vertical axis are actions that TSMC has taken to fulfill its responsibilities.

TSMC CSR Matrix

TSMC \ Society	Morality	Business Ethics	Economy	Rule of Law	Sustainability	Work/Life Balance Happiness	Philanthropy
Integrity	V	V					
Law Compliance				V			
Anti-Corruption Anti-Bribery Anti-Cronyism	V	V		V			
Environmental Protection Climate Control Energy Conservation				V	V		
Corporate Governance		V	V	V			
Provide Well-Paying Jobs			V			V	
Good Shareholder Return			V				
Employees' Work/Life Balance						V	
Encourage Innovation		V	V				
Good Work Environment						V	
Volunteers Organization					V	V	V
Education and Culture Foundation							V

CSR Management

As the TSMC's top-level group for corporate social responsibility, the CSR committee acts as a center for decision-making and platform for coordination throughout the Company. TSMC's CFO (chief financial officer) serves as chairperson of the CSR committee, which is comprised of representatives from each functional organization. The committee meets each quarter to discuss developments and future directions of CSR operations. It also coordinates across all organizations based on the type and nature of issues addressed and monitors the progress and effectiveness of CSR projects.

Functions related to CSR include legal, customer service, materials management, quality and reliability, research and development, risk management, finance, investor relations, operations, human resources, the TSMC Foundation, the TSMC Volunteer Program, public relations and environment, health, and safety. These functions are responsible for addressing CSR issues of interest to employees, shareholders/investors, customers, suppliers, governments, communities, and other stakeholders to systematically and

effectively fulfill the Company's corporate social responsibilities. The CSR committee chairperson leads committee to jointly set the Company's CSR strategy, identify key issues for the year and monitor the execution of related projects and budgets by each organization to ensure they are effectively carried out. The CSR committee chairperson also annually reports the current year's results and submits plans for the upcoming year to the board of directors.

Stakeholder Engagement

TSMC's approach to stakeholder relations is divided into four stages: identification, analysis, planning and engagement. In order to pursue sustainable operations, TSMC not only performs direct communications with each of its stakeholders through multiple channels established by CSR-related units but also maintains a "Stakeholder Engagement" section on the corporate website, as well as a CSR mailbox to gather a broad range of views from the public. The CSR mailbox, set up in 2011, is managed by dedicated public relations staff, and submissions are sent to relevant departments according to the nature and range of issues addressed. In 2016, the TSMC CSR mailbox received 472 submissions, including requests for surveys, studies and visits, inquiries about daily operations, recruiting and CSR-related experience sharing, suggestions and complaints from the public, and requests for endorsement, donation and collaboration as well as event invitations. All received timely responses from the Company's dedicated personnel.

Stakeholders and Communication Channels in 2016

Stakeholders	Communication Channels
Employees	<ul style="list-style-type: none"> Corporate intranet, internal emails and other announcement channels (such as promotion posters at facilities) Human resource representatives Regular and ad-hoc communication meetings Employee voice channels, such as immediate response system, employee opinion box, wellness center, wellness website, etc. Ombudsman System Audit Committee Whistleblower System
Shareholders & Investors	<ul style="list-style-type: none"> Annual shareholder meeting Quarterly earnings conference call Investor conferences and meetings Telephone and email responses to investors' questions and feedback collection Annual reports, CSR reports, 20-F filings to US SEC, material announcements to Taiwan Stock Exchange, and corporate news on the Company's website
Customers	<ul style="list-style-type: none"> Annual customer satisfaction survey Customer quarterly business review meetings Customer audits
Suppliers	<ul style="list-style-type: none"> Supplier quarterly business review meetings Supplier questionnaire survey Supplier onsite audits Annual supply chain management forum Supplier ethics code awareness training
Government	<ul style="list-style-type: none"> Official correspondence Meetings (such as communication meetings or public hearings) Communication with government authorities through industry organizations, including the Association of Science Park Industries, Taiwan Semiconductor Industry Association, World Semiconductor Council, and Chinese National Federation of Industries
Society	<ul style="list-style-type: none"> Arts events in the communities Sponsorship of non-profit organizations to support educational projects Professorship endowments and student scholarships at universities Support of non-profit organizations and institutions via monetary and in-kind donation, as well as providing necessary manpower for a good cause Regular visits to National Museum of Science, Hsinchu Veterans Home, St. Teresa Children Center, Hsinchu Gaofeng Botanical Garden, Jacana Ecology Education Park, and other remote schools to provide volunteer services Annual volunteer activities in collaboration with TSMC fabs and divisions

In April 2016, the Company launched its first Facebook fan page, a newly established two-way communication channel to introduce a variety of CSR activities provided by the TSMC Education and Culture Foundation, TSMC Volunteer Program and 17 fab/division volunteer initiatives on a weekly basis. This enables further understanding of the Company's social contribution to society.

TSMC believes that maintaining good communication with stakeholders not only helps the Company better understand economic, social and environmental challenges, but also creates value for the Company and society and promotes sustainable growth.

Responsibilities of TSMC CSR Committee Members

Committee Members	Responsibilities	Stakeholders
Legal	Corporate Governance, Code of Conduct, Legal Compliance, Intellectual Property, Protection of Confidential Information	Government Employees Society
Customer Service	Customers Service and Satisfaction, Customer Trust, Customer Confidentiality	Customers
Materials Management	Materials and Supply Chain Risk Management, Supplier Management, Conflict Minerals, EICC	Suppliers
Quality and Reliability	Product Quality and Reliability, Product Recall Mechanism.	Customers
Research and Development	Innovation Management, Green Products	Employees Customers
Risk Management	Risk Management, Crisis Management, Emergency Response and Action Plan	Customers Employees Government Society Investors
Finance	Financial Disclosure, Dividend Policy, Tax Strategy	Government Investors
Investor Relations	Resolving Issues of Stakeholder Concern, Establishing Trusting Long-term Relationships, Effective Two-way Communication, Annual Report Production	Investors
Operations	Operational Eco-efficiency, Pollution Prevention, Water Resource Risk Management, Green Manufacturing	Customers Investors
Environment, Health, and Safety	Environmental Policy and Management System, Climate Change Mitigation and Adaption, Pollution Prevention, Energy Consumption Efficiency, Carbon Emissions and Carbon Rights Management, Product Environmental Responsibility, Response Mechanism for Environmental Issues, Environmental Spending, Green Supply Chain, Policy and Management Systems for Occupational Health and Safety, Workplace Health and Safety, Occupational Disease Prevention and Health Promotion, Communication of ESH Regulations	Employees Customers Government Society Suppliers Investors
Human Resources	Talent Recruitment and Retention, Employee Health and Safety, Employee Training and Development, Compensation and Benefits, Freedom of Association and Collective Bargaining, Labor Relations and Whistleblower Procedures, Labor Rights Violations and Reporting Procedures, Management of Working Hours, Child Labor	Employees
TSMC Education and Culture Foundation, TSMC Volunteer Society	Corporate Citizenship, Philanthropy, Community Relations	Society
Public Relations	Stakeholder Engagement, Mechanism for Reflecting Issues of Social Concern, Media Relations	Society

As the only semiconductor company chosen for the Dow Jones Sustainability World Indices for the past 16 consecutive years, TSMC believes that integrity is fundamental to any company's sustainability. From a CSR perspective, TSMC also believes that customer trust is enhanced if the Company follows the law, insists on transparency and shows good corporate governance. These practices, along with outstanding business results, mean investors will be more willing to invest in the Company over the long term and employees will be more likely to make a mutual commitment to the Company to fulfill its core values, leading to stronger coherence within the Company. At TSMC's urging, suppliers – both upstream and downstream – have been working together to strengthen environmental protection by building a green supply chain. With the engagement of all stakeholders, the Company's resources can be amplified to create even more value for society. In summary, carrying out TSMC's social responsibilities gives the Company greater competitive advantage and benefits all stakeholders.

2016 CSR Awards and Recognitions

Category	Organization	Awards and Recognitions
Overall CSR	Dow Jones Sustainability Indices (DJSI)	•Membership in the Dow Jones Sustainability World Index for the 16th consecutive year •RobecoSAM Sustainability Award - Gold Class
	MSCI Global Sustainability Indexes	•Selected as MSCI Global Sustainability Indexes component
	FTSE4Good Index	•Selected as FTSE4Good Emerging Index component
	Goldman Sachs, GS Sustain	•Selected as GS SUSTAIN Focus List companies, which incorporates global industry leaders
	R.O.C. Presidential Office	•R.O.C. Presidential Innovation Award
	Taiwan Institute of Sustainable Energy	Taiwan Corporate Sustainability Awards: •Taiwan Corporate Sustainability Awards No.1 for Domestic Corporates •Taiwan Top 50 Corporate Responsibility Report Awards – Electronics Industry – Gold Class •Sustainable Water Management Award •Climate Leader Award
	Barron's	•Selected as Top100 World's Most Admired Companies
	FORTUNE	•Selected as one of The World's Most Admired Companies
	Newsweek	•Selected as Newsweek Green Rankings Top Green Companies in the World
	Channel NewsAsia	•Selected as one of the most sustainable corporations in Channel NewsAsia Sustainability Ranking
	CommonWealth Magazine	•Excellence in Corporate Social Responsibility Award – Large cap – 2nd Place •Most Admired Company in Taiwan for the 21st consecutive year •Most admired entrepreneur in Taiwan
	Global Views Magazine	Corporate Social Responsibility Award: •Technology Industry Group - Model Award
	Cheers Magazine	•Most Admired Company for the New Generation
	Economy, Governance	Taiwan Stock Exchange
R.O.C. Ministry of Economic Affairs Bureau of Foreign Trade		•Outstanding Trade Contribution Award
R.O.C. Ministry of Economic Affairs Intellectual Property Office		•Ranked No.1 in Top 100 Patent Filers
PricewaterhouseCoopers		•Ranked No.1 in Taiwan by Pricewaterhouse Coopers Global Innovation 1,000 Study
China Credit Information Service		•Ranked No.1 in Profitability of large Taiwan Companies
Institutional Investor Magazine		•Best CEO (Technology/Semiconductor) - 1st Place (buy-side and sell-side) - All-Asia •Best CEO (Technology/Semiconductor) - 1st Place (buy-side) - All-Asia •Best CEO (Technology/Semiconductor) - 1st Place (sell-side) - All-Asia •Best CFO (Technology/Semiconductor) - 1st Place (buy-side and sell-side) - All-Asia •Best CFO (Technology/Semiconductor) - 1st Place (buy-side) - All-Asia •Best CFO (Technology/Semiconductor) - 2nd Place (sell-side) - All-Asia •Best Investor Relations (Technology/Semiconductor) - 1st Place (buy-side and sell-side) - All-Asia •Best Investor Relations (Technology/Semiconductor) - 1st Place (buy-side) - All-Asia •Best Investor Relations (Technology/Semiconductor) - 1st Place (sell-side) - All-Asia •Best Investor Relations Professional (Technology/Semiconductor) - 1st Place (buy-side and sell-side) - All-Asia •Best Investor Relations Professional (Technology/Semiconductor) - 1st Place (buy-side) - All-Asia •Best Investor Relations Professional (Technology/Semiconductor) - 1st Place (sell-side) - All-Asia •Best Analyst Days (Technology/Semiconductor) - 1st Place (buy-side and sell-side) - All-Asia •Best Website (Technology/Semiconductor) - 1st Place (buy-side and sell-side) - All-Asia
IR Magazine		•Global Top 50 Gold Rank No.1 •Global Top IRO - Five Winning IROs •Global Top Corporate Governance - Five Winning Companies •Best Use of Technology - Greater Asia •Best Corporate Governance - Greater Asia •Best in Sector: Technology - Greater Asia
Asiamoney		•Best Managed Company Large Cap in Taiwan
FinanceAsia		•FinanceAsia 20th Anniversary Platinum Awards: Best Company – in Taiwan
FORTUNE		•Selected as member of Fortune Global 500
Forbes		•Forbes Global 2000
Forbes Asia		•Fabulous 50
Nikkei		•Nikkei Asia 300 Indexes
World Export Controls Review (WorldECR Journal)		•Best Export Controls Compliance Team of the Year - Rest of the World

(Continued)

Category	Organization	Awards and Recognitions
Environment, Safety and Health	U.S. Green Building Council Leadership in Energy and Environmental Design (LEED) certification	•“Gold” class certification – Fab 14B Manufacturing Facility and Office Building
	R.O.C. Ministry of the Interior “Ecology, Energy Saving, Waste Reduction and Health (EEWH)” certification	•“Diamond” class certification – Fab 12A Manufacturing Facility, Fab 12 Phase 6 Manufacturing Facility, Fab 14B Manufacturing Facility
	R.O.C. Environmental Protection Administration	•Excellence in Toxic Substance Management Award – Fab 2 and Fab 5 •Enterprise Green Procurement Award – Fab 2 and Fab 5, Fab 3, Fab 8, Fab 12A, Fab 14A, Fab 14B •Environmental Education Award – Fab 6, Fab 15A
	R.O.C. Ministry of Economic Affairs	•Excellence in Energy Conservation – Fab 12 Phase 6 •Excellence in Carbon Reduction Award – Fab 2 and Fab 5, Fab 8 •Green Factory Label – Fab 15A •Water Conservation Award – Fab 14B for two consecutive years
	R.O.C. Ministry of Labor	•Excellence in Labor Safety and Hygiene Award – Fab 12A
	Hsinchu Science Park Administration	•Water Conservation Award – Fab 2 and Fab 5 •Excellence in Energy Conservation – Fab 2 and Fab 5, Fab 3 •Excellence in Labor Safety and Hygiene Award – Fab 2 and Fab 5 •Excellence in Ammonia Nitrogen Reduction in Wastewater – Fab 12A, Fab 12 Phase 7
	Central Taiwan Science Park Administration	•Excellence in Labor Safety and Hygiene Award – Fab 15A
	Southern Taiwan Science Park Administration	•Excellence in Environmental Protection – Fab 6
	Hsinchu County Environmental Protection Bureau	•Enterprise Environmental Protection Evaluation – Fab 12 Phase 6
	Hsinchu City Environmental Protection Bureau	•Enterprise Green Procurement Award – Fab8, Fab 12A
	Tainan City Environmental Protection Bureau	•Enterprise Green Procurement Award – Fab 14A

7.2 Environmental, Safety and Health (ESH) Management

TSMC believes its environmental, safety and health practices must not only meet legal requirements, but should also measure up to or exceed recognized international best practices. TSMC’s ESH policies aim to reach the goals of “zero incident” and “sustainable development,” and to make TSMC a world-class company in environmental, safety and health management. The Company’s strategies for reaching these goals are to comply with regulations, promote safety and health, strengthen recycling and pollution prevention, manage ESH risks, instill an ESH culture, establish a green supply chain, and fulfill its related corporate social responsibilities.

All TSMC manufacturing facilities have received ISO 14001: 2004 certification for environmental management systems and OHSAS 18001: 2007 certification for occupational safety and health management systems and transferred environmental management system certificate to ISO 14001: 2015 in 2016. All fabs in Taiwan have also been TOSHMS (Taiwan Occupational Safety and Health Management System) certified since 2009.

TSMC strives for continuous improvement and actively seeks to enhance climate-change management, pollution prevention and control, power and resource conservation, waste reduction and recycling, safety and health management, fire and explosion prevention as well as to minimize the impact of earthquake damage, so as to reduce overall environmental, safety and health risks.

In 2006, in order to meet regulatory and customer needs for the management of hazardous materials, TSMC began to adopt the IECQ QC 080000 Hazardous Substance Process Management (HSPM) System. All TSMC manufacturing facilities have been QC 080000 certified since 2007. By practicing QC 080000, TSMC ensures that its products comply with regulatory and customer requirements, including the European Union’s “Restriction of Hazardous Substances (RoHS) Directive,” the EU’s “Registration, Evaluation, Authorization and Restriction of Chemicals (REACH),” the “Montreal Protocol on Substances that Deplete the Ozone Layer” (the halogen free in electronic products initiative), and Perfluorooctane Sulfonates (PFOS) restriction standards.

Since 2011, TSMC has adopted the ISO 50001 Energy Management System for the continuous improvement of energy conservation. TSMC’s Fab 12 Phase 4 data center is Taiwan’s first facility to earn the ISO 50001 certification for a high-density computing data center. As of 2016, TSMC has three fabs – Fab 12 Phase 4/5/6, Fab 14 Phase 3/4 and Fab 15 – that earned ISO 50001 certifications. Other TSMC fabs also implement energy management measures consistent with ISO 50001.

TSMC regularly communicates with suppliers and contractors regarding environmental, safety and health issues and encourages them to improve their ESH performance. In line with this policy, TSMC uses priority work management and self-management to govern work performed by contractors. TSMC requires contractors performing level-one high-risk operations to complete certification for technicians and to establish their own OHSAS 18001 safety and health management system. This promotion of self-management is aimed at increasing the sense of responsibility of TSMC’s contractors, with the goal of promoting safety awareness and technical improvement for all contractors in the industry.

TSMC collaborates with suppliers to improve the sustainability of the Company’s supply chain regarding ESH-related issues, such as environmental protection, safety and hygiene code compliance, daily management, fire protection, and conflict mineral management. TSMC not only performs ESH audits at its suppliers’ manufacturing sites but also proactively assists them with improving ESH performance.

Besides the requirement of ESH code compliance, energy/water saving and carbon management of TSMC’s supply chain are essential to the Company’s green supply chain ideals. Since 2009, TSMC has required suppliers to establish carbon inventory procedures. In 2015, TSMC calculated its carbon footprint and water footprint, which were certified by a third party for ISO 14067 and ISO 14046, respectively. TSMC not only provides such information to customers but also continue to promote carbon reduction and water conservation at TSMC and in the supply chain from a life-cycle point of view.

TSMC also monitors potential climate-change related risks in the supply chain, investigates the supply chain’s carbon emissions, electricity usage and water usage, and encourages suppliers to implement measures to save energy, reduce carbon emissions, conserve water and reduce waste. The ESH management programs of TSMC suppliers are tied to a sustainability index that includes three components: the Green Index, the Social Index and the Risk Index. The Green Index includes environmental management systems, regulatory compliance, hazardous substance management, conflict mineral investigation, greenhouse gas inventory and other green activities. The Social Index includes labor and ethical conduct. Both the Green and Social indices are consistent with the Electronic Industry Citizenship Coalition (EICC) Code of Conduct. The Risk Index includes safety and health management, fire prevention, natural disaster mitigation, IT interruption recovery, transportation reliability, supply chain management and business continuity planning. This sustainability index is applied to TSMC’s critical suppliers.

7.2.1 Environmental Protection

Greenhouse Gas (GHG) Emission Reduction

TSMC is an active participant in international environmental regulatory and protection programs. The Company has taken many measures to reduce its emission of GHGs. For example, TSMC endorsed a memorandum of understanding with the Taiwan Semiconductor Industry Association (TSIA), the Taiwan Environmental Protection Administration (EPA), and the World Semiconductor Council (WSC) to establish the corporate PFC emission reduction policy and action plans proactively, whereby the Company committed to reducing PFC emissions to 10% below the average of 1997 and 1999 by 2010, a commitment that it was proud to make and achieve.

TSMC is active in the WSC’s activities to set up a global voluntary PFC emissions reduction goal for the next ten years, and has incorporated past experience to develop best practices. The implementation of best practices has been adopted by the WSC as a major element of the 2020 goal. In 2013, in accordance with the “EPA Early Actions for Carbon Credit of Greenhouse Gases Reduction” regulation, TSMC applied for the recognition of greenhouse reduction from 2005 to 2011 that committed to the WSC and EPA, and received 5.28 million tons of carbon dioxide credits in 2015. Those carbon credits can be used to offset greenhouse gas emissions of new manufacturing facilities regulated by Environmental Impact Assessment (EIA) Act. The mitigation of climate-change risk supports the Company’s sustainable operations.

The “Greenhouse Reduction and Management Act” established by Taiwan EPA has been in effect since July 1, 2015. The related sub-regulations will be established and announced soon, and TSMC is preparing to take action. In 2005, TSMC was the semiconductor leading company to complete the GHG inventory program and take a complete inventory of its GHG emissions and to gain ISO 14064 certification. The purpose of the inventory is to serve as a baseline reference for TSMC’s strategy to reduce GHG emissions, to meet domestic regulatory requirements, and to prepare for carbon trading and corporate carbon asset management. All TSMC facilities conduct an annual GHG inventory. The inventory shows that the major direct GHG emissions are perfluorinated compounds (PFCs), which are used in the semiconductor manufacturing process. The primary indirect GHG emission is electricity consumption.

Thermal power generators, the major source of electricity in Taiwan, emit larger amounts of carbon dioxide (CO₂) than any other power generators. Because 70% of GHG emission comes from electricity consumption, TSMC emphasizes energy saving and carbon reduction initiatives. TSMC has not only adopted energy-conserving designs in its manufacturing fabs

Category	Organization	Awards and Recognitions
Environment, Safety and Health	U.S. Green Building Council Leadership in Energy and Environmental Design (LEED) certification	•“Gold” class certification – Fab 14B Manufacturing Facility and Office Building
	R.O.C. Ministry of the Interior “Ecology, Energy Saving, Waste Reduction and Health (EEWH)” certification	•“Diamond” class certification – Fab 12A Manufacturing Facility, Fab 12 Phase 6 Manufacturing Facility, Fab 14B Manufacturing Facility
	R.O.C. Environmental Protection Administration	•Excellence in Toxic Substance Management Award – Fab 2 and Fab 5 •Enterprise Green Procurement Award – Fab 2 and Fab 5, Fab 3, Fab 8, Fab 12A, Fab 14A, Fab 14B •Environmental Education Award – Fab 6, Fab 15A
	R.O.C. Ministry of Economic Affairs	•Excellence in Energy Conservation – Fab 12 Phase 6 •Excellence in Carbon Reduction Award – Fab 2 and Fab 5, Fab 8 •Green Factory Label – Fab 15A •Water Conservation Award – Fab 14B for two consecutive years
	R.O.C. Ministry of Labor	•Excellence in Labor Safety and Hygiene Award – Fab 12A
	Hsinchu Science Park Administration	•Water Conservation Award – Fab 2 and Fab 5 •Excellence in Energy Conservation – Fab 2 and Fab 5, Fab 3 •Excellence in Labor Safety and Hygiene Award – Fab 2 and Fab 5 •Excellence in Ammonia Nitrogen Reduction in Wastewater – Fab 12A, Fab 12 Phase 7
	Central Taiwan Science Park Administration	•Excellence in Labor Safety and Hygiene Award – Fab 15A
	Southern Taiwan Science Park Administration	•Excellence in Environmental Protection – Fab 6
	Hsinchu County Environmental Protection Bureau	•Enterprise Environmental Protection Evaluation – Fab 12 Phase 6
	Hsinchu City Environmental Protection Bureau	•Enterprise Green Procurement Award – Fab8, Fab 12A
	Tainan City Environmental Protection Bureau	•Enterprise Green Procurement Award – Fab 14A

7.2 Environmental, Safety and Health (ESH) Management

TSMC believes its environmental, safety and health practices must not only meet legal requirements, but should also measure up to or exceed recognized international best practices. TSMC’s ESH policies aim to reach the goals of “zero incident” and “sustainable development,” and to make TSMC a world-class company in environmental, safety and health management. The Company’s strategies for reaching these goals are to comply with regulations, promote safety and health, strengthen recycling and pollution prevention, manage ESH risks, instill an ESH culture, establish a green supply chain, and fulfill its related corporate social responsibilities.

All TSMC manufacturing facilities have received ISO 14001: 2004 certification for environmental management systems and OHSAS 18001: 2007 certification for occupational safety and health management systems and transferred environmental management system certificate to ISO 14001: 2015 in 2016. All fabs in Taiwan have also been TOSHMS (Taiwan Occupational Safety and Health Management System) certified since 2009.

TSMC strives for continuous improvement and actively seeks to enhance climate-change management, pollution prevention and control, power and resource conservation, waste reduction and recycling, safety and health management, fire and explosion prevention as well as to minimize the impact of earthquake damage, so as to reduce overall environmental, safety and health risks.

In 2006, in order to meet regulatory and customer needs for the management of hazardous materials, TSMC began to adopt the IECQ QC 080000 Hazardous Substance Process Management (HSPM) System. All TSMC manufacturing facilities have been QC 080000 certified since 2007. By practicing QC 080000, TSMC ensures that its products comply with regulatory and customer requirements, including the European Union’s “Restriction of Hazardous Substances (RoHS) Directive,” the EU’s “Registration, Evaluation, Authorization and Restriction of Chemicals (REACH),” the “Montreal Protocol on Substances that Deplete the Ozone Layer” (the halogen free in electronic products initiative), and Perfluorooctane Sulfonates (PFOS) restriction standards.

Since 2011, TSMC has adopted the ISO 50001 Energy Management System for the continuous improvement of energy conservation. TSMC’s Fab 12 Phase 4 data center is Taiwan’s first facility to earn the ISO 50001 certification for a high-density computing data center. As of 2016, TSMC has three fabs – Fab 12 Phase 4/5/6, Fab 14 Phase 3/4 and Fab 15 – that earned ISO 50001 certifications. Other TSMC fabs also implement energy management measures consistent with ISO 50001.

TSMC regularly communicates with suppliers and contractors regarding environmental, safety and health issues and encourages them to improve their ESH performance. In line with this policy, TSMC uses priority work management and self-management to govern work performed by contractors. TSMC requires contractors performing level-one high-risk operations to complete certification for technicians and to establish their own OHSAS 18001 safety and health management system. This promotion of self-management is aimed at increasing the sense of responsibility of TSMC’s contractors, with the goal of promoting safety awareness and technical improvement for all contractors in the industry.

TSMC collaborates with suppliers to improve the sustainability of the Company’s supply chain regarding ESH-related issues, such as environmental protection, safety and hygiene code compliance, daily management, fire protection, and conflict mineral management. TSMC not only performs ESH audits at its suppliers’ manufacturing sites but also proactively assists them with improving ESH performance.

Besides the requirement of ESH code compliance, energy/water saving and carbon management of TSMC’s supply chain are essential to the Company’s green supply chain ideals. Since 2009, TSMC has required suppliers to establish carbon inventory procedures. In 2015, TSMC calculated its carbon footprint and water footprint, which were certified by a third party for ISO 14067 and ISO 14046, respectively. TSMC not only provides such information to customers but also continue to promote carbon reduction and water conservation at TSMC and in the supply chain from a life-cycle point of view.

TSMC also monitors potential climate-change related risks in the supply chain, investigates the supply chain’s carbon emissions, electricity usage and water usage, and encourages suppliers to implement measures to save energy, reduce carbon emissions, conserve water and reduce waste. The ESH management programs of TSMC suppliers are tied to a sustainability index that includes three components: the Green Index, the Social Index and the Risk Index. The Green Index includes environmental management systems, regulatory compliance, hazardous substance management, conflict mineral investigation, greenhouse gas inventory and other green activities. The Social Index includes labor and ethical conduct. Both the Green and Social indices are consistent with the Electronic Industry Citizenship Coalition (EICC) Code of Conduct. The Risk Index includes safety and health management, fire prevention, natural disaster mitigation, IT interruption recovery, transportation reliability, supply chain management and business continuity planning. This sustainability index is applied to TSMC’s critical suppliers.

7.2.1 Environmental Protection

Greenhouse Gas (GHG) Emission Reduction

TSMC is an active participant in international environmental regulatory and protection programs. The Company has taken many measures to reduce its emission of GHGs. For example, TSMC endorsed a memorandum of understanding with the Taiwan Semiconductor Industry Association (TSIA), the Taiwan Environmental Protection Administration (EPA), and the World Semiconductor Council (WSC) to establish the corporate PFC emission reduction policy and action plans proactively, whereby the Company committed to reducing PFC emissions to 10% below the average of 1997 and 1999 by 2010, a commitment that it was proud to make and achieve.

TSMC is active in the WSC’s activities to set up a global voluntary PFC emissions reduction goal for the next ten years, and has incorporated past experience to develop best practices. The implementation of best practices has been adopted by the WSC as a major element of the 2020 goal. In 2013, in accordance with the “EPA Early Actions for Carbon Credit of Greenhouse Gases Reduction” regulation, TSMC applied for the recognition of greenhouse reduction from 2005 to 2011 that committed to the WSC and EPA, and received 5.28 million tons of carbon dioxide credits in 2015. Those carbon credits can be used to offset greenhouse gas emissions of new manufacturing facilities regulated by Environmental Impact Assessment (EIA) Act. The mitigation of climate-change risk supports the Company’s sustainable operations.

The “Greenhouse Reduction and Management Act” established by Taiwan EPA has been in effect since July 1, 2015. The related sub-regulations will be established and announced soon, and TSMC is preparing to take action. In 2005, TSMC was the semiconductor leading company to complete the GHG inventory program and take a complete inventory of its GHG emissions and to gain ISO 14064 certification. The purpose of the inventory is to serve as a baseline reference for TSMC’s strategy to reduce GHG emissions, to meet domestic regulatory requirements, and to prepare for carbon trading and corporate carbon asset management. All TSMC facilities conduct an annual GHG inventory. The inventory shows that the major direct GHG emissions are perfluorinated compounds (PFCs), which are used in the semiconductor manufacturing process. The primary indirect GHG emission is electricity consumption.

Thermal power generators, the major source of electricity in Taiwan, emit larger amounts of carbon dioxide (CO₂) than any other power generators. Because 70% of GHG emission comes from electricity consumption, TSMC emphasizes energy saving and carbon reduction initiatives. TSMC has not only adopted energy-conserving designs in its manufacturing fabs

and offices, but has also continuously improved the energy efficiency of its facilities during operation. These efforts simultaneously reduce both carbon dioxide gas emissions and costs.

Since 2015, TSMC has actively participated in the R.O.C. Ministry of Economic Affairs' voluntary "Green Power Purchasing Program". In 2016, TSMC purchased 200 million kilowatt hours (kWh) of green power that made up nearly 20% of the Taiwan Power Company's total green power available for purchase under the program in that year. Since green power is generated with zero carbon emissions, the purchase of 200 million kWh of green power will eliminate over 100 million kilograms of CO₂ emissions, equivalent to the carbon absorbed by 10 million trees in one year. TSMC hopes that by supporting Taiwan's renewable energy efforts, it can continue to pursue sustainability, promote a low-carbon environment, and reduce the impact of global warming.

Air and Water Pollution Control

The Company has installed effective air and water pollution control equipment in each wafer fab to meet regulatory emissions standards. In addition, TSMC maintains backup pollution control systems, including emergency power supplies, to lower the risk of pollutant emission in the event of equipment failure. TSMC centrally monitors the operations of its air and water pollution control equipment around the clock and treats system effectiveness as an important tracking item to ensure the quality of emitted air and discharged water.

To make the most effective use of Taiwan's limited water resources, all TSMC fabs strive to increase water reclamation rates by adjusting the water usage of manufacturing equipment and improving wastewater reclamation systems. All fabs meet or exceed the process water reclamation rate standard of the Science Park Administration. New fabs are able to reclaim more than 85% of process water, and outperforming most semiconductor fabs around the world. TSMC also makes every effort to reduce non-manufacturing-related water consumption, including water used in air conditioning systems, sanitary facilities, cleaning and landscaping activities and kitchens. TSMC uses an intranet website to collect and measure water recycling volumes company-wide.

Since water resources are inherently local, TSMC shares its water saving experiences with other semiconductor companies through the Association of Science-Based Industrial Park to promote water conservation in order to achieve the Science Park's goals and ensure a long-term balance of supply and demand.

Waste Management and Recycling

The Company has a designated unit responsible for waste recycling and disposal. To meet the goal of sustainable resource utilization, TSMC's priorities are: (1) reduce process waste, (2) increase onsite reuse, and (3) increase offsite recycling. The last option consists of treatment or disposal. To achieve raw material reduction, resource recycling and the goal of zero waste, TSMC built an in-house waste sulfuric acid pre-treatment system as electronic grade sulfuric acid can be used as waste water treatment agents after the wafer fabrication process. In order to track waste flow and ensure that all waste is treated or recycled legally and properly, TSMC carefully selects waste disposal and recycling contractors and performs annual audits of certification documents and site operations. TSMC also takes proactive steps to strengthen vendor auditing effectiveness. For example, all waste transportation contractors were asked and agreed to join the "GPS Satellite Fleet" so that all the cleanup transportation routes and abnormal stays for all trucks can be traced. In addition, all waste recycling and treatment vendors have installed closed-circuit TV systems at operating sites to monitor and audit the waste handling. Meanwhile, TSMC also conducts an ongoing survey of recycling product tracking. These actions were taken to ensure lawful and proper waste recycling and treatment, and in 2016 TSMC's fabs in Taiwan achieved a 95% waste recycling rate, with a landfill rate below 1% for the seventh consecutive year.

Environmental Accounting

The purpose of TSMC's environmental accounting system is to identify and calculate environmental costs for internal management. At the same time, the Company can also evaluate the savings or economic benefits of environmental protection programs so as to promote cost-effective programs. While environmental expenses are expected to continue growing, environmental accounting can help TSMC manage these costs more effectively. TSMC's environmental accounting measures various environmental costs, establishes independent environmental account codes, and provides these to all units for use in annual budgeting. The Company's economic benefit evaluation calculates cost savings for reduction of energy, water or waste and benefits from waste recycling in accordance with its environmental protection programs.

The environmental benefits disclosed in this report include real income from projects such as waste recycling and savings from major environmental projects. In 2016, 184 environmental projects of TSMC fabs were completed and the total benefits, including waste recycling, were more than NT\$1,168 million.

2016 Environmental Cost of TSMC Fabs in Taiwan

Unit: NT\$ thousands

Classification	Description	Investment	Expense
1. Direct Costs for Reducing Environmental Impact			
(1) Pollution Control Cost	Fees for air pollution control, water pollution control, and others	7,987,837	3,621,017
(2) Resource Conservation Cost	Costs for resource (e.g. water) conservation	1,686,996	-
(3) Industrial Waste Disposal and Recycling	Costs for waste treatment (including recycling, incineration and landfill)	-	1,207,390
2. Indirect Cost for Reducing Environmental Impact (Environmental Managerial Cost)	(1) Cost of training (2) Environmental management system and certification expenditures (3) Environmental impact measurement and monitoring fees (4) Environmental protection product costs (5) Environmental protection organization fees	94,748	242,518
3. Other Environmental Costs	(1) Costs for decontamination and remediation (2) Environmental damage insurance fees and environmental taxes and expenses (3) Costs related to environmental settlement, compensations, penalties and lawsuits	-	100
Total		9,769,581	5,071,025

2016 Environmental Efficiency of TSMC Fabs in Taiwan

Unit: NT\$ thousands

Category	Description	Efficiency
1. Cost Savings of Environmental Protection Projects	Energy savings: completed 61 projects	227,000
	Water savings: completed 16 projects	18,070
	Waste reduction: completed 107 projects	503,000
2. Real Income from Industrial Waste Recycling	Recycling of used chemicals, wafers, targets, batteries, lamps, packaging materials, paper cardboard, metals, plastics, and other waste	420,000
Total		1,168,070

Green Building and Green Factory

Since 2006 TSMC has adopted standards from both the Taiwan "Green Building" and the evaluation of the U.S. Green Building Council - Leadership in Energy and Environmental Design (LEED) for new fab and office building designs to achieve better energy and resource efficiency than conventional designs. During this time, TSMC has also continued to upgrade existing office buildings to comply with the LEED standard each year. From 2008 to 2016, 21 of TSMC's fabs and office buildings have achieved LEED certifications (three platinum-class and 18 gold-class). Meanwhile, TSMC also received three Taiwan Intelligent Building diamond class certifications and 15 Taiwan EEWH (Ecology, Energy Saving, Waste Reduction and Health) diamond class certifications.

TSMC believes that more manufacturing companies should convert their facilities into green factories to improve the environment and lower construction costs. Therefore, the Company freely shares its practical experience with industry, government and academia. As of the end of 2016, 10,245 visitors from 269 different industry, government, academic and general community groups had contacted TSMC to gain an understanding of the Company's green factory practices. Since 2009, TSMC has led the industry in support of the Taiwan government's "Green Factory Labeling System," a system that includes "Clean Production Evaluation" and "Green Factory Evaluation". TSMC received Taiwan's first "Green Factory Label" and seven labels in total for Fab 12 Phase 4, Fab 14 Phase 3 and Phase 4, Fab 12 Phase 5 and Phase 6, Fab 15 Phase 1 and Phase 2 and Fab 15 Phase 3 and Phase 4.

7.2.2 Green Products

TSMC collaborates with its upstream material and equipment suppliers, design ecosystem partners and downstream assembly and testing service providers to minimize environmental impact. We reduce the resources and energy consumed for each unit of production and are able to provide more advanced, power efficient and ecologically sound products, such as lower-power-consumption chips for mobile devices, high-efficiency LED driver chips for flat panel display backlighting, indoor/outdoor solid state LED lighting, "Energy Star" certified low standby AC-DC adaptors chips, and high-efficiency DC brushless motor chips, etc. By leveraging TSMC's superior energy-efficient technologies, these chips support sustainable city infrastructure, greener vehicles, smart

girds, and so on. In addition to helping customers design low-power, high-performance products to reduce resource consumption over the product's life cycle, TSMC's green manufacturing practices provide additional "Green Value" to customers and other stakeholders.

TSMC-manufactured ICs are used in a broad variety of applications covering various segments of the computer, communications, consumer, industrial and other electronics markets. Through TSMC's manufacturing technologies, customers' designs are realized and their products are incorporated into people's lives. These chips, therefore, make significant contributions to the progress of modern society. TSMC works hard to achieve profitable growth while providing products that add environmental and social value. Listed below are several examples of how TSMC-manufactured products significantly contribute to the environment and society.

Environmental Contribution by TSMC Foundry Services

1. Continue to Drive Technology to Lower Power Consumption and Save Resources

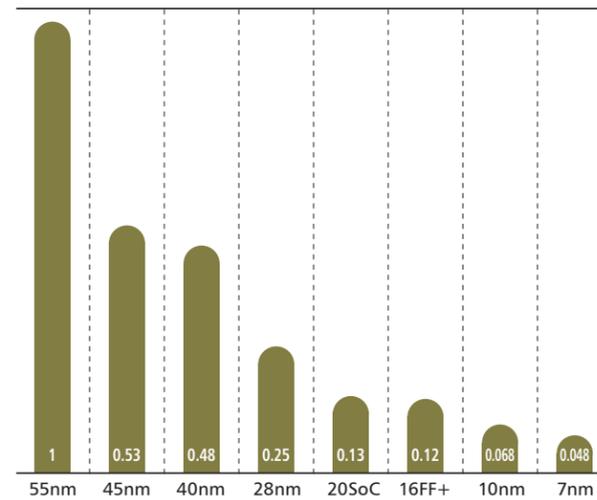
- TSMC continues to drive the development of advanced semiconductor process technologies to support customer designs that result in the most advanced, energy-saving and environmentally friendly products to improve sustainability. In each new technology generation, circuitry line widths shrink, making transistors smaller and reducing product power consumption.
- TSMC has quickly ramped up its 28nm and beyond technologies. Wafer revenue contribution from 28nm and below technologies grew significantly from 12% in 2012 to 54% in 2016. TSMC's objective is to continue R&D efforts in 28nm and beyond technologies and to increase the wafer revenue contribution from 28nm and beyond technologies, helping the Company achieve both profitable growth and energy savings.

TSMC Wafer Revenue Contribution from 28nm and Beyond Technologies

2012	2013	2014	2015	2016
12%	30%	42%	48%	54%

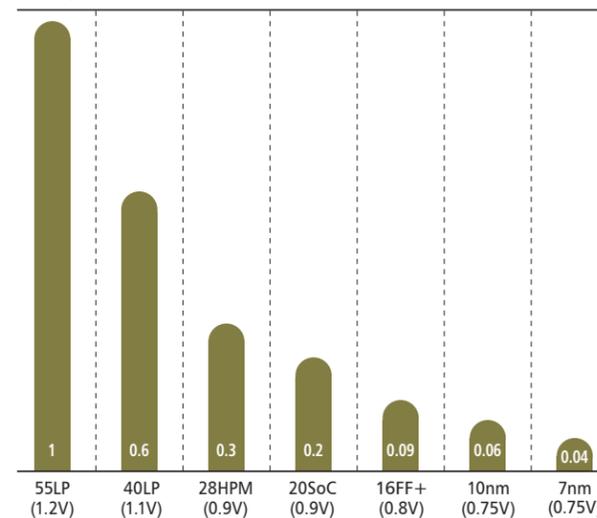
Chip Die Size Cross-Technology Comparison

Die size reduces as line width shrinks



Chip Total Power Consumption Cross-Technology Comparison

More power is saved as line width shrinks



2. Provide Customers Leading Power Management IC Process with the Highest Efficiency

- TSMC's leading manufacturing technology helps customers design and produce green products. Power management ICs, the key components that regulate and supply power to all other IC components, are the most notable green IC products. TSMC helps customers produce industry-leading power management chips with more stable and efficient power supplies and lower energy consumption.

- In 2016, TSMC's HV/Power technologies collectively shipped more than 2.1 million 8-inch equivalent wafers to customers. In total, power management ICs manufactured by TSMC accounted for more than one-third of global computer, communication and consumer systems.

HV/Power Technologies Shipments (Unit: 8-inch equivalent wafer)

2012	2013	2014	2015	2016
>1,000K	>1,300K	>1,800K	>2,000K	>2,100K

3. Green Manufacturing that Lowers Energy Consumption

TSMC continues to develop more advanced and efficient technologies to reduce energy/resource consumption and pollution per unit during the manufacturing process as well as power consumption and pollution during product use. In each new technology generation, circuitry line widths shrink, making circuits smaller and lowering the energy and raw materials consumed for per unit in manufacturing. In addition, the Company continuously provides process simplification and new design methodology based on its manufacturing excellence to help customers reduce design and process waste so as to produce more advanced, energy-saving and environmentally-friendly products. To see the total energy savings and benefits realized in 2016 through TSMC's green manufacturing, please refer to Environmental Accounting on pages 124-125 in this annual report.

Social Contribution by TSMC Foundry Services

1. Unleash Customers' Mobile and Wireless Chip Innovations that Enhance Mobility and Convenience

- The rapid growth of smartphones and tablets in recent years reflects strong demand for mobile devices, which, in turn, offer remarkable convenience. TSMC contributes significant value to these devices, including: (1) new TSMC process technology helps chips achieve faster computing speeds in a smaller die area, leading to smaller form factors for these electronic devices. In addition, TSMC SoC technology integrates more functions into one chip, reducing the total number of chips in electronic devices, again resulting in a smaller system form factor; (2) new TSMC process technology also helps chips consume less energy. People can therefore use mobile devices for a longer period of time; and (3) TSMC helps spread the growth of more convenient wireless connectivity such as 3G/4G and WLAN/Bluetooth, meaning people can communicate more efficiently and "work anytime and anywhere," significantly improving the mobility of modern society.
- Mobile computing related products, such as baseband, RF transceivers, application processors (AP), wireless local area

networks (WLAN), imaging sensors, near field communication (NFC), Bluetooth, and global positioning systems (GPS) among others, represented 52% of TSMC wafer revenue in 2016.

TSMC Wafer Revenue Contribution from Mobile Computing Related Products

2012	2013	2014	2015	2016
40%	44%	48%	51%	52%

Note: Mobile computing related products were re-classified in 2014.

2. Unleash Customers' CIS (CMOS image sensor) and MEMS (micro electro mechanical systems) Innovations that Enhance Human Health and Safety

- In addition to smartphones, tablets and many other consumer electronic devices, TSMC-manufactured CIS and MEMS chips are widely used in medical treatment and health care applications. By leveraging the Company's advanced technologies, more and more chips for these applications are introduced to the market, providing major contributions to modern medicine. Customers' CIS and MEMS products are used in a number of advanced medical treatments as well as in preventative health care applications. Examples include early warning systems to minimize the injury from falls for the elderly, systems to detect physiological changes, car safety systems and other applications that greatly enhance human health and safety.

7.2.3 Safety and Health

Safety and Health Management

TSMC's safety and health management is built on the framework of the OHSAS 18001 system and adheres to the management principle of "Plan, Do, Check, Act" to prevent accidents, promote employee safety and health and protect Company assets. All TSMC fabs in Taiwan have also received TOSHMS (Taiwan Occupational Safety and Health Management System) certification.

Besides accident prevention, TSMC has established emergency response procedures to protect employees and contractors if a disaster should occur, as well as to prevent and/or reduce the negative impact on society and the environment. TSMC continually communicates with its suppliers to ensure that potential risk in the operation of production equipment is minimized, and rigorously follows safety control procedures when installing production equipment. The Company places stringent controls on high-risk operations and also evaluates the seismic tolerance of its facilities and equipment to reduce the risk of earthquake damage.

For epidemics, TSMC has established company-level prevention committees and procedures for emergency response to outbreaks of infectious diseases.

Working Environment and Employee Safety and Health Protection

TSMC's ESH policy is focused on establishing a safe working environment, preventing occupational injury and illness, keeping employees healthy, enhancing every employee's awareness and sense of accountability to ESH, and building an ESH culture. TSMC safety and health management operations apply to:

• Equipment Safety and Health Management

In addition to meeting regulatory requirements and internal standards, as well as mitigating ESH-related risks when building or upgrading facilities, TSMC also maintains procedures governing new equipment and raw materials, safety approvals for bringing new tools online, updating safety rules, seismic protection measures, and other safety measures.

TSMC requires that all new tools meet SEMI-S8 requirements and that appropriate supplementary control measures be taken to reduce ergonomic risk. Moreover, TSMC endeavors to automate 300mm front-opening unified pod (FOUP) transportation to prevent accumulative physical damage caused by repetitive manual handling of 300mm FOUPs. TSMC 300mm fabs have completed automatic transportation control.

• Environmental, Safety and Health Evaluation of New Tools and New Chemical Substances

As a technology leader in the global semiconductor industry, TSMC operates many diversified process tools and introduces new chemicals in the R&D stage. Before using those new tools and new chemicals, they are reviewed carefully by the "New Tools and New Chemical Review Committee". The purpose is to ensure that new tools are compliant with the semiconductor industry's safety standards (such as SEMI S2) and that new chemicals' environmental, safety and health concerns can be well controlled, including engineering controls, application of personal protection equipment, and operational safety training during storage, transportation, usage and disposal.

• General Safety Management, Training and Audit

All TSMC manufacturing facilities hold environmental, safety and health committee meetings on a monthly basis. TSMC adopts multiple preventive measures such as controls on high-risk work, contractor management, chemical safety management, personal protective equipment requirements, and safety audit management. In addition, TSMC maintains

detailed disaster response procedures and performs regular drills designed to minimize harm to employees and property, as well as the impact on society and the environment in the event of a disaster.

• Working Environment Hazardous Factors Management

TSMC conducts workplace hazard assessments and interventions to provide a comfortable and safe workplace to employees. TSMC also requires employees to use personal protective equipment (PPE) to prevent hazardous exposures.

TSMC performs semi-annual workplace environment assessments of physical and chemical hazards, including CO₂ concentration, illumination, noise, and hazardous chemical substances regulated by local laws. The Company performs exposure assessments and uses hierarchy management control for chemicals with potential health hazards since 2015. If abnormal measurements or events happen or an exposure assessment indicates there is an adverse health effect for employees, ESH professionals immediately conduct onsite observation and interventions to reduce the exposure to acceptable levels.

• Emergency Response

The planning and execution of an effective emergency response should identify high-risk events from risk assessment and be prepared for various scenarios. It should focus on continuous improvement and practice drills covering all potentially severe events. TSMC's emergency response plans include procedures for rapid-response crisis management and disaster recovery to potential incidents.

All TSMC fabs conduct major annual emergency response exercises and evacuation drills. TSMC's Tainan site fabs continue their spot drills, which have been recognized as industry best practices. TSMC's onsite service contractors also have to participate in emergency response planning and exercises to ensure cooperation in handling accidents and to effectively minimize any damage caused by disasters. At least every two years, each fab director invites fab management and support functions to participate in crisis management drills for potentially high-risk events such as earthquake, fire and flood (Tainan site).

In addition to the regular emergency response drills held by engineering and facilities departments each quarter, the Company's laboratory, canteen, dormitory, and shuttle bus personnel also hold emergency response drills to prepare for events such as earthquakes, chemical leakage, ammonia release, fires and automobile accidents.

• Emerging Infectious Disease Response

TSMC has a dedicated corporate ESH organization to monitor emerging infectious diseases around the world, to assess any potential impact on the workplace, and to provide an appropriate strategic response plan. In previous outbreaks (such as SARS in 2003 and the H1N1 influenza outbreak in 2009), TSMC convened the corporate influenza response committee to develop the Company's strategies. These strategies include educating employees in prevention and response, publishing guidelines for managers, establishing guidelines for employee sick leave due to flu, and installing alcohol-based hand sanitizers at appropriate locations. The Committee also monitors the status of employee leave due to illness and, at the same time, develops a continuous plan to address manpower shortages and minimize business impact.

TSMC believes that employees' physical and mental health is not only fundamental to maintaining normal business operations but also part of a corporation's responsibility.

• Employee Physical and Mental Health Enhancement

To protect and promote employee physical and mental health, TSMC fosters collaboration among the onsite industrial safety and environmental protection department, onsite medical personnel of the health center, and physicians of occupational medicine. TSMC strives to reduce cardiovascular disease that might be induced or aggravated by overwork, night work or shift work, and conducts maternal health protection programs as well. TSMC devotes significant resources to mental health awareness and related activities, which not only protect employees from hazards at work but also proactively promote employee health in general. In 2016, through planned personal health management, 45.6% of personnel diagnosed at high risk for cardiovascular disease shifted to low risk. 801 female employees participated in the maternal health program. For five consecutive years TSMC has held a series of physical and mental health activities. 691 employees have joined the weight-loss program, losing a total of 1,942 kilograms collectively. For smoking cessation, 115 employees participated with a success rate of 67% during a three-month period, exceeding the 33% goal set by the health promotion administration. 781 employees completed the sleep quality improvement program, which included one-on-one medical consultation to improve life quality.

Supplier and Contractor Management

• Supplier Management

As a means of enhancing its supply chain management, TSMC is committed to communicating with and encouraging its contractors and suppliers to improve their quality, cost effectiveness, delivery performance and sustainability on

environmental protection, safety and health. Through regular communication with senior managers, site audits and experience sharing, TSMC collaborates with major suppliers and contractors to enhance partnership and ensure continual improvement for better performance and increased joint contributions to society. As noted above, contractors performing high-risk activities must lay out clearly defined safety precautions and preventative measures. In addition, contractors working on high-risk engineering projects must establish OHSAS 18001 systems and the workers must successfully complete work skill training.

• Supply Chain Sustainability

TSMC works with its suppliers in several fields of sustainable development, such as greening the supply chain, carbon management for climate change, mitigation of fire risk, ESH management and business continuity plans for natural disasters.

Since becoming a full member of the Electronic Industry Citizenship Coalition (EICC) in 2015, TSMC has completed the adoption of the EICC Code of Conduct across the Company by performing self-assessments at its facilities worldwide and reviewing policies and procedures in the areas of labor, health and safety, environment, ethics, and management systems.

To enhance supply chain sustainability and streamline risk management, TSMC is committed to collaborating with its suppliers to maintain full compliance with Taiwan's environmental, safety, health and fire regulations, and to establish the necessary management capability as well as continuous enhancement.

TSMC is subject to the U.S. Securities & Exchange Commission (SEC) disclosure rule on conflict minerals released under Rule 13p-1 of the U.S. Securities Exchange Act of 1934. As a recognized global leader in the high-tech supply chain, the Company acknowledges its corporate social responsibility to strive to procure conflict-free minerals in an effort to recognize humanitarian and ethical social principles that protect the dignity of all people. To this end, TSMC has implemented a series of compliance safeguards in accordance with leading industry practices such as adopting the due diligence framework in the OECD's Model Supply Chain Policy for a Responsible Global Supply Chain of Minerals from Conflict-Affected and High Risk Areas issued in 2011.

TSMC is one of the strongest supporters of the Electronic Industry Citizenship Coalition (EICC) and the Global e-Sustainability Initiative (GeSI), and this will help the Company's suppliers source conflict-free minerals through

their jointly developed Conflict-Free Smelter Program (CFSP). TSMC has asked its suppliers to disclose and make timely updates to information on smelters and mines since 2011. TSMC encourages suppliers to source minerals from facilities or smelters that have received a “conflict-free” designation by a recognized industry group (such as the EICC). TSMC also requires those who have not received such designation to become compliant with CFSP or an equivalent third-party audit program. TSMC requires the use of tantalum, tin, tungsten and gold in its products that are conflict-free.

TSMC will continue to issue the supplier survey annually and require suppliers to improve and expand their disclosure to fulfill regulatory and customer requirements. For further information, please see the Company’s Form SD filed with the U.S. SEC. (http://www.tsmc.com/english/investorRelations/sec_filings.htm)

7.3 TSMC Education and Culture Foundation

The TSMC Education and Culture Foundation (TSMC Foundation), led by TSMC Vice Chairman F.C. Tseng, who serves as the TSMC Foundation’s chairman, was established in 1998 to make CSR contributions. In 2016, the TSMC Foundation contributed over NT\$75.81 million to various projects in minority education, humanity education, arts promotion, and so on, in order to narrow the urban-rural gap and uplift society.

Focus on Minority Education

Corporate Contributions to Bridge the Urban-Rural Gap
Industrialization, informatization and globalization are spurring growth and development in cities and urban areas, which widens the cultural, educational and digital-resource gap with rural regions. Cooperating with several social groups, non-governmental organizations and educational institutions, the TSMC Foundation provided resources of the arts, sciences, reading and digital education to help the children at the bottom of the society move upward.

Reading brings knowledge and knowledge is power. In 2004, the TSMC Foundation began supporting “Hope Reading” of the CommonWealth Foundation, which each year donates 100 good books to 200 high schools and primary schools in Taiwan’s remote townships. Over the past 13 years, more than 240,000 children have been helped with more than 210,000 books. To respond to the needs of the digital era, in 2016 the TSMC Foundation further sponsored “Hope Reading 2.0,” which, in addition to book donation, selects 6 merit schools and 5 benchmark schools, and provides each class 2 tablets

and each student in third to sixth grades with one tablet, respectively, for a total of 265 tablets in all. With the help of other education partners, the TSMC Foundation will also implement e-learning systems to build up the reading and e-learning culture with the aid of distance courses and online community reading platforms.

The TSMC Foundation also emphasizes aesthetics and science education. “TSMC Aesthetic Tour” and “TSMC Science Tour,” launched in 2003 and 2010, respectively, take children from remote townships throughout the country to visit the National Palace Museum, the Taipei Fine Arts Museum and the science museums in northern, central and southern Taiwan. In 2016, more than 3,000 educators and students from rural schools in 17 counties participated in these tours. To date, more than 97,000 students from over 200 rural primary schools have improved their aesthetic view and inspired their scientific interests.

Besides, the TSMC Foundation has strengthened its cooperation with Junyi Academy and Boyo Social Welfare Foundation, by providing for free qualified digital learning tools and tutors to help rural students in their study regardless of financial limitation. For economically disadvantaged students in top universities, the TSMC Foundation sponsors the “Rising Sun Plan” of National Tsing Hua University and the “Sunflower Plan” of National Central University. In 2016, the TSMC Foundation provided 19 students with NT\$1.62 million in scholarships and launched textbook donations to lighten their economic burden and enable them to focus on their studies.

Building Educational Platforms

Fostering Multi-Competence Talents and Helping Youth Reach Their Dreams

To enhance student interests in the sciences and humanities, the TSMC Foundation organizes national science contests, science camps and humanity activities. These events build a stage for the youth, giving them the opportunity not only to showcase their talents but also to discover themselves and to consider their future.

To encourage those in the younger generation to chase their dreams, the TSMC Foundation launched the first “TSMC Dream Builders of Youth Project”. More than 166 teams composed of 500 college students from Taoyuan, Hsinchu and Miaoli, applied for the project and, after three-stage reviews by professional committees, eight teams were awarded prizes totaling NT\$3 million. Within a year, they will devote themselves in various programs, including agricultural recreation, environmental sustainability, humanities promotion

and technology startup to demonstrate their creativity and potential.

The TSMC Foundation has held the “TSMC Youth Literature Award” and “TSMC Youth Calligraphy Contest” since 2004 and 2008, respectively, to encourage young people to develop proficiency in literature and calligraphy. In addition to novel and poetry, prose was included in the literature award as another category for literary creation, and a record 628 works were submitted. For the calligraphy contest, collaborating with National Palace Museum, the TSMC Foundation organized three school workshops, which attracted more than 800 attendees, including the contesters of regular and clerical script, semi-cursive and cursive script, and seal carving. The TSMC Foundation also gives community residents a chance to appreciate the beauty of literature and calligraphy by school activities, publishing the works of prize winners and organizing touring exhibitions of the contests.

According to the Programme for International Student Assessment, Taiwanese students excel in mathematics and sciences but are less proficient at logical thinking, argumentation and presentation. Therefore, the TSMC Foundation sponsors The Center for Advanced Science Education at National Taiwan University to hold the competition, “TSMC Cup – Competition of Scientific Short Talk”. The competitors have to read a wide variety of scientific materials, write popular scientific articles, give scientific speeches and answer the questions from their opponents, in order to improve their science presentation skills. In 2016, echoing the United Nations’ theme, “International Year of Pulses,” the competition focused on pulses and invited 223 teams composed of senior high school students to read well-respected books, write essays and deliver short scientific talks on the subjects of science, nutrition, environment and agriculture in the preliminary and semi-final workshops and the contest, with the ultimate goal of cultivating in-depth knowledge and mastering presentation skills.

The TSMC Foundation also continued to support three science talent camps: Wu Chien-Shiung Science Camp, Wu Ta-Yu Science Camp and Madame Curie Senior High School Chemistry Camps, to provide senior high school students with the opportunity to meet and learn from world-class scientists with the objective of inspiring the students and helping them realize their potential.

Promoting the Arts and Culture

Spreading the Seeds of the Fine Arts and Humanities for Community Development

The TSMC Foundation has long played the role of “fine arts planter,” spreading the seeds of the fine arts in the society. In addition to actively supporting prominent international and Taiwanese artistic performances, the TSMC Foundation has continued to organize the “TSMC Hsin-Chu Arts Festival” at TSMC’s site communities, Hsinchu, Taichung and Tainan, to present a broad spectrum of performances to encourage the community’s interest in the arts.

In 2016, the commemoration of 400th anniversary of the death of William Shakespeare, in response to the cultural event, the festival invited Contemporary Legend Theatre, Corny Chicken Theatre and Prof. I-Fan Ho of National Hsinchu University of Education to perform novel musical, children’s concert and drama lectures for community residents to better understand Shakespeare’s literature. The festival also invited the young violinist Richard Lin to perform three concerts in northern, central and southern Taiwan, to promote prominent Taiwanese artists. Furthermore, the TSMC Foundation hosted the first “In Spring Chanting Poetry Festival” and invited communities and schools at Taoyuan, Hsinchu and Miaoli to chant poetry and enjoy the beauty of literature. The “2016 TSMC Hsinchu Arts Festival” arranged 53 fine arts activities, attracting over 20,000 attendees.

The TSMC Foundation also supports various Taiwanese art groups with actual deed. In 2016, the TSMC Foundation sponsored the opera concert of Verdi’s “Othello,” a semi-stage opera concert with sound effects and projected animations made by National Symphony Orchestra. It was jointly developed with Mary Birnbaum, an opera and theater director of the Juilliard School in U.S. “Othello” attracted more than 3,500 fans to enjoy the music and was very well reputed. The TSMC Foundation has a long-term commitment to relive historic buildings and to promote Chinese Traditional Classics. Since 2008, the TSMC Foundation has invited Professor Yih-yun Hsin to teach traditional Chinese philosophy and wisdom through broadcast programs on the IC Radio Broadcasting Station. The programs are extremely popular and followed by Chinese audiences all over the world. The TSMC foundation also collaborates with Literary Supplement of United Daily News to organize monthly literary lectures, inviting authors to read their works in the Sun Yun-Suan Memorial Museum, to offer community residents a chance to experience the charm of literature up close and in person.

their jointly developed Conflict-Free Smelter Program (CFSP). TSMC has asked its suppliers to disclose and make timely updates to information on smelters and mines since 2011. TSMC encourages suppliers to source minerals from facilities or smelters that have received a “conflict-free” designation by a recognized industry group (such as the EICC). TSMC also requires those who have not received such designation to become compliant with CFSP or an equivalent third-party audit program. TSMC requires the use of tantalum, tin, tungsten and gold in its products that are conflict-free.

TSMC will continue to issue the supplier survey annually and require suppliers to improve and expand their disclosure to fulfill regulatory and customer requirements. For further information, please see the Company’s Form SD filed with the U.S. SEC. (http://www.tsmc.com/english/investorRelations/sec_filings.htm)

7.3 TSMC Education and Culture Foundation

The TSMC Education and Culture Foundation (TSMC Foundation), led by TSMC Vice Chairman F.C. Tseng, who serves as the TSMC Foundation’s chairman, was established in 1998 to make CSR contributions. In 2016, the TSMC Foundation contributed over NT\$75.81 million to various projects in minority education, humanity education, arts promotion, and so on, in order to narrow the urban-rural gap and uplift society.

Focus on Minority Education

Corporate Contributions to Bridge the Urban-Rural Gap
Industrialization, informatization and globalization are spurring growth and development in cities and urban areas, which widens the cultural, educational and digital-resource gap with rural regions. Cooperating with several social groups, non-governmental organizations and educational institutions, the TSMC Foundation provided resources of the arts, sciences, reading and digital education to help the children at the bottom of the society move upward.

Reading brings knowledge and knowledge is power. In 2004, the TSMC Foundation began supporting “Hope Reading” of the CommonWealth Foundation, which each year donates 100 good books to 200 high schools and primary schools in Taiwan’s remote townships. Over the past 13 years, more than 240,000 children have been helped with more than 210,000 books. To respond to the needs of the digital era, in 2016 the TSMC Foundation further sponsored “Hope Reading 2.0,” which, in addition to book donation, selects 6 merit schools and 5 benchmark schools, and provides each class 2 tablets

and each student in third to sixth grades with one tablet, respectively, for a total of 265 tablets in all. With the help of other education partners, the TSMC Foundation will also implement e-learning systems to build up the reading and e-learning culture with the aid of distance courses and online community reading platforms.

The TSMC Foundation also emphasizes aesthetics and science education. “TSMC Aesthetic Tour” and “TSMC Science Tour,” launched in 2003 and 2010, respectively, take children from remote townships throughout the country to visit the National Palace Museum, the Taipei Fine Arts Museum and the science museums in northern, central and southern Taiwan. In 2016, more than 3,000 educators and students from rural schools in 17 counties participated in these tours. To date, more than 97,000 students from over 200 rural primary schools have improved their aesthetic view and inspired their scientific interests.

Besides, the TSMC Foundation has strengthened its cooperation with Junyi Academy and Boyo Social Welfare Foundation, by providing for free qualified digital learning tools and tutors to help rural students in their study regardless of financial limitation. For economically disadvantaged students in top universities, the TSMC Foundation sponsors the “Rising Sun Plan” of National Tsing Hua University and the “Sunflower Plan” of National Central University. In 2016, the TSMC Foundation provided 19 students with NT\$1.62 million in scholarships and launched textbook donations to lighten their economic burden and enable them to focus on their studies.

Building Educational Platforms

Fostering Multi-Competence Talents and Helping Youth Reach Their Dreams

To enhance student interests in the sciences and humanities, the TSMC Foundation organizes national science contests, science camps and humanity activities. These events build a stage for the youth, giving them the opportunity not only to showcase their talents but also to discover themselves and to consider their future.

To encourage those in the younger generation to chase their dreams, the TSMC Foundation launched the first “TSMC Dream Builders of Youth Project”. More than 166 teams composed of 500 college students from Taoyuan, Hsinchu and Miaoli, applied for the project and, after three-stage reviews by professional committees, eight teams were awarded prizes totaling NT\$3 million. Within a year, they will devote themselves in various programs, including agricultural recreation, environmental sustainability, humanities promotion

and technology startup to demonstrate their creativity and potential.

The TSMC Foundation has held the “TSMC Youth Literature Award” and “TSMC Youth Calligraphy Contest” since 2004 and 2008, respectively, to encourage young people to develop proficiency in literature and calligraphy. In addition to novel and poetry, prose was included in the literature award as another category for literary creation, and a record 628 works were submitted. For the calligraphy contest, collaborating with National Palace Museum, the TSMC Foundation organized three school workshops, which attracted more than 800 attendees, including the contesters of regular and clerical script, semi-cursive and cursive script, and seal carving. The TSMC Foundation also gives community residents a chance to appreciate the beauty of literature and calligraphy by school activities, publishing the works of prize winners and organizing touring exhibitions of the contests.

According to the Programme for International Student Assessment, Taiwanese students excel in mathematics and sciences but are less proficient at logical thinking, argumentation and presentation. Therefore, the TSMC Foundation sponsors The Center for Advanced Science Education at National Taiwan University to hold the competition, “TSMC Cup – Competition of Scientific Short Talk”. The competitors have to read a wide variety of scientific materials, write popular scientific articles, give scientific speeches and answer the questions from their opponents, in order to improve their science presentation skills. In 2016, echoing the United Nations’ theme, “International Year of Pulses,” the competition focused on pulses and invited 223 teams composed of senior high school students to read well-respected books, write essays and deliver short scientific talks on the subjects of science, nutrition, environment and agriculture in the preliminary and semi-final workshops and the contest, with the ultimate goal of cultivating in-depth knowledge and mastering presentation skills.

The TSMC Foundation also continued to support three science talent camps: Wu Chien-Shiung Science Camp, Wu Ta-Yu Science Camp and Madame Curie Senior High School Chemistry Camps, to provide senior high school students with the opportunity to meet and learn from world-class scientists with the objective of inspiring the students and helping them realize their potential.

Promoting the Arts and Culture

Spreading the Seeds of the Fine Arts and Humanities for Community Development

The TSMC Foundation has long played the role of “fine arts planter,” spreading the seeds of the fine arts in the society. In addition to actively supporting prominent international and Taiwanese artistic performances, the TSMC Foundation has continued to organize the “TSMC Hsin-Chu Arts Festival” at TSMC’s site communities, Hsinchu, Taichung and Tainan, to present a broad spectrum of performances to encourage the community’s interest in the arts.

In 2016, the commemoration of 400th anniversary of the death of William Shakespeare, in response to the cultural event, the festival invited Contemporary Legend Theatre, Corny Chicken Theatre and Prof. I-Fan Ho of National Hsinchu University of Education to perform novel musical, children’s concert and drama lectures for community residents to better understand Shakespeare’s literature. The festival also invited the young violinist Richard Lin to perform three concerts in northern, central and southern Taiwan, to promote prominent Taiwanese artists. Furthermore, the TSMC Foundation hosted the first “In Spring Chanting Poetry Festival” and invited communities and schools at Taoyuan, Hsinchu and Miaoli to chant poetry and enjoy the beauty of literature. The “2016 TSMC Hsinchu Arts Festival” arranged 53 fine arts activities, attracting over 20,000 attendees.

The TSMC Foundation also supports various Taiwanese art groups with actual deed. In 2016, the TSMC Foundation sponsored the opera concert of Verdi’s “Othello,” a semi-stage opera concert with sound effects and projected animations made by National Symphony Orchestra. It was jointly developed with Mary Birnbaum, an opera and theater director of the Juilliard School in U.S. “Othello” attracted more than 3,500 fans to enjoy the music and was very well reputed. The TSMC Foundation has a long-term commitment to relive historic buildings and to promote Chinese Traditional Classics. Since 2008, the TSMC Foundation has invited Professor Yih-yun Hsin to teach traditional Chinese philosophy and wisdom through broadcast programs on the IC Radio Broadcasting Station. The programs are extremely popular and followed by Chinese audiences all over the world. The TSMC foundation also collaborates with Literary Supplement of United Daily News to organize monthly literary lectures, inviting authors to read their works in the Sun Yun-Suan Memorial Museum, to offer community residents a chance to experience the charm of literature up close and in person.

7.4 TSMC Volunteer Program

Taiwan Semiconductor Manufacturing Company (TSMC) values the corporate social responsibilities. In such principle, the TSMC volunteer program, led by its president Mrs. Sophie Su-fen Chang, encourages employees to participate in happy and smart volunteer activities by holding the goal “selected program, long-term dedication” and encourages employees to optimize their work-life balance.

The TSMC Volunteer Program collectively plans various volunteer services and invites employees and their families to join volunteer services. There are six major programs:

TSMC Volunteer Docent Program: For knowledge sharing, one of the important ways of providing corporate services and responding to society. Through knowledge communication and development, the public may further recognized their surrounding environment. Moreover, they may create the power to change society by inspiring future masters. Service locations: “National Museum of Natural Science” in Taichung and “TSMC Museum of Innovation” in Hsinchu.

TSMC Book Reading Volunteer Program: Since 2004, this program has continuously sponsored the “Hope Reading” program of the Commonwealth Publishing Group. The program donates 20,000 books to 200 remote schools every year as bridge to the world built for disadvantaged students. Service locations: Hsinchu County: Lu Fong Elementary School, Jing Ping Elementary School, Chao Tung Elementary School, Fu Hsin Elementary School, Taichung City: Xi Wei Elementary School, and Tainan City: Song Lin Elementary School, Guang Jung Elementary School and Shu Lin Elementary School.

TSMC Energy-Saving Volunteer Program: The program is organized by employees of the Company with professional energy saving knowledge to assist schools at all levels on energy-saving assessment and improvement. The service locations cover: Taipei, Hsinchu, Taichung, Tainan and Kaohsiung such areas, providing power consumption safety and professional energy saving suggestions.

TSMC Community Volunteer Program: “Typhoon Morakot Project Team” was officially transformed into the “TSMC Community Volunteer Program” after the disaster in 2010 and moving toward people who need the help most. Following the aging society and low birth rate, the elderly and children are groups that TSMC community volunteers pay attention to. Through regular activities and gatherings, the volunteers work closely with elderly and children. Service locations: Hsinchu Veterans Home, and Hsinchu St. Teresa Children Center.

TSMC Ecology Volunteer Program: TSMC is devoted to the protection of the environment. The Company reserves land for ecological projects at every new fab, and applies multilevel ecological engineering methods, which include planting native tree species and bird/butterfly-attracting plants, providing habitats and foraging places for animals. These are aimed at creating a biodiversity environment and protecting the environment around the fab. Service locations: Hsinchu Fab 12B, Taichung Fab 15, Tainan Jacana Ecology Education Park

TSMC Fab/Division Volunteer Program: Exercising corporate social responsibility is always an extremely important part of returns and services provided by TSMC to the public. With support of executive officers and the enthusiastic response of employees, the fab/division volunteer program was created in 2013. It has shaped CRS culture inside the Company and “Do good” becomes popular among the fabs. The warm and strong figures of TSMC volunteers are everywhere; activities-include: environmental protection, promotion of energy conservation, caring for the disadvantaged, promotion of education, help for farmers and workers, and charitable donations to protect Taiwan silently.

7.5 TSMC i-Charity

“TSMC i-Charity” is an interactive online platform launched in 2014 for employees to proactively take part in philanthropic activities and give back to society. The intranet opens a channel for TSMC employees to propose caring projects, share results, suggest new ideas and participate in philanthropic events directly and in a timely manner.

In 2016, 6,826 attendees participated in the following projects, as over NT\$12 million in contributions were received:

- Light up the Tribe with Love-Construction for Hualien Xiu-Lin “Little Sun” School
- Caring for Disadvantaged Children- Call for Hualien Volunteer
- TSMC Bookcase- Caring for Disadvantaged Children with Knowledge and Love
- Tai Tung St. Mary Hospital Reconstruction
- School Building, Repairing and Construction for Tainan Hsin-Sheng Elementary School
- Jun-Yi Academy Platform
- Teach for Taiwan
- School Building Repair Construction for National Taitung Jr. College
- Build up the Dreams with Love- Yuan-Dong Junior High School
- Healthy program for west Taiwan - Early lung cancer detection with Low-Dose Computed Tomography

With this interactive platform, TSMC hopes to maintain its commitment to society and encourage employees to join in efforts to care for and give back to society in all ways.

7.6 Social Responsibility Implementation Status as Required by the Taiwan Financial Supervisory Commission

Assessment Item	Implementation Status			Non-implementation and Its Reason(s)
	Yes	No	Summary	
1. Implementation of Corporate Governance (1) Does the Company have a corporate social responsibility policy and evaluate its implementation? (2) Does the Company hold regular CSR training? (3) Does the Company have a dedicated (or ad-hoc) CSR organization with Board of Directors authorization for senior management, which reports to the Board of Directors? (4) Does the Company set a reasonable compensation policy, integrate employee appraisal with CSR policy, and set clear and effective incentive and disciplinary policies?	V		(1) Please refer to “7. Corporate Social Responsibility” on pages 118-133 of this Annual Report. (2) Please refer to “3.5 Code of Ethics and Business Conduct” on pages 49-53 of this Annual Report. (3) Please refer to “7. Corporate Social Responsibility” on pages 118-133 of this Annual Report. (4) Social responsibility is regarded as an integral part of corporate governance by TSMC. TSMC’s fair compensation policy is set with consideration of the goals of the Company’s corporate governance and operation; corporate social responsibility is included as part of its indices/indices. For further details, please refer to “5.5 Human Capital” on pages 87-91 of this Annual Report.	None
2. Environmentally Sustainable Development (1) Is the Company committed to improving resource efficiency and to the use of renewable materials with low environmental impact? (2) Has the Company set an Environmental management system designed to industry characteristics? (3) Does the Company track the impact of climate change on operations, carry out greenhouse gas inventories, and set energy conservation and greenhouse gas reduction strategy	V		Please refer to “7.2.1 Environmental Protection” on pages 123-125 of this Annual Report.	None
3. Promotion of Social Welfare (1) Does the Company set policies and procedures in compliance with regulations and internationally recognized human rights principles? (2) Has the Company established appropriately managed employee appeal procedures? (3) Does the Company provide employees with a safe and healthy working environment, with regular safety and health training? (4) Has the Company established a mechanism for regular communication with employees and use reasonable measures to notify employees of operational changes which may cause significant impact to employees? (5) Has the Company established effective career development training plans? (6) Has the Company set policies and consumer appeal procedures in its R&D, purchasing, production, operations, and service processes? (7) Does the Company follow regulations and international standards in the marketing and labelling of its products and services? (8) Does the company evaluate environmental and social track records before engaging with potential suppliers? (9) Does the Company’s contracts with major suppliers include termination clauses if they violate CSR policy and cause significant environmental and social impact?	V		(1) Please refer to “5.5 Human Capital” on pages 87-91 of this Annual Report. (2) Please refer to “5.5 Human Capital” on pages 87-91 of this Annual Report. (3) Please refer to “7.2.3 Safety and Health” on pages 127-130 of this Annual Report. (4) Please refer to “5.5 Human Capital” on pages 87-91 of this Annual Report. (5) Please refer to “5.5 Human Capital” on pages 87-91 of this Annual Report. (6) Not applicable as TSMC is not an end product manufacturer. (7) Not applicable as TSMC is not an end product manufacturer. (8) Please refer to “Supplier and Contractor Management” on page 129-130 of this Annual Report. (9) Please refer to “Risks Associated with Purchase Concentration” in 6.3.3 Operational Risks of this Annual Report.	None
4. Enhanced Information Disclosure Does the Company disclose relevant and reliable CSR information on its website and the Taiwan Stock Exchange website?	V		TSMC has published a “Corporate Social Responsibility Report” since 2008, and discloses this on the Company’s website (http://www.tsmc.com/english/csr/index.htm).	None
5. If the company has established its corporate social responsibility code of practice according to “Listed Companies Corporate Social Responsibility Code of Practice,” please describe the operational status and differences. TSMC follows the Corporate Social Responsibility Policy set by the Chairman, Dr. Morris Chang. For our corporate social responsibility operational status, please refer to “7. Corporate Social Responsibility” on pages 118-133 of this Annual Report and our corporate social responsibility related information in our website: http://www.tsmc.com/english/csr/index.htm				
6. Other important information to facilitate better understanding of the company’s implementation of corporate social responsibility: Please refer to TSMC’s website for its corporate social responsibility implementation status: http://www.tsmc.com/english/csr/index.htm				
7. Other information regarding “Corporate Responsibility Report ” which is verified by certifying bodies: TSMC’s Corporate Social Responsibility Report is in accordance with the GRI G4 guidelines comprehensive option and verified by certifying bodies.				

7.4 TSMC Volunteer Program

Taiwan Semiconductor Manufacturing Company (TSMC) values the corporate social responsibilities. In such principle, the TSMC volunteer program, led by its president Mrs. Sophie Su-fen Chang, encourages employees to participate in happy and smart volunteer activities by holding the goal “selected program, long-term dedication” and encourages employees to optimize their work-life balance.

The TSMC Volunteer Program collectively plans various volunteer services and invites employees and their families to join volunteer services. There are six major programs:

TSMC Volunteer Docent Program: For knowledge sharing, one of the important ways of providing corporate services and responding to society. Through knowledge communication and development, the public may further recognized their surrounding environment. Moreover, they may create the power to change society by inspiring future masters. Service locations: “National Museum of Natural Science” in Taichung and “TSMC Museum of Innovation” in Hsinchu.

TSMC Book Reading Volunteer Program: Since 2004, this program has continuously sponsored the “Hope Reading” program of the Commonwealth Publishing Group. The program donates 20,000 books to 200 remote schools every year as bridge to the world built for disadvantaged students. Service locations: Hsinchu County: Lu Fong Elementary School, Jing Ping Elementary School, Chao Tung Elementary School, Fu Hsin Elementary School, Taichung City: Xi Wei Elementary School, and Tainan City: Song Lin Elementary School, Guang Jung Elementary School and Shu Lin Elementary School.

TSMC Energy-Saving Volunteer Program: The program is organized by employees of the Company with professional energy saving knowledge to assist schools at all levels on energy-saving assessment and improvement. The service locations cover: Taipei, Hsinchu, Taichung, Tainan and Kaohsiung such areas, providing power consumption safety and professional energy saving suggestions.

TSMC Community Volunteer Program: “Typhoon Morakot Project Team” was officially transformed into the “TSMC Community Volunteer Program” after the disaster in 2010 and moving toward people who need the help most. Following the aging society and low birth rate, the elderly and children are groups that TSMC community volunteers pay attention to. Through regular activities and gatherings, the volunteers work closely with elderly and children. Service locations: Hsinchu Veterans Home, and Hsinchu St. Teresa Children Center.

TSMC Ecology Volunteer Program: TSMC is devoted to the protection of the environment. The Company reserves land for ecological projects at every new fab, and applies multilevel ecological engineering methods, which include planting native tree species and bird/butterfly-attracting plants, providing habitats and foraging places for animals. These are aimed at creating a biodiversity environment and protecting the environment around the fab. Service locations: Hsinchu Fab 12B, Taichung Fab 15, Tainan Jacana Ecology Education Park

TSMC Fab/Division Volunteer Program: Exercising corporate social responsibility is always an extremely important part of returns and services provided by TSMC to the public. With support of executive officers and the enthusiastic response of employees, the fab/division volunteer program was created in 2013. It has shaped CRS culture inside the Company and “Do good” becomes popular among the fabs. The warm and strong figures of TSMC volunteers are everywhere; activities-include: environmental protection, promotion of energy conservation, caring for the disadvantaged, promotion of education, help for farmers and workers, and charitable donations to protect Taiwan silently.

7.5 TSMC i-Charity

“TSMC i-Charity” is an interactive online platform launched in 2014 for employees to proactively take part in philanthropic activities and give back to society. The intranet opens a channel for TSMC employees to propose caring projects, share results, suggest new ideas and participate in philanthropic events directly and in a timely manner.

In 2016, 6,826 attendees participated in the following projects, as over NT\$12 million in contributions were received:

- Light up the Tribe with Love-Construction for Hualien Xiu-Lin “Little Sun” School
- Caring for Disadvantaged Children- Call for Hualien Volunteer
- TSMC Bookcase- Caring for Disadvantaged Children with Knowledge and Love
- Tai Tung St. Mary Hospital Reconstruction
- School Building, Repairing and Construction for Tainan Hsin-Sheng Elementary School
- Jun-Yi Academy Platform
- Teach for Taiwan
- School Building Repair Construction for National Taitung Jr. College
- Build up the Dreams with Love- Yuan-Dong Junior High School
- Healthy program for west Taiwan - Early lung cancer detection with Low-Dose Computed Tomography

With this interactive platform, TSMC hopes to maintain its commitment to society and encourage employees to join in efforts to care for and give back to society in all ways.

7.6 Social Responsibility Implementation Status as Required by the Taiwan Financial Supervisory Commission

Assessment Item	Implementation Status			Non-implementation and Its Reason(s)
	Yes	No	Summary	
1. Implementation of Corporate Governance (1) Does the Company have a corporate social responsibility policy and evaluate its implementation? (2) Does the Company hold regular CSR training? (3) Does the Company have a dedicated (or ad-hoc) CSR organization with Board of Directors authorization for senior management, which reports to the Board of Directors? (4) Does the Company set a reasonable compensation policy, integrate employee appraisal with CSR policy, and set clear and effective incentive and disciplinary policies?	V		(1) Please refer to “7. Corporate Social Responsibility” on pages 118-133 of this Annual Report. (2) Please refer to “3.5 Code of Ethics and Business Conduct” on pages 49-53 of this Annual Report. (3) Please refer to “7. Corporate Social Responsibility” on pages 118-133 of this Annual Report. (4) Social responsibility is regarded as an integral part of corporate governance by TSMC. TSMC’s fair compensation policy is set with consideration of the goals of the Company’s corporate governance and operation; corporate social responsibility is included as part of its indices/indices. For further details, please refer to “5.5 Human Capital” on pages 87-91 of this Annual Report.	None
2. Environmentally Sustainable Development (1) Is the Company committed to improving resource efficiency and to the use of renewable materials with low environmental impact? (2) Has the Company set an Environmental management system designed to industry characteristics? (3) Does the Company track the impact of climate change on operations, carry out greenhouse gas inventories, and set energy conservation and greenhouse gas reduction strategy	V		Please refer to “7.2.1 Environmental Protection” on pages 123-125 of this Annual Report.	None
3. Promotion of Social Welfare (1) Does the Company set policies and procedures in compliance with regulations and internationally recognized human rights principles? (2) Has the Company established appropriately managed employee appeal procedures? (3) Does the Company provide employees with a safe and healthy working environment, with regular safety and health training? (4) Has the Company established a mechanism for regular communication with employees and use reasonable measures to notify employees of operational changes which may cause significant impact to employees? (5) Has the Company established effective career development training plans? (6) Has the Company set policies and consumer appeal procedures in its R&D, purchasing, production, operations, and service processes? (7) Does the Company follow regulations and international standards in the marketing and labelling of its products and services? (8) Does the company evaluate environmental and social track records before engaging with potential suppliers? (9) Does the Company’s contracts with major suppliers include termination clauses if they violate CSR policy and cause significant environmental and social impact?	V		(1) Please refer to “5.5 Human Capital” on pages 87-91 of this Annual Report. (2) Please refer to “5.5 Human Capital” on pages 87-91 of this Annual Report. (3) Please refer to “7.2.3 Safety and Health” on pages 127-130 of this Annual Report. (4) Please refer to “5.5 Human Capital” on pages 87-91 of this Annual Report. (5) Please refer to “5.5 Human Capital” on pages 87-91 of this Annual Report. (6) Not applicable as TSMC is not an end product manufacturer. (7) Not applicable as TSMC is not an end product manufacturer. (8) Please refer to “Supplier and Contractor Management” on page 129-130 of this Annual Report. (9) Please refer to “Risks Associated with Purchase Concentration” in 6.3.3 Operational Risks of this Annual Report.	None
4. Enhanced Information Disclosure Does the Company disclose relevant and reliable CSR information on its website and the Taiwan Stock Exchange website?	V		TSMC has published a “Corporate Social Responsibility Report” since 2008, and discloses this on the Company’s website (http://www.tsmc.com/english/csr/index.htm).	None
5. If the company has established its corporate social responsibility code of practice according to “Listed Companies Corporate Social Responsibility Code of Practice,” please describe the operational status and differences. TSMC follows the Corporate Social Responsibility Policy set by the Chairman, Dr. Morris Chang. For our corporate social responsibility operational status, please refer to “7. Corporate Social Responsibility” on pages 118-133 of this Annual Report and our corporate social responsibility related information in our website: http://www.tsmc.com/english/csr/index.htm				
6. Other important information to facilitate better understanding of the company’s implementation of corporate social responsibility: Please refer to TSMC’s website for its corporate social responsibility implementation status: http://www.tsmc.com/english/csr/index.htm				
7. Other information regarding “Corporate Responsibility Report ” which is verified by certifying bodies: TSMC’s Corporate Social Responsibility Report is in accordance with the GRI G4 guidelines comprehensive option and verified by certifying bodies.				

7.4 TSMC Volunteer Program

Taiwan Semiconductor Manufacturing Company (TSMC) values the corporate social responsibilities. In such principle, the TSMC volunteer program, led by its president Mrs. Sophie Su-fen Chang, encourages employees to participate in happy and smart volunteer activities by holding the goal “selected program, long-term dedication” and encourages employees to optimize their work-life balance.

The TSMC Volunteer Program collectively plans various volunteer services and invites employees and their families to join volunteer services. There are six major programs:

TSMC Volunteer Docent Program: For knowledge sharing, one of the important ways of providing corporate services and responding to society. Through knowledge communication and development, the public may further recognized their surrounding environment. Moreover, they may create the power to change society by inspiring future masters. Service locations: “National Museum of Natural Science” in Taichung and “TSMC Museum of Innovation” in Hsinchu.

TSMC Book Reading Volunteer Program: Since 2004, this program has continuously sponsored the “Hope Reading” program of the Commonwealth Publishing Group. The program donates 20,000 books to 200 remote schools every year as bridge to the world built for disadvantaged students. Service locations: Hsinchu County: Lu Fong Elementary School, Jing Ping Elementary School, Chao Tung Elementary School, Fu Hsin Elementary School, Taichung City: Xi Wei Elementary School, and Tainan City: Song Lin Elementary School, Guang Jung Elementary School and Shu Lin Elementary School.

TSMC Energy-Saving Volunteer Program: The program is organized by employees of the Company with professional energy saving knowledge to assist schools at all levels on energy-saving assessment and improvement. The service locations cover: Taipei, Hsinchu, Taichung, Tainan and Kaohsiung such areas, providing power consumption safety and professional energy saving suggestions.

TSMC Community Volunteer Program: “Typhoon Morakot Project Team” was officially transformed into the “TSMC Community Volunteer Program” after the disaster in 2010 and moving toward people who need the help most. Following the aging society and low birth rate, the elderly and children are groups that TSMC community volunteers pay attention to. Through regular activities and gatherings, the volunteers work closely with elderly and children. Service locations: Hsinchu Veterans Home, and Hsinchu St. Teresa Children Center.

TSMC Ecology Volunteer Program: TSMC is devoted to the protection of the environment. The Company reserves land for ecological projects at every new fab, and applies multilevel ecological engineering methods, which include planting native tree species and bird/butterfly-attracting plants, providing habitats and foraging places for animals. These are aimed at creating a biodiversity environment and protecting the environment around the fab. Service locations: Hsinchu Fab 12B, Taichung Fab 15, Tainan Jacana Ecology Education Park

TSMC Fab/Division Volunteer Program: Exercising corporate social responsibility is always an extremely important part of returns and services provided by TSMC to the public. With support of executive officers and the enthusiastic response of employees, the fab/division volunteer program was created in 2013. It has shaped CRS culture inside the Company and “Do good” becomes popular among the fabs. The warm and strong figures of TSMC volunteers are everywhere; activities-include: environmental protection, promotion of energy conservation, caring for the disadvantaged, promotion of education, help for farmers and workers, and charitable donations to protect Taiwan silently.

7.5 TSMC i-Charity

“TSMC i-Charity” is an interactive online platform launched in 2014 for employees to proactively take part in philanthropic activities and give back to society. The intranet opens a channel for TSMC employees to propose caring projects, share results, suggest new ideas and participate in philanthropic events directly and in a timely manner.

In 2016, 6,826 attendees participated in the following projects, as over NT\$12 million in contributions were received:

- Light up the Tribe with Love-Construction for Hualien Xiu-Lin “Little Sun” School
- Caring for Disadvantaged Children- Call for Hualien Volunteer
- TSMC Bookcase- Caring for Disadvantaged Children with Knowledge and Love
- Tai Tung St. Mary Hospital Reconstruction
- School Building, Repairing and Construction for Tainan Hsin-Sheng Elementary School
- Jun-Yi Academy Platform
- Teach for Taiwan
- School Building Repair Construction for National Taitung Jr. College
- Build up the Dreams with Love- Yuan-Dong Junior High School
- Healthy program for west Taiwan - Early lung cancer detection with Low-Dose Computed Tomography

With this interactive platform, TSMC hopes to maintain its commitment to society and encourage employees to join in efforts to care for and give back to society in all ways.

7.6 Social Responsibility Implementation Status as Required by the Taiwan Financial Supervisory Commission

Assessment Item	Implementation Status			Non-implementation and Its Reason(s)
	Yes	No	Summary	
1. Implementation of Corporate Governance (1) Does the Company have a corporate social responsibility policy and evaluate its implementation? (2) Does the Company hold regular CSR training? (3) Does the Company have a dedicated (or ad-hoc) CSR organization with Board of Directors authorization for senior management, which reports to the Board of Directors? (4) Does the Company set a reasonable compensation policy, integrate employee appraisal with CSR policy, and set clear and effective incentive and disciplinary policies?	V		(1) Please refer to “7. Corporate Social Responsibility” on pages 118-133 of this Annual Report. (2) Please refer to “3.5 Code of Ethics and Business Conduct” on pages 49-53 of this Annual Report. (3) Please refer to “7. Corporate Social Responsibility” on pages 118-133 of this Annual Report. (4) Social responsibility is regarded as an integral part of corporate governance by TSMC. TSMC’s fair compensation policy is set with consideration of the goals of the Company’s corporate governance and operation; corporate social responsibility is included as part of its indices/indices. For further details, please refer to “5.5 Human Capital” on pages 87-91 of this Annual Report.	None
2. Environmentally Sustainable Development (1) Is the Company committed to improving resource efficiency and to the use of renewable materials with low environmental impact? (2) Has the Company set an Environmental management system designed to industry characteristics? (3) Does the Company track the impact of climate change on operations, carry out greenhouse gas inventories, and set energy conservation and greenhouse gas reduction strategy	V		Please refer to “7.2.1 Environmental Protection” on pages 123-125 of this Annual Report.	None
3. Promotion of Social Welfare (1) Does the Company set policies and procedures in compliance with regulations and internationally recognized human rights principles? (2) Has the Company established appropriately managed employee appeal procedures? (3) Does the Company provide employees with a safe and healthy working environment, with regular safety and health training? (4) Has the Company established a mechanism for regular communication with employees and use reasonable measures to notify employees of operational changes which may cause significant impact to employees? (5) Has the Company established effective career development training plans? (6) Has the Company set policies and consumer appeal procedures in its R&D, purchasing, production, operations, and service processes? (7) Does the Company follow regulations and international standards in the marketing and labelling of its products and services? (8) Does the company evaluate environmental and social track records before engaging with potential suppliers? (9) Does the Company’s contracts with major suppliers include termination clauses if they violate CSR policy and cause significant environmental and social impact?	V		(1) Please refer to “5.5 Human Capital” on pages 87-91 of this Annual Report. (2) Please refer to “5.5 Human Capital” on pages 87-91 of this Annual Report. (3) Please refer to “7.2.3 Safety and Health” on pages 127-130 of this Annual Report. (4) Please refer to “5.5 Human Capital” on pages 87-91 of this Annual Report. (5) Please refer to “5.5 Human Capital” on pages 87-91 of this Annual Report. (6) Not applicable as TSMC is not an end product manufacturer. (7) Not applicable as TSMC is not an end product manufacturer. (8) Please refer to “Supplier and Contractor Management” on page 129-130 of this Annual Report. (9) Please refer to “Risks Associated with Purchase Concentration” in 6.3.3 Operational Risks of this Annual Report.	None
4. Enhanced Information Disclosure Does the Company disclose relevant and reliable CSR information on its website and the Taiwan Stock Exchange website?	V		TSMC has published a “Corporate Social Responsibility Report” since 2008, and discloses this on the Company’s website (http://www.tsmc.com/english/csr/index.htm).	None
5. If the company has established its corporate social responsibility code of practice according to “Listed Companies Corporate Social Responsibility Code of Practice,” please describe the operational status and differences. TSMC follows the Corporate Social Responsibility Policy set by the Chairman, Dr. Morris Chang. For our corporate social responsibility operational status, please refer to “7. Corporate Social Responsibility” on pages 118-133 of this Annual Report and our corporate social responsibility related information in our website: http://www.tsmc.com/english/csr/index.htm				
6. Other important information to facilitate better understanding of the company’s implementation of corporate social responsibility: Please refer to TSMC’s website for its corporate social responsibility implementation status: http://www.tsmc.com/english/csr/index.htm				
7. Other information regarding “Corporate Responsibility Report ” which is verified by certifying bodies: TSMC’s Corporate Social Responsibility Report is in accordance with the GRI G4 guidelines comprehensive option and verified by certifying bodies.				