7. Corporate Social Responsibility

Rice carving requires total concentration, and not a single mistake is tolerated. In its pursuit of sustainability, TSMC takes the utmost care with all of its economic, environmental, and social corporate responsibilities to make the Company a force for improving society.

7.1 Overview

TSMC believes a company’s corporate social responsibility is to uplift society. As an important part of the technology industry, we will not only aim to maintain our leadership in worldwide competition and promote Taiwan’s globalization and economic growth, but also continue to carry out our corporate social responsibility and do our utmost to be good corporate citizens in the future.

CSR Guidelines

Our 10 principles for practicing corporate social responsibility are important standards for continuing to support positive change in society:

1. We insist on honesty and integrity. We are honest to our shareholders, employees, customers, and to the public alike.
2. We respect the rule of law and always obey the law.
3. We abhor cronyism. We do not seek favoritism from the government or any government official, and we do not bribe.
4. We practice good corporate governance, and balance the interests of shareholders, employees, and all stakeholders in the Company.
5. We do not engage in politics.
6. We provide good job opportunities with a safe, comfortable, and intellectually challenging environment to give our employees both physical comfort and mental stimulation.
7. We do our part to control climate change and place great importance on the protection of the environment.
8. We emphasize and reward innovation, and actively manage the risks that innovation may bring.
9. We invest and develop power-efficient technologies to provide customers with more advanced, efficient and ecologically sound products to contribute to a greener world.
10. We support educational and cultural activities, and care for our communities over the long term.
The following table shows TSMC’s view of CSR. TSMC’s social responsibility is to “uplift society,” and on the vertical axis are matters that TSMC considers its responsibilities. The horizontal axis shows areas where TSMC believes its values can affect society.

### Corporate Social Responsibility: Uplift Society

<table>
<thead>
<tr>
<th>CSR Area</th>
<th>Responsibility</th>
</tr>
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<tbody>
<tr>
<td>Integrity</td>
<td>v v</td>
</tr>
<tr>
<td>Good Governance</td>
<td>v</td>
</tr>
<tr>
<td>Anti-Competition</td>
<td>v</td>
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<tr>
<td>Anti-Bribery</td>
<td>v</td>
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<tr>
<td>Environmental Protection</td>
<td>v</td>
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<tr>
<td>Climate Change</td>
<td>v</td>
</tr>
<tr>
<td>Energy Conservation</td>
<td>v</td>
</tr>
<tr>
<td>Corporate Governance</td>
<td>v v</td>
</tr>
<tr>
<td>Provide Wellbeing</td>
<td>v</td>
</tr>
<tr>
<td>Good Shareholder Return</td>
<td>v</td>
</tr>
<tr>
<td>Employees’ Work-Life Balance</td>
<td>v</td>
</tr>
<tr>
<td>Encourage Innovation</td>
<td>v</td>
</tr>
<tr>
<td>Good Work Environment</td>
<td>v</td>
</tr>
<tr>
<td>Volunteer Organization</td>
<td>v</td>
</tr>
<tr>
<td>Educational and Cultural Foundation</td>
<td>v</td>
</tr>
</tbody>
</table>

**CSR Management Approach**

TSMC’s decision-making and operations in corporate social responsibility (CSR) are led by the Company’s Chief Financial Officer, who was appointed by the Chairman to act as an overall coordinator for the entire Company’s CSR activities. To better carry out and coordinate sustainability efforts, the Company founded the “Corporate Social Responsibility Committee” in 2011, bringing together representatives from all of TSMC’s CSR-related business segments. Since 2012, CSR has been a topic on TSMC’s Board meeting agenda. Annual CSR performance is reported to the Board.

The CSR Committee holds quarterly meetings to discuss related topics, led by the CFO and the President of the Volunteer Program. The quarterly CSR meeting systematically and effectively carries out our corporate social responsibilities by following a “Plan-Do-Check-Act” cycle to regularly review interaction with stakeholders and the issues that concern them, discuss progress in CSR activities and set future plans. Through close cooperation between organizations, CSR is now an integral part of TSMC’s daily operations.

### Stakeholder Engagement

TSMC’s stakeholder management procedure is divided into four stages: identification, analysis, plan, and engagement. In order to pursue sustainable operations, TSMC establishes individual communication channels with each of our stakeholders according to their influence and issues of concern. We communicate with stakeholders through multiple channels established by CSR-related units, and compile their economic, social and environmental concerns.

TSMC believes that sustainability, ethics, and integrity are fundamental to a company’s long-term success. As we carry out our CSR principles, it is our firm belief that customers will trust us more because of our honesty and integrity, respect for the law, and good corporate governance. Investors will be more willing to invest over the long term because of our clear core values, and employees will feel closer to the Company as they identify with those values. Carrying out TSMC’s social responsibilities brings us greater competitive advantage, creates greater value for shareholders, and benefits all of our stakeholders.

### DJSI Industry Group Leader

In 2014, TSMC was recognized by the Dow Jones Sustainability Indices (DJSI) as the Semiconductors and Semiconductor Equipment Industry Group Leader for a second consecutive year, once again affirming the Company’s commitment to sustainability and corporate social responsibility. Moreover, TSMC is one of only two semiconductor companies chosen as index components for 14 consecutive years.
7.2 Environmental, Safety and Health (ESH) Management

TSMC believes its environmental, safety and health practices must not only comply with legal requirements, but also measure up to or exceed recognized international practices. TSMC’s ESH policy aims 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. 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 and minimize the impact of earthquake damage, in order to reduce the overall environmental, safety and health risk.

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 are compliant with regulatory and customer requirements, including the European Union’s Restriction of Hazardous Substances (RoHS) Directive, EU 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 Perfluorocarbons Sulforanes (PFOS) restriction standards.

Since 2011, TSMC adopted ISO 50001 Energy Management System for the continuous improvement of energy conservation. TSMC 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 early 2014, TSMC has three fabs—Fab 12 Phase 4/F6, Fab 14 Phase 3/4 and Fab 15 —that earned the 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 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 on-site 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 is essential to the Company’s green supply chain ideals. Since 2009, TSMC has required suppliers to set up their carbon inventory procedures. Since 2010, TSMC collaborated with selected suppliers to set up product carbon footprints and has received PAS2050 certifications for 6-inch, 8-inch and 12-inch finished wafers.

TSMC also monitors potential water shortages in the supply chain and investigates the supply chain’s water inventory. TSMC is also preparing to work with suppliers on water footprinting and conservation plans. 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 of 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, pandemic response planning and a business continuity plan. 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. TSMC achieved its voluntary PFC emissions reduction goal as per its commitment to the World Semiconductor Council (WSC) and the Taiwan Environmental Protection Administration (EPA) in 2010.

In 2005, TSMC was Taiwan’s first semiconductor company to make a complete inventory of its GHG emissions and to gain ISO 14064 certification. The purpose of the inventory was to serve as a baseline reference for TSMC’s strategy to reduce GHG emissions, to meet future domestic regulatory requirements, and to prepare for carbon trading and corporate carbon asset management. All TSMC facilities conduct an annual GHG. The inventory result 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.

TSMC is taking measures to reduce its emission of GHGs. TSMC endorsed a memorandum of understanding between the Taiwan Semiconductor Industry Association, the Taiwan EPA, and the WSC, whereby TSMC committed to reducing PFC emissions to 10% below the average of 1997 and 1999 by 2010, a commitment that it was proud to achieve. This emissions target remains fixed as TSMC continues to grow and expand its manufacturing facilities.

TSMC is active in WSC’s activities to set up a global voluntary PFC emissions reduction goal for the next ten years, and has integrated past experience to develop best practices. The implementation of best practices for new semiconductor fabs has been adopted by WSC for the major element of the 2020 goal. In 2013, according to the “EPA Early Actions for Carbon Credit of Greenhouse Gases Reduction” regulation, TSMC applied for the recognition of greenhouse reduction that committed to the WSC and EPA, and received carbon credits from 2005 to 2011. Those carbon credits can be used to offset greenhouse gas emissions of new manufacturing facilities regulated by Environmental Impact Assessment (EIA) Act. It will mitigate climate change risk to support the Company’s sustainable operation.

Carbon-fired power generators are the major source of electricity in Taiwan and emit large amounts of carbon dioxide (CO2). TSMC has not only adopted energy-conserving designs for both its manufacturing fabs and offices, but has also continuously improved the energy efficiency of facilities during operation. These efforts simultaneously reduce both carbon dioxide emissions and costs.

Air and Water Pollution Control

TSMC 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 breakdown. TSMC centrally monitors the operations of air and water pollution control equipment around the clock and tracks system effectiveness 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 make an effort to increase water reclamation rates by adjusting the water usage of manufacturing equipment and improving wastewater reclamation systems. Now fabs are able to reclaim more than 88% of process water, meeting or exceeding the standards of the Science Park Administration and outperforming most semiconductor fabs around the world. TSMC also strives to reduce non-manufacturing-related water consumption, including water used in air conditioning systems, sanitary facilities, cleaning, landscaping and kitchens. TSMC uses an intranet website to collect and measure water recycling companies wide-volume 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

TSMC has established a designated unit responsible for waste recycling and disposal. To meet the goal of sustainable resource utilization, TSMC’s first priority is to reduce process waste, the second is to recycle, and the last choice is treatment or disposal. TSMC carefully selects waste disposal.
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 cost reduction or economic benefits of environmental protection programs so as to promote economically efficient programs. With environmental costs expected to continue growing, environmental accounting can help TSMC manage more effectively. TSMC’S environmental accounting measures define the various environmental costs and set up independent environmental account codes, then provide these to all units for use in annual budgeting. This online system can output data for environmental cost statistics.

The Company’s economic benefit evaluation calculates cost savings for reduction of energy, water or wastes and waste recycling benefits according to our environmental protection programs. The Company’s economic benefit evaluation calculates cost savings for reduction of energy, water or wastes and waste recycling benefits according to our 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 2014, 350 environmental projects were completed and the total benefits including waste recycling are more than NT$1,215 million.

### 2014 Environmental Cost of TSMC Fabs in Taiwan

<table>
<thead>
<tr>
<th>Description</th>
<th>Investment</th>
<th>Expense</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Direct Cost for Reducing Environmental Impact</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1) Air Pollution Control</td>
<td>7,425,012</td>
<td>1,437,361</td>
</tr>
<tr>
<td>(2) Resource Conservation</td>
<td>1,090,937</td>
<td>108,946</td>
</tr>
<tr>
<td>(3) Waste Disposal and Recycling</td>
<td>606,702</td>
<td></td>
</tr>
<tr>
<td>2. Indirect Cost for Reducing Environmental Impact (Indirect Cost)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1) Cost of training</td>
<td>270,080</td>
<td>208,085</td>
</tr>
<tr>
<td>(2) Environmental management system and certification expenditures</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(3) Environmental management system and certification expenditures</td>
<td></td>
<td></td>
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<tr>
<td>(4) Environmental management system and certification expenditures</td>
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<td></td>
</tr>
<tr>
<td>(5) Environmental management system and certification expenditures</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Other Environment-related Costs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1) Costs for decontamination and remediation</td>
<td>9,733,389</td>
<td>4,419,076</td>
</tr>
<tr>
<td>(2) Environmental impact assessment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(3) Environmental impact assessment</td>
<td></td>
<td></td>
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<tr>
<td>(4) Environmental impact assessment</td>
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<td></td>
</tr>
<tr>
<td>(5) Environmental impact assessment</td>
<td></td>
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</tbody>
</table>

### 2014 Environmental Efficiency of TSMC Fabs in Taiwan

<table>
<thead>
<tr>
<th>Description</th>
<th>Efficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Cost Saving of Environmental Protection Projects</td>
<td></td>
</tr>
<tr>
<td>(1) Energy saving: completed 156 projects</td>
<td>375,680</td>
</tr>
<tr>
<td>(2) Waste reduction: completed 201 projects</td>
<td>50,666</td>
</tr>
<tr>
<td>(3) Environmental impact assessment</td>
<td>75,200</td>
</tr>
<tr>
<td>(4) Total savings of completed projects</td>
<td>511,567</td>
</tr>
<tr>
<td>2. Real Income of Industrial Waste Recycling</td>
<td></td>
</tr>
<tr>
<td>(1) Recycling of waste</td>
<td>341,937</td>
</tr>
<tr>
<td>(2) Total income of recycling</td>
<td>1,214,565</td>
</tr>
</tbody>
</table>

### Other Environmental Protection Programs

TSMC conducts “Product Life Cycle Assessments” (Product LCA), collecting and analyzing data from the entire semiconductor manufacturing chain from raw materials suppliers to finished products, including statistics for such items as energy, raw material consumption, and pollution. The Product LCA study has established “Eco-Profiles” for all TSMC fabs and helps the Company to meet international regulations, such as the European Union’s “Energy-Using Product” directive. These “Eco-Profiles” can also be provided to customers who require such documentation.

TSMC also maintains “green procurement” procedures, requiring raw materials suppliers to declare that the materials they supply to TSMC do not contain any prohibited substances. This ensures that products manufactured by TSMC comply with customer requirements and the regulatory requirements of the European Union’s RoHS Directive. TSMC also encourages employees to use “green Mark” products in offices, such as recycled paper, desktop PCs, LCD monitors, and batteries.

1. Cost Saving of Environmental Protection Projects

TSMC knows how to do environmental protection projects, but they need to achieve better energy and resource efficiency than conventional designs. At the same time, TSMC continues to upgrade existing office buildings to comply with the LEED standard each year. From 2008 to 2014, 16 of TSMC’S fabs and office buildings achieved LEED certifications (2 Platinum, 14 Gold class).

### Environmental Compliance Record

In 2014 and as of the date of this Annual Report, TSMC had not received any environmental penalties or fines.

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 reduce 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 for flat Panel Display Backlighting and indoor/outdoor Solid State LED lighting, and “Energy Star” low standby AC-DC adaptors, etc. In addition to helping customers design low-power, high-performance products to reduce resource consumption over the product’s life cycle, TSMC implements clean manufacturing practices that provide additional “green value” to our customers and our 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 incorporated into peoples’ lives. These chips 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. We have listed below several examples of how TSMC-manufactured products significantly contribute to society and the environment.

Environmental Contribution by TSMC Foundry Services

1. Providing New Process Technology to Achieve Lower Power Consumption

• The continuous development of TSMC’s advanced semiconductor process technologies follows Moore’s Law, which holds that process technology moves forward one generation every 24 months. In each new generation, circuitry line widths shrink, making circuits smaller and lowering the energy and raw materials consumed per unit area. At the same time, the smaller IC die size consumes less power. TSMC’S 28nm technology, for example, can accommodate approximately four times the number of electronic components as the 55nm technology. ICs made with 28nm technology in active or standby mode consume roughly one third the power of 55nm products, according to TSMC’S internal test results. The Company...
continuously provides process simplification and new design methodology based upon its manufacturing excellence to help customers reduce design and process waste. TSMC leads the foundry segment in technology, having achieved volume production at the 28nm node. TSMC’s 28nm processes include 28nm High Performance (28HP), 28nm High Performance Low Power (28HPL), 28nm Low Power (28LP), 28nm High Performance Mobile Computing (28HPM), and 28nm High Performance Compact Mobile Computing (28HPC). Customer 28nm production tape-outs are more than double the number of 40nm customer tape-outs. The 28nm process also has surpassed the previous generation’s production ramp and product yield at the same point in time, due in part to closer and earlier collaboration with customers. TSMC will continue to encourage customer designs that result in the most advanced, energy-saving, and environmentally friendly products. TSMC quickly ramped its 28nm technology. The 28nm contribution to wafer revenue grew significantly from 1% in 2011 to 33% in 2014. This reflects the fact that TSMC’s advanced manufacturing process technology helps the company achieve both profitable growth and energy savings.

28nm Contribution to Total Wafer Revenue (Unit: %)

<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
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2. Manufacturing Power Management ICs with the Highest Efficiency
TSMC’s leading manufacturing technology helps its customers design and manufacture green products. Power management ICs are the most notably green IC products. Power management ICs are the key components that regulate and supply power to all IC components. TSMC’s analog power technology research and development team uses 6-inch, 8-inch and 12-inch wafer fabs to develop Bipolar-CMOS-DMOS (BCD) and Ultra-High Voltage (UHV) technology, producing industry-leading power management chips with more stable and efficient power supplies and lower energy consumption for broad-based applications in the consumer, communication, and computer markets. TSMC’s BCD is the best fit technology for high efficiency LED driver for the applications of Flat Panel Display Backlighting and indoor/outdoor Solid State LED lighting. In addition, TSMC’s UHV with 400V–800V options is the best fit technology for Green Product applications, such as “Energy Star” low standby AC-DC adapters, Solid State LED lighting, high efficiency DC Brushless motors.

TSMC also provides analog and power-friendly design platforms. Customers use these platforms to develop energy-saving products.

Power management ICs generate material revenue to TSMC’s industrial market segment. In 2014, TSMC’s HV/Power technologies collectively shipped more than 1.8 million customer wafers. In total, the Power management ICs manufactured by TSMC for our customers accounted for more than one-third of global computer, communication and consumer (3C) systems.

3. Green Manufacturing that Lowers Energy Consumption
TSMC develops manufacturing technologies that provide more advanced and efficient manufacturing services. Improvements reduce per-unit energy consumption, resource consumption and pollutant generation. They also lower energy consumption and reduce pollution during product use. To see the total energy savings benefits realized through TSMC’s green manufacturing, please refer to page 108, “Environmental Accounting”.

Social Contribution by TSMC Foundry Services
1. Providing Mobile and Wireless Chips that Enhance Mobility and Convenience
The rapid growth of smartphones and tablets in recent years reflects strong demand for mobile devices. Mobile devices offer remarkable convenience, and TSMC contributes significant value to these devices. For example, new process technology helps chips provide faster computing speeds in a smaller die area, leading to smaller form factors for these electronic devices. In addition, SoC technology integrates more functions into one chip, reducing the total number of chips in electronic devices, which also leads to a smaller system form factor. Second, new process technology helps chips consume less energy. People can therefore use mobile devices for a longer period of time, increasing their convenience. And third, with more convenient wireless connectivity such as 3G/4G and WLAN/Bluetooth, people communicate more efficiently with each other, can “work anytime and anywhere,” significantly improving the mobility of modern society.

Mobile computing related products, such as Baseband, RF Transceiver, AP (Application Processors), WLAN (Wireless Local Area network), imaging sensors, and NFC (Near Field Communication), among others, represent 48% of TSMC wafer revenue in revenue in 2014. TSMC’s growth in recent years was largely driven by the growing global demand for these mobile IC products.

<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
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<td></td>
<td>21</td>
<td>24</td>
<td>28</td>
<td>31</td>
<td>33</td>
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</table>

Note: Mobile computing related products were recast in 2014

2. Enhancing Human Health and Safety with MEMS (Micro Electro Mechanical Systems)
TSMC-manufactured ICs are widely used in medical treatment and health care applications. Through the Company’s advanced manufacturing technology, more and more IC products are providing major contributions to modern medicine. Customers’ MEMS products are used in a number of advanced medical treatments. MEMS are also widely used in preventative health care, such as early warning systems that limit the number of injuries to the elderly resulting from falls, systems that detect physiology changes, car safety systems and other applications that greatly enhance human health and safety.

7.2.3 Safety and Health

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 and protect employee safety and health as well as Company assets. 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 the lives of employees and contractors if disasters should occur, as well as to minimize 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.
In order to avoid infectious disease epidemics, TSMC has established company-level prevention committees and procedures for emergency response to infectious diseases outbreak.

**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:

- **Hardware Equipment Safety and Health Management**
  In addition to meeting regulatory requirements and internal standards, as well as mitigating ESH-related risks when building or re-building 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 (FOPU) transportation to prevent accumulative damage caused by long-term manual handling of 300mm FOPUs. TSMC 300mm fabs have achieved 99.9% automatic transportation control.

- **Environmental, Safety and Health Evaluation of New Tools and New Chemical Substances**
  TSMC, as a technology leader in the worldwide semiconductor industry, operates many diversified process fabs and manages chemical safety. 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 (FOPU) transportation to prevent accumulative damage caused by long-term manual handling of 300mm FOPUs. TSMC 300mm fabs have achieved 99.9% automatic transportation control.

- **Emergency Response**
  The planning and execution of an effective emergency response requires big-picture thinking, continuous improvement and practice drills. TSMC’s emergency response plans include procedures for rapid response to accidents and disaster recovery as well as establishing response procedures for potential disasters.

- **Employee Health Enhancement**
  Workforce stress and employee health have recently become new topics of concern for the government, society, employers, and employees as areas that require further attention and effort. The TSMC Employee Assistance Program (EAP) provides free individual counseling sessions, group sharing, workshops, and mental assessment, as well as lectures on personal and family issues to take care of employees’ well-being.

- **Contractor Self Evaluation and Management of Health**
  Contractor management, including audits, self-evaluations, and contractor health management, is an essential component of TSMC’s overall safety and health strategy. Contractors performing high-risk work, such as work at heights and at cleanroom ceilings, are required to check workers’ health status for undertaking these high-risk tasks. Those determined to have chronic illness and self-reported symptoms must visit a doctor for physical evaluation and treatment to reduce workplace health and safety risk. A total of 120 contractors completed the self-evaluation and found that 2.9% of workers’ tasks should be adjusted. All contractors at high-risk completed the necessary task adjustment in 2014. This program will be rolled forward to all TSMC Fabs in 2015 for more comprehensive contractor health 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...
contractors working on high-risk engineering projects must lay out clearly defined safety precautions and preventative measures. In addition, performing high-risk activities requires contractors to enhance partnership and ensure continual experience sharing, TSMC collaborates with major suppliers required our suppliers to disclose information on smelters and mines since 2011. We also encourage our suppliers to source minerals from facilities or smelters that have received a “conflict-free” designation by a recognized industry group (such as the EICC) and to require those who haven’t received such designation to become compliant with CSP or an equivalent third-party audit program. It is TSMC’s goal to use tantalum, tin, tungsten and gold in our products that are conflict-free. We will continue to renew our supplier survey annually and require our suppliers to improve and expand their disclosure to fulfill regulatory and customer requirements.

7.3 TSMC Education and Culture Foundation

The TSMC Education and Culture Foundation (TSCF) is led by TSMC Vice Chairman F.C. Tseng, who serves as the Foundation’s Chairman. Established in 1998 to coordinate the Company’s financial sponsorship as part of its efforts in corporate social responsibility, The Foundation devotes its resources towards education, promotion of art and cultural events, community building, and the employee Volunteer Program.

In 2014, the TSMC Foundation contributed over NT$64 million to its long-term projects. A highlight of the year was the grand opening of the Children Arts Center, in cooperation with the TSMC Foundation and the Taipei Fine Arts Museum. The space is the very first collaboration on children arts promotion between the Taipei Government and a private enterprise.

The TSMC Foundation observes the Foundation’s long-term projects have received extensive support from the public. In 2014, the Foundation continued to sponsor The Center for Advanced Science Education at Taiwan University (CASE) to support “TSMC Cup – Competition of Scientific Story Telling.” This year the topic competition included Taiwan social issues first time. The completion not only inspires high school students’ interest for science and strengthens their communication ability; it also cares for the community and society.

The TSMC Foundation also collaborates with the Wu Chien-Shiung Foundation to work on “Lifting the Ability of High School Physics Experiments,” providing professional development for 350 science teachers.

In the humanities, the TSCF Foundation supports “Hope Reading” of the Commonwealth Foundation that donates good books to 30 junior high schools of Taiwan’s remote townships to promote the habit of reading among underprivileged teenagers. The Foundation also continued to hold “the TSMC Youth Literature Award” and “TSMC Youth Calligraphy Contest” to build up a stage for the talented youth.

At the college level, in addition to endowing chair professorships to enhance academic research at Taiwan universities, the TSCF Foundation for the first time sponsored the “Raising Sun Plan” of National Tsing Hua University. To bridge the unbalanced allocation of educational resources caused by the disparity between rich and poor, the plan provides underprivileged students a chance to enter the top-notch university with lower grade limit and scholarships.

Promotion of Arts and Chinese Classics

The TSCF Foundation sees it a long-term mission to promote Chinese Classics. Through presenting lectures, producing broadcasting programs and publishing audio books, the Foundation enables audiences to easily understand traditional Chinese philosophy and wisdom.

Since 2008, the TSCF Foundation has invited Professor Hsin Yih-yun to produce Chinese Classics broadcasting programs on the IC Radio Broadcasting Station. The programs are extremely popular and followed by Chinese audiences all over the world. Following The Analects and Chuang-tzu, this year Professor Hsin introduced Mo-tzu, whose thought was as important as Confucius’ at Chinese Spring and Autumn and Warring States Period. Through Professor Hsin Yih-yun to produce Chinese Classics broadcasting programs and arrangements to narrow the gap of the audience and the speakers and let the audience feel the appeal of the Classics. The Essays and Criticism (Shi Shuo Hsin Yu) Lectures delivered by Professor Hsin were conducted

At the primary-school level, the Foundation emphasizes aesthetics education, and for many years has contributed resources to a variety of children’s art education programs, including the “TSMC Aesthetic Tour” that over the past 12 years has taken more than 80,000 children from remote townships to visit National Palace Museum, Taipei Fine Arts Museum (TFAM) and other fine arts sites. The Taipei Fine Arts Museum (TFAM) recognized the Foundation’s long-term contribution in this aspect. In 2009, TFAM invited TSMC Foundation to join the collaboration of the construction of “the Children’s Art Center”. Through six years of dedicated efforts by architects, the center was inaugurated on the Children’s Festival Day this year.

Located in the basement of Taipei Fine Arts Museum, the Children’s Art Education Center is a learning space dedicated to kids 4 to 12 years old and their families. This “museum within a museum” occupies 2,000 square meters of space, and offers an integrated, comprehensive range of services, including a gallery, an Interactive Area, studios, and an outdoor plaza. The opening exhibition, “The Gift,” and the following exhibition “Get Rhythm with Paul Klee Interactive Exhibit and Workshop Series” received overwhelming positive responses. The Children’s Art Education Center will operate in the name of TSMC Education and Culture Foundation and Taipei Fine Arts Museum for a period of five years to witness to our collaborative achievements.

At the high school level, to enhance teenagers’ full development to knowledge of science and humanity the Foundation supports and organizes scientific camps, contests, and humanity activities. In 2014, the Foundation continued to sponsor The Center for Advanced Science Education at National Taiwan University to hold the competition, “TSMC Cup – Competition of Scientific Story Telling.” This year the “TSMC Cup – Competition of Scientific Story Telling” competition focused on “Food” to echo the Taiwan Food Safety Issues.

The Foundation also supports three science talent camps – Wu Chien-Shiung Science Camp, Wu Ta-Yu Science Camp, and Madame Curie Senior High School Chemistry Camps – to provide talented students with the opportunity to hold discussions with world-class scientists with the goal of inspiring students and helping them realize their potential. “Senior High School Academic Train,” organized by National Tsing-Hua University, invited professors to introduce senior high school students to the latest knowledge of technology and common knowledge for daily life and science. The courses will be held in 12 senior high schools located in northern, central, southern, eastern and Kinmen areas. The TSCF Foundation also collaborates with the Wu Chien-Shiung Foundation to work on “Lifting the Ability of High School Physics Experiments,” providing professional development for 350 science teachers.

The Foundation also held innovative lectures with unique decorations and arrangements to narrow the gap of the audience and the speakers and let the audience feel the appeal of the Classics. The Essays and Criticism (Shi Shuo Hsin Yu) Lectures delivered by Professor Hsin were conducted.
in tea banquets to let participants feel the atmosphere of the oriental salon. The Foundation also invited Professor Li Hon-chi, Emeritus Professor of New York University, to lead the audience into the Renaissance Era in a coffee shop. And noting the importance of preserving historic sites, the Foundation continued to sponsor the Taipei Story House’s Literature Salon, which includes regular author readings on this cultural heritage site.

Community Building by Arts

The Foundation has long played the role of “fine art planter” to spread the seeds of fine art to the community through continuous art activities. At TSMC’s site communities, Hsinchu, Taichung and Tainan, the Foundation annually organizes “Hsinchu Arts Festival” to present a broad spectrum of performances to enrich the communities with arts.

The opening concert of the 2014 Hsinchu Arts Festival was a piano recital by Sir András Schiff, one of the most important pianists in the world, who chose Hsinchu City for his Taiwan debut and whose recital drew attention from classical music lovers across Taiwan. The Festival arranged and recorded a master class for Taiwanese Music Studying Students. After introducing Peking Opera, Kun Opera, Bangzi Opera, Nankan, Liyuan Opera, the Festival invited Tang Mei-yun, the national first class actress of Nankuan, Liyuan Operas, the Festival invited Tang Mei-yun, the national first class actress of the “Hope Reading Program” organized by CommonWealth Foundation also provided information on reading, and ways to reduce carbon emissions to the schools.

TSMC Volunteer Docent Program

To promote science education and enhance people’s understanding of the IC industry, TSMC made a donation to the National Museum of Natural Science in Taichung in 1995 to set up an exhibition hall—the World of the Integrated Circuits. The hall was renovated twice and then replaced entirely in 2011 with “The World of Semiconductor” exhibition hall.

TSMC Volunteer Docent Program was established in 2004 to provide visitors with guided tours. In 2014, a total of 1,147 volunteers with 6,351 dedicated service hours were recorded; the cumulative service hour also reached more than 60,219 hours.

The docents’ enthusiasm and professionalism were highly praised by visitors. The group has continuously been recognized as the “Outstanding Volunteer Team” by the National Museum of Science.

TSMC Book Reading Volunteer Program

To help reduce the disparity of educational resources between rural and urban schools, TSMC Foundation started sponsoring the “Hope Reading Program” organized by CommonWealth Magazine in 2004 with the donation of 20,000 books annually to 200 schools in remote and rural areas.

Following on the early efforts of TSMC Foundation, the TSMC Book Reading Volunteer Program was established in 2005. In 2014, a total of 628 volunteers have devoted 8,576 hours of services to 8 remote schools in Hsinchu, Taichung and Tainan; the cumulative service hour also reached more than 39,045 hours.

TSMC Energy Saving Volunteer Program

Leveraging the expertise of TSMC employees in energy saving, TSMC Energy Saving Volunteer Program was established in 2008 to assist schools needing to reduce electricity telecommunication costs, improve water and air-conditioning consumption, as well as environmental safety. After assessing the facilities, measuring and collecting data, and evaluating power efficiency, the teams proposed energy-saving plans and ways to reduce carbon emissions to the schools.

In 2014, 52 energy saving volunteers devoted 960 hours in Hsinchu, Taichung, Tainan and Penghu areas. Moreover, 2014 also marked the first time for the volunteers to support a large-scale teaching hospital, National Cheng Kung University Hospital, by providing suggestions on electrical safety and energy saving.

TSMC Community Volunteer Program

When Typhoon Morakot struck Southern Taiwan in 2009, TSMC employees, deeply saddened by the suffering it caused, established Typhoon Morakot Project Team in a fast pace. With their seamless teamwork, effectiveness and precision, the team provided timely assistance and relief measures to the typhoon victims.

Typhoon Morakot Project Team was transformed into TSMC Community Volunteer Program in 2010, aimed at reaching out to the ones in need, including both the elderly and the children. The TSMC Community Volunteer Program mainly serves the elderly at Hsinchu Veterans Home and the children at St. Teresa Children Center. In 2014, a total of 375 volunteers participated regularly in activities and were closely connected to the elderly and the children.

One Holiday Volunteer activity was held in July 2014 when TSMC Community Volunteers invited the children they served in the Book Reading Volunteer Program from Hsinchu, Taichung, and Tainan to “Ulpao Land” theme park. With well-designed activities, these children from remote areas spent a wonderful Saturday together.

TSMC Ecology Volunteer Program

The TSMC Ecology Volunteer Program was launched in 2012; in 2014, a total of 472 volunteers have donated their time to the cause of environmental protection. Volunteers were trained as ecology docents to share natural ecology concepts with school children and the public visiting the selected areas. Activities in 2014 included the following:

- Hsinchu F12B ecology park: 181 employees took part and the Company invited more than 300 students and teachers from 12 elementary schools to visit TSMC’s ecology park.
- Taichung F15 ecology park: 107 employees took part and the Company invited more than 150 students and teachers from 5 elementary schools to visit TSMC’s ecology park in Taichung.
- Tainan Jacana ecology education park: 184 employees and their family members were recruited to serve as volunteer docents at the Jacana ecology education park on weekends and holidays.

TSMC Fab/Division Volunteer Program

Employees, on the Fab/Division level, devote themselves to various welfare activities for causes such as environmental protection, promotion of energy conservation, and caring of the disadvantaged, promotion of education, help for farmers and workers, and charitable donation.

- Environmental Protection

In 2014, the volunteers held a charity bazaar by selling water chestnuts from the Guantian Jacana Park and using the earnings to fix and replace telescopes in the park to improve the quality of the eco tours. In Tainan, the volunteers helped reactivate the water purification plant on Monuments Mountain and held cultural and environmental tours to bring new life to the historical site.

- Energy Conservation

Despite severe competition in the technology industry, the Company never forgets to cherish the environment. Seminars concerning energy consumption and power reduction continued to be held in 2014 to share TSMC’s knowledge and technology of the green buildings and energy saving accomplishments. Through these efforts, the Company hopes to root the green power deeply into the minds of other corporations.

- Caring for the Disadvantaged

Beyond employees’ continuous and enthusiastic support to repair and maintain the old houses of people in need, provide daily supplies and necessities, and offer warm companionship, TSMC volunteers find new ways to enrich the lives of children. In 2014, the employees raised used cameras for children living in remote areas, leading them to see the world in a different way through the camera. In addition, meal fees were donated to children of the Kuakus tribe in southern Taiwan, and promotions of their culture of old ballads were conducted. Volunteers also supported Hui Ming School for the Blind and the underprivileged baseball team by giving them the stage and means to perform. Lastly, they also led the girls from St. Francis Xavier Home for Girls to learn skills and developed their interests in handicraft and baking.

- Promotion of Education

In 2014, the volunteers spread the seed of education further to Xi-Wei Elementary School. The volunteers donated new and used books to inspire the children’s interest in reading.
With the interactive platform, TSMC hopes to maintain its commitment to society, and encourages its employees to join efforts to care for and give back to society in all the ways possible.

7.6 Kaohsiung Gas Explosion Project

A series of gas explosions that damaged the city of Kaohsiung on July 31, 2014, caused more than 300 casualties. TSMC Volunteer Society President Ms. Sophie Chang led a group of executives to survey the damage soon after the incident to provide the company with advice for relief projects. Senior executives responsible for corporate social responsibility immediately held a meeting and decided that TSMC would build on its experience in reconstruction projects for Typhoon Morakot, leverage donations from the company and its employees, collaborate with suppliers, and establish a site at the disaster area to support rebuilding.

TSMC’s reconstruction team arrived in the disaster area on August 5 and stayed for 64 days. With timely and seamless support from supporting suppliers, the team has completed 570 meters of sheet piling, 4,383 meters of temporary roads, 695 repairs on 365 homes, 4,732 meters of safety fences, and 5 temporary bridges. This has allowed residents to safely travel to and from the disaster area, return to their reconstructed homes and businesses, and resume normal lives.

Total spending on this reconstruction project was NT$74.65 million. In addition to funds from employees through the “TSMC Charity” platform and donations from the Company, the project was expanded to participation from other companies, attracting more resources to magnify our relief efforts.

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

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7.8 Other information regarding “Corporate Responsibility Report” which are verified by certification bodies:

- “TSMC’s Corporate Social Responsibility Report is in accordance with the GRI G4 guidelines comprehensive option and verified by certification bodies. For further details, please refer to TSMC’s Corporate Social Responsibility Report on pages 102-119 of this Annual Report.

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