Corporate Social Responsibility Policy

Since its establishment, TSMC has not only strived for the highest achievements in its core business of dedicated IC foundry services but has also actively developed positive relationships with all stakeholders including employees, shareholders, customers, suppliers, and society to fulfill its responsibility as a corporate citizen and pursue a sustainable future.

**Guiding Principles**

**Vision**

**Mission**

**Guiding Principles**

Acting with Integrity: TSMC believes in acting ethically, following the law, and balancing the interests of all stakeholders. The Company endeavors to use the experience of developing a sustainable business to drive the industry and supply chain into a positive cycle and to act together with them as an uplifting force in society.

Strengthening Environmental Protection: TSMC strives to achieve environmental sustainability and continues to promote green fabs, green manufacturing, and green supply chains. The Company seeks the most efficient use of energy and resources and is committed to reducing waste and preventing pollution. TSMC is eager to share its environmental experience and expertise and aims to collaborate with government, academia, and all of society to address the challenges of climate change.

Caring for the Disadvantaged: TSMC believes in equality, justice, and a safe and prosperous society. The Company combines its resources with employee volunteer service to commit money, material and labor to the two main areas of ‘education’ and ‘living.’ TSMC hopes to provide underprivileged students in rural regions with diverse learning opportunities and to offer disadvantaged groups necessary aid and emergency relief for the common good of society.

Dr. Mark Liu, Chairman
"TSMC Corporate Social Responsibility Policy" is the top guiding principle for our sustainable development. The "CSR Matrix" set by TSMC’s Founder, Dr. Morris Chang clearly defines the scope of TSMC’s corporate social 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.

<table>
<thead>
<tr>
<th>TSMC</th>
<th>Society</th>
<th>Morality</th>
<th>Business Ethics</th>
<th>Economy</th>
<th>Rule of Law</th>
<th>Sustainability</th>
<th>Work / Life Balance</th>
<th>Happiness</th>
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Corporate Governance

TSMC advocates and acts upon the principles of operational transparency and respect for shareholder rights. We believe that the basis for successful corporate governance is a sound and effective Board of Directors. In line with this principle, the TSMC Board delegates various responsibilities and authority to two Board Committees, the Audit Committee and the Compensation Committee. Each Committee's chairperson regularly reports to the Board on the activities and actions of the relevant committee. The Board of Directors plays the role to oversee and provide guidance to the Company's comprehensive sustainable management strategies. The chairperson of the CSR committee reports annually to the Board of Directors on implementation results for the year and the future work plan.

Governance Structure

Audit Committee
Compensation Committee
Board of Directors
Executive Officers
Internal Audit
Shareholders' Meeting

Ethics and Regulatory Compliance

In order to build an effective compliance system of ethical standards and regulatory compliance initiatives, TSMC established not only the Ethics Code, but also internal policies and procedures in major areas of law. We also track and identify any relevant regulatory changes to ensure that TSMC's internal policies and procedures are effective and up to date. For more details on Ethics and Regulatory Compliance at TSMC, please also refer to TSMC's 2018 Annual Report “Code of Ethics and Business Conduct” and “Regulatory Compliance”.

Risk Management

TSMC established an enterprise risk management (ERM) program to integrate and manage strategic, operational, financial and hazardous risks together with potential consequences to operations and financial results. For more details of Risk Management, please refer to TSMC's 2018 Annual Report “Risk Management”, which includes detailed explanations of the recent computer virus incident and the Fab 14B photoresist material incident. TSMC will continue working on the fundamentals of our business and strengthen our cybersecurity and proprietary information protection.

Board of Directors and Committees Structure

Inheriting the spirit of TSMC's Founder, Dr. Morris Chang's philosophy on corporate governance, under the leadership of Chairman Dr. Mark Liu and CEO & Vice Chairman Dr. C.C. Wei, TSMC's Board of Directors takes a serious and forthright approach to its duties and is a dedicated, competent and independent Board.

Four Board Responsibilities

- Supervise
- Evaluate the management’s performance & appoint and dismiss officers
- Resolve the important, concrete matters
- Provide guidance to the management team

Note 3 In addition to all five Independent Directors, at the meeting of November 13, 2018, TSMC’s Board of Directors appointed Mr. Moshe N. Gavrielov (former Chief Executive Officer of Xilinx, Inc.) as a member of the Compensation Committee.
Corporate Social Responsibility Committee

TSMC has established a corporate social responsibility committee that serves as a cross-department communication and management platform to fulfill its corporate citizenship and social responsibility. The committee connects with international standards, and sets a top-to-bottom operation system with lateral cooperation. The chairperson leads the committee in formulating annual strategies for issues on sustainability, setting mid-term and long-term goals and tracking their results, actively balancing the interests of stakeholders, and driving the positive development of the industry and its supply chain.

**Chairperson appointed CFO as the committee chairperson**

**Functional organizations related to economy, environment, society, and corporate governance propose representatives.**

Quarterly meetings are held to supervise the performances of issues on sustainability, conduct interdepartmental communication, coordination, resource integration, and establish continuous improvement plans.

The Chairperson of the Committee reports to the Board of Directors annually on the results of the current year's performance results and the work plan for the upcoming year.

**The Highest-level Corporate Social Responsibility Management Platform within TSMC**

**Chairperson**

Chairman appointed CFO as the committee chairperson

**Committee Members**

Functional organizations related to economy, environment, society, and corporate governance propose representatives.

**Major Tasks**

Quarterly meetings are held to supervise the performances of issues on sustainability, conduct interdepartmental communication, coordination, resource integration, and establish continuous improvement plans.

The Chairperson of the Committee reports to the Board of Directors annually on the results of the current year's performance results and the work plan for the upcoming year.

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**Main Points of 2018 Chairperson's Report to the Board of Directors**

**Implementation Results for the Year**

- In response to the impacts of climate change, we fulfilled strategies for water resources, waste management, energy and greenhouse gas emissions management, and increased the percentage of renewable energy use.
- Strengthened responsible supply chain management, set the code of conduct for suppliers, held more frequent forums on responsible supply chain, and strengthened the auditing and coaching system for upstream and downstream manufacturers.
- Aligned sustainability targets between TSMC's core business and UN Sustainable Development Goals.
- TSMC Education and Culture Foundation and TSMC Charity Foundation continued to invest resources and volunteer services towards education, art promotion, the disadvantaged, and disaster relief.
- Provided coaching and improved corporate social responsibility management of subsidiaries, related enterprises, and suppliers. At the same time, the Committee led functional units to review major issues and UN Sustainable Development Goals, developed strategies, set medium to long-term goals, and tracked annual performance.
- Continued to drive the upgrading of local supply chains, extended local procurement plans, and established a complete supplier audit and coaching system extending to Tier 2 suppliers to expand the influence of a green supply chain.
- Optimized the efficiency of energy usage, not only purchasing renewable energy, but also promoting circular economy. Cooperated with the government to set up a platform for recycling waste resources, and expanded the effectiveness of TSMC's green management internally and externally.
- Carried out disaster relief and care operations in Hualien, the TSMC Charity Foundation assisted 439 vulnerable victims to rebuild their homes and boost local tourism.
- Responded to global sustainability trends, established an environmental profit and loss assessment model to examine the added value created by TSMC's sustainability initiatives.

**Work Plan for 2019**

- Continue to improve the sustainable performance of green manufacturing, and fulfill long-term goals for 2025.
- Increase the use ratio of renewable energy and alternative energy.
- Promote responsible supply chains, working with upstream and downstream vendors to set and practice long-term energy saving and waste reduction goals.
Words from Committee Members

Sylvia Fang  
Vice President, Legal and General Counsel

"Integrity" is the foundation of TSMC’s sustainable operations, and it also serves as the common code of conduct abided by TSMC’s supply chain. From upstream to downstream, and from internal to external, TSMC and its supply chain partners will act on the core values of “integrity” as we carry out our daily business activities.

J.K. Lin  
Senior Vice President, Information Technology and Materials Management & Risk Management

As a member of the Responsible Business Alliance (RBA), TSMC expresses its gratitude to all its supply chain partners for respecting and following its code of conduct. For our supply chain partners, the Company is also looking forward to extending their influence upwards along the supply chain and building a sustainable and green semiconductor industry together.

J.K. Wang  
Senior Vice President, Operations / Fab Operations

TSMC is an advocate of environmental sustainability and continuously promotes green factories, green manufacturing, and green supply chains in pursuit of optimal energy and resource efficiency. TSMC has also proactively developed waste reduction and pollution prevention technologies. In recent years, TSMC further supported the development of renewable energy, reclaimed water, and circular economy with concrete actions. This wave of green action is TSMC’s unwavering promise to building a sustainable society.

Y.P. Chin  
Senior Vice President, Operations / Product Development

Customers are important partners of TSMC. We strive to build long-term relationships with our customers and serve as a trusted, long-term partner that clients can rely for success.

Connie Ma  
Vice President, Human Resources

Employees are an important asset in keeping TSMC’s competitive advantage. We strive to foster communication and offer an inclusive and friendly workplace for staff members to contribute and grow in the organization.

Jun He  
Senior Director, Quality and Reliability Organization

Quality is a key element in the development TSMC’s sustainable business. The Company is uncompromising in the pursuit of quality. We have made great efforts in strengthening our corporate culture of quality to ensure all colleagues are on the same page. TSMC is devoted to improving the capabilities of its organizations and employees in realizing myriad product applications and supporting clients in winning markets and improving quality.

F.C. Tseng  
Chairman, TSMC Education and Culture Foundation

Education is the cornerstone of a nation, and culture is the soul of a society. TSMC values education and culture, and helps the next generation turn their dreams into reality through diverse education projects led by the TSMC Education and Culture Foundation. TSMC also promotes artistic and cultural exhibitions and performances to bring society one step closer to perfect harmony.

Sophie Chang  
Chairperson, TSMC Charity Foundation

It is undoubtedly meaningful to look back at the actions we took and the paths we once tread when we grow older. It is the biggest joy of charity. I hope the small seeds planted today can one day sprout into kindness and beauty through the warmth and care of society, growing into an even greater influence.
Materiality Analysis and Stakeholder Communication

Corporate sustainability is an important driver of TSMC’s progress. TSMC pondered how core competencies can add value and positive impacts on society. The Company also anticipates sustainable management practices can improve operation efficiency within organizations. Based on this, TSMC identifies important sustainability issues to formulate corresponding strategies and medium-to-long-term goals. The Company encourages colleagues to develop practical improvement plans for continuous advancement and create shared value for the Company and society. By adopting principles of materiality and following GRI Standards and the AA 1000 SES (Stakeholder Engagement Standards, SES), TSMC establishes systematic processes to manage major sustainability issues and objectives, and use materiality to serve as the basis for compiling its corporate social responsibility report.

**Phase 1: Identification**

TSMC uses the AA 1000 SES to identify six major stakeholders with the highest degree of relevance to company operations, regarding them as the main communication parties for the annual CSR report. Based on the overall consideration of stakeholder feedback, international standards and trends, sustainability assessments, and internal business objectives, TSMC identified a total of 20 sustainability issues as the basis for materiality analysis in 2018. General result-oriented issues, such as corporate governance, risk management, stakeholder communication, financial performance and tax, and more, will continue to be disclosed in the Company’s annual report, CSR report, and company website instead of being mapped in the materiality matrix.

**Step 1 Define major stakeholders**

- **6 Major Categories of Stakeholders**
  - TSMC defined major stakeholders as “internal and external groups or individuals who have impacts on or are affected by TSMC.” By that definition, six major categories of stakeholders were identified: shareholders / investors, employees, customers, suppliers / contractors, government, and society (community, academic institutions, media, NGO/NPO, etc.)

- **20 Issues**
  - 20 sustainability issues relevant to TSMC were derived from four major sources: international sustainability standards and regulations (GRI Standards, ISO26000, UN Global Compacts, RBA); sustainable investment institutions (DJSI, CDP, MSCI ESG Index); the Company’s internal development goals and vision; and communication with stakeholders.

**Step 2 Identify sustainability issues**

**703 Valid Samples**

Collecting valid feedback from stakeholders is one of the key elements to determine material issues. TSMC identified key stakeholders within the six major categories of stakeholders based on their interaction with the Company, level of impact, and level of importance to the Company. An online survey was conducted among the key stakeholders on their level of interest in different sustainability issues, and a total of 703 valid samples were collected.

**Step 3 Investigate the level of interest**

**80 Employees**

Taking into account economic, environmental, and social dimensions, TSMC measured the impact of the sustainability issues on the Company’s operations against six factors: innovation/R&D, revenue, cost, customer satisfaction, brand / reputation, and risk. A total of 80 employees were in charge of corporate sustainability, including a senior vice president, vice presidents, and senior directors participated in this process.

**Step 4 Analyze operational impact**

**Step 5 Draft materiality matrix**

Based on the analysis results of Steps 3 and 4, materiality matrix was drafted and reviewed by TSMC’s CSR Committee. After merging 3 issues, the committee identified 9 high impact issues and another 8 as potential issues.
Phase 3: Confirmation

Based on the results of materiality analysis, TSMC's CSR committee decided to consolidate several issues into three broader categories: "labor management relations" was merged under "human rights," "industry localization and upgrading" was merged under "supplier sustainability management," and "employee diversity and equal opportunity" was merged under "talent attraction and retention". Ultimately, 17 sustainability issues were selected to be the core areas of TSMC's 2018 CSR report. Long-term sustainable goals were also established to comprehensively implement sustainable governance. Compared with materiality analysis results from the previous year, the placement of "water management" and "social participation" in the materiality matrix has changed. This is primarily due to the assessment process — as members examined the importance of the two topics to company operations, they agreed that both were less crucial than those in the year before. The 17 areas were next evaluated to determine their impact on TSMC's upstream value chain, company operation, and downstream stages. They were also compared with GRI Standards, where 27 major topics for TSMC were identified. Following the reporting requirements and management approach of each topic, information and other data were collected.

4 Stages of Value Chain

Procurement, wafer fabrication, packaging/testing, and customer usage are the four main stages of TSMC's value chain, which were also used to define the disclosure boundaries for the 17 material issues. The boundaries helped the Company understand the impact of sustainability issues on upstream, operations, and downstream stages.

27 Topics

In response to 17 material issues and 27 specific topics from the GRI standards, and based on reporting requirements and management direction of each topic, we collected and disclosed sustainability information. Other sustainability issues identified by TSMC's CSR committee were disclosed at the same time.

Note 1 Corporate governance, risk management, stakeholder communication, and financial performance were more generally disclosed or result-oriented issues. While they were not mapped on the materiality matrix, information pertaining to these issues will be disclosed in TSMC’s annual report, CSR report, and CSR website.

Note 2 Considering the content and repetition of certain issues, "labor management relations" was merged under "human rights," "industry localization and upgrading," was merged under "supplier sustainability management," and "employee diversity and equal opportunity" was merged under "talent attraction and retention."
## Material Issues and TSMC Value Chain

<table>
<thead>
<tr>
<th>Focuses</th>
<th>Material Issues</th>
<th>Operational Impact</th>
<th>GRI Standards Aspects</th>
<th>Upstream Note 1</th>
<th>TSMC Operations Note 2</th>
<th>Downstream Note 3</th>
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<td><strong>Common Good</strong></td>
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<td>Economic performance, indirect economic impacts, local communities</td>
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Note 1: Upstream Boundaries: materials, equipment and related services procured by TSMC
Note 2: Operation Boundaries: wafer fabrication and packaging / testing provided by TSMC
Note 3: Downstream Boundaries: end products destined for customers provided by TSMC
Listening to Stakeholders

**Employees**

- **65** Labor-management meetings

**Shareholders and Investors**

- **375** Institutional investors
- **229** Conferences and meetings

In addition to offering competitive compensation, the Company also provides a world-class stage where employees can work on the most advanced technologies in the global semiconductor industry. As an engineer of TSMC, I look forward to making contributions to human life and making products that can change the way people live. Compared to other material things, this is by far more valuable.

Hsiu-Jen Lin
TSMC employee
The 2018 winner of Excellent Young Engineers Award, Chinese Institute of Engineers

**Focus Areas**

- To uphold the Company's values, we provide a challenging and enjoyable work environment, foster an open-style management system, and care for employees' interests to become the most appealing employer.
- Communication meetings of all levels / quarterly
- Labor-management meetings / quarterly
- Fab Caring Circle, Employee Opinion Box and Ombudsman System / as needed
- Employee Surveys / annually
- Internal website, email and other announcements, such as posters / as needed

**Issues**

- Prospects for the global integrated circuit industry and long-term competitiveness of the Company
- The leadership style of the management team following the retirement of the founder
- The Company's support measures to accommodate more frequent cross-regional transfers
- Determining the boundary of interest conflicts and implementing interest conflict avoidance and declaration

**Responses from TSMC**

- Managers of all levels shared information about the Company's technology development, industrial position, and related information with employees in all communication meetings.
- The incumbent Chairman and CEO will continue adhering to the Company's shared vision and core values, take the Company's culture seriously, and expect employees to carry them out both in work and life.
- To help employees be open to taking up challenges and grow together with TSMC, the Company has established a sound cross-regional transfer policy with supporting measures, and communicates with employees frequently.
- The concept of conflicts of interest are explained and promoted through ethics and regulatory compliance trainings and company posters.

Andrew McKee
Analyst, First State Stewart Asia

**Shareholders and Investors**

- To help investors understand TSMC's investment value, TSMC communicates with investors its growth strategies, stable profitability, good shareholder returns, and performance in sustainability.
- General shareholders' meeting / annually
- Investor conference / quarterly
- Domestic and overseas broker conference / as needed, face-to-face meetings and telephone conference calls / as needed
- Email / as needed
- Financial and non-financial statements / annually
- Disclosure of material information to market observation post system / as needed

**Focus Areas**

- Impact from the geopolitical situation and the Company's response
- Changes in the competitive environment
- Future growth potential and profitability
- Dividend policy
- Energy policy and response measures to climate change

**Responses from TSMC**

- In 2018, through quarterly investor conferences and 229 investor meetings, TSMC communicated with its investors about market trends, growth strategies, and profitability, and expressed its opinions on changes in the business environment.
- With the support of strong operating performance and future growth potential, TSMC has been providing positive return to investors for 10 consecutive years.
- The Board of Directors also proposed that all shareholders of TSMC common shares will receive a total of NT$10 cash dividend per share in 2019, a 25% increase from that of 2018.
- In 2018, TSMC completed the TSMC Climate Change Statement. It has also purchased renewable energy, participated in the Global Climate Action Summit, and identified climate risks and opportunities within the TCFD framework.
**Customers**

- **33** Customers involved in quarterly assessments
- **111** Quarterly assessment meetings

We have a very good relationship with the TSMC customer services team. Everyone works together to identify and solve problems with excellent interactions between TSMC and ADI.

*Shay Whiston*
Director, Foundry Technology, ADI

---

**Brief**

- Focus on TSMC’s technology development plans, production planning, and the protection of customer information.

**Communication Channels / Frequency**

- Business and technology assessment / quarterly
- Annual customer satisfaction survey / annually
- Customer meetings / as needed

**Issues**

- Technology innovation
- Excellent manufacturing
- Virtual fab
- Hazardous substance management

**Focus Areas**

- Technology development schedules and plans
- Capacity planning and production information
- Information transparency and protection
- Elimination of specific chemicals (e.g. NMP) from manufacturing processes

**Responses from TSMC**

- In line with the technology roadmap, customers were provided with over 700 types of manufacturing and processing technologies.
- Customers were provided with “All-in-One” product manufacturing information.
- In 2018, TSMC applied for safe IC production certifications for certain factories, enabling them to take production orders for high-security products at any time.
- Launched an NMP reduction plan ahead of customer requirements. It is expected to reduce the use of NMP in manufacturing and processing by 70% in 2019.

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**Suppliers / Contractors**

- **313** Suppliers participated in the TSMC Sustainable Supply Chain Forums
- **108** Supplier communication meetings

**Brief**

- Focus on TSMC’s future developments and quality improvements in manufacturing and processing technology, external auditing, and ESH standards, as well as compliance with the code of ethics and business conduct.

**Communication Channels / Frequency**

- Supplier Management Forum, Responsible Supply Chain Forum, Advanced Process Material forum, Supply Chain Environment, Safety, and Health Forum / annually
- On-site consult and audit / as needed
- Supplier ethics promotion / annually
- Supplier self-assessment questionnaire / annually

**Issues**

- Professional ethics
- Product quality
- Waste management

**Focus Areas**

- TSMC’s Code of Ethics and Suppliers Code of Conduct
- Evaluation of TSMC’s internal operation mechanism in selecting suppliers
- Raw material quality standards
- TSMC’s knowledge sharing regarding OSH and waste management practices

**Responses from TSMC**

- In 2018, TSMC established risk assessments for new suppliers, and announced a Code of Ethics and Supplier Code of Conduct to be signed and followed by suppliers. The completion rate of the first stage was 100%. In the first quarter of 2019, suppliers will provide feedback on the guidelines for the Supplier Code of Conduct.
- In 2018, TSMC consulted suppliers to improve production processes and quality. Nine suppliers were consulted, bringing the number of suppliers consulted by TSMC to 29.
- In 2018, suppliers were required to accept sustainable risk auditing by third-party audit firms. 33 suppliers have been audited and the major defect rate has improved to 90.9%.
- In 2018, TSMC held the first Responsible Supply Chain Forum. Suppliers were invited to have face-to-face communications with the Company to understand the current situation and establish goals for energy-efficiency, water conservation, and waste minimization.

*Jerry Lu*
CEO, KANTO-PPC

*Olivier BLACHIER*
President, Air Liquide Far Eastern

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*As a local business, we must move forward towards continuous improvement of production processes to reduce waste. We hope to work with TSMC to create a green production environment!*
Chi-Yuan Liang
Chair Professor, National Central University
Former Chairman, Chung-Hua Institution for Economic Research

Focus Areas

Brief
- Focus on TSMC's patent applications and overall technology, energy and water demands of new fabs, and understand TSMC's promotions and experience sharing on Occupational Safety and Health.

Issues
- Official correspondences and visits / as needed
- Interviews to provide industry experience and advice / as needed
- Conferences (e.g. briefings, public hearings, symposia, seminars, meetups) / as needed
- Communication platforms of the industry associations / monthly

Focus Areas

Brief
- Protection of intellectual property rights
- Energy management
- Water management

Issues
- Development trends of advanced semiconductor technology and the current situation of TSMC technologies
- Additional electricity and renewable energy required to build new fabs
- Additional water, including recycled water required to build new fabs
- Regulations, technology and capacity of waste management
- Improve occupational safety and health management in supply chain

Focus Areas

Brief
- TSMC shared its technology developments and patent strategy with Taiwan Intellectual Property Office and United States Patent and Trademark Office to jointly create a high-quality environment for patent applications.
- Due to the additional need for electricity, a voluntary commitment was made to use renewable energy for 20% of energy demands of the new 3nm fab under the condition that supply is stable and sufficient.
- TSMC cooperated with the government to promote reclaimed water projects. It is estimated that, if it proceeds as planned, the phase one water supply of the Yongkang water regeneration facility will be operational by the end of 2020. On behalf of the Taiwan Semiconductor Industry Association, TSMC set up a waste disposal platform for high-tech industries planned, the phase one water supply of the Yongkang water regeneration facility will be operational by the end of 2020. It is estimated that, if it proceeds as planned, the phase one water supply of the Yongkang water regeneration facility will be operational by the end of 2020. On behalf of the Taiwan Semiconductor Industry Association, TSMC set up a waste disposal platform for high-tech industries

Responses from TSMC

- TSMC published a “Environment, Safety, and Health Guidance for Suppliers Booklet”. It has also held three educational training and experience sharing-sessions, where suppliers were invited to visit and learn from TSMC.


table

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Corporate Social Responsibility Report

Focus 3: Responsible Supply Chain

- TSMC cooperated with the government to promote reclaimed water projects. It is estimated that, if it proceeds as planned, the phase one water supply of the Yongkang water regeneration facility will be operational by the end of 2020.

Focus 4: Green Manufacturing

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Focus 5: Inclusive Workplace

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Focus 6: Common Good

- TSMC cooperated with the government to promote reclaimed water projects. It is estimated that, if it proceeds as planned, the phase one water supply of the Yongkang water regeneration facility will be operational by the end of 2020.
Sustainable Value Creation

TSMC is well aware that as the Company grows, the expansion of business brings us financial stability and success while it also has an impact on society and environment. Through sustainable corporate practices, the Company strives to maximize the net positive impact and minimize the negative impact to gain the trust of stakeholders by showing the Company's relentless efforts in sustainable development.

TSMC's sustainable value management model uses six capitals (finance, manufacturing, intelligence, human resource, environment, and society) as resource investments. It incorporates four core elements (senior management support, junior management involvement, committee of corporate social responsibility, and organization culture) with seven management competencies (corporate ethics management, innovation research management, customer relationship management, supply chain management, environmental management, human resource management, and stakeholder engagement) to fulfill corporate sustainability for three processes of the value chain (upstream procurement, corporate operations, and customer experience).

Sustainable Value Creation

In 2018, TSMC continued to carry out economic and social impact assessments, and developed environmental profit and loss methodologies to complete impact assessments based on the Triple Bottom Line (TBL). By referring to the monetary valuation of environmental impacts and related environmental aspects (ISO 14008), Natural Capital Protocol, and the framework for the IMPACT White Paper, TSMC has developed environmental profit and loss coefficient methodologies with the assistance of academic units. Environmental impact assessments were conducted by the Impact Pathway Approach for all TSMC operation sites around the world through describing the possible environmental externalities of operating activities and their intricate relationships. In addition, since TSMC's main operations are located in Taiwan, in order to truly reflect the local environmental characteristics, the Company has also started to develop localized coefficients applicable to Taiwan for a comprehensive analysis.

Note 2: Environmental profit and loss presented in this section is the monetary assessment of possible external impacts from TSMC's production. For the costs and economic benefits arising from the implementation of environmental protection projects, please refer to "Environmental Cost" in TSMC's 2018 annual report. For the methodologies of environmental profit and loss, please refer to the TSMC 2018 Environmental Profit and Loss (EPL) Report. For past impact-related projects, please refer to the TSMC 2016-2017 Social Impact Valuation Report.

Note 3: Calculation of industrial injury value = industrial injury cost + medical cost + willingness to pay price to avoid occupational injury.

Note 4: Adjusted 2017 industrial injury value to NT$6.5 million (original misquotation of NT$650 million).

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**Finance**
Generate economic value and return by effectively managing financial resources.

**Manufacturing**
Provide products that meet the needs of each client by carefully maintaining equipment and infrastructure manufacturing resources.

**Intelligence**
Strengthen the power of knowledge capital through constant dedication in innovative developments and patents.

**Human Resource**
Create key assets for the Company by recruiting like-minded colleagues and strengthening talent development.

**Environment**
Reduce consumption of natural resources and maintain optimal usage efficiency by managing sources.

**Society**
Give back to society and obtain its trust through community participation.

**Note 1:** The production value of supply chain drivers was estimated by the Industry, Science and Technology International Strategy Center with the 2011 Input-Output Tables (including imports) from the Directorate General of Budget, Accounting and Statistics.

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**Six Main Capitals**

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**Process and Methods**

**Senior Management Support**
The chairman personally participates in the promotion of corporate social responsibilities, inviting senior executives to lead functional organizations to propose sustainable solutions based on the core competencies of TSMC to tackle environmental and social problems and create greater positive influences.

**Committee of Corporate Social Responsibility**
The CSR committee generates sustainable momentum within organizations by holding quarterly meetings focused on cross-functional communication / facilitation, resource integration and monitoring projects’ execution progress and performance.

**Organization Culture**
Foster an organization culture that doesn’t commit easily, but make all efforts to fulfill the commitment when it does. Set long-term goals and periodically review results on key issues that are in line with international sustainability trends and operational needs.

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**Sustainable Value**

**Sustainable Value Creation**

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**Value Chain:**

- Procurement
- TSMC Operations
- Customer Usage

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Responding to UN Sustainable Development Goals

TSMC starts from its core capability and responds proactively to UN Sustainable Development Goals (UN SDGs) to tackle global sustainable development challenges. In 2018, TSMC reviewed its alignment to UN SDGs through three major steps: "Understanding SDGs and Defining Priorities," "Integrating and Setting Goals," and "Reporting and Communicating." We tried to leverage our core advantages and joined hands with upstream and downstream partners to bring change and innovation. In 2019, the Company's Chairman and the Chairperson of the CSR Committee, along with high-level executives from research and development, business development, operations, materials and supply chain management, human resources, the TSMC Education and Culture Foundation, and the TSMC Charity Foundation, will jointly map out a promotion blueprint to connect TSMC's core capability with SDGs in 2019.

**Step One**
Understanding SDGs and Defining Priorities

- **9 items TSMC responds to SDGs**
  - Based on TSMC's core and operational capabilities, SDG 6 (Clean Water and Sanitation), SDG 7 (Affordable Clean Energy), SDG 8 (Decent Work and Economic Growth), SDG 12 (Responsible Consumption and Production), SDG 13 (Climate Action), and SDG 16 (Peace, Justice, and Strong Institutions) are all highly correlated with the Company's business drivers. SDG 1 (Solve Poverty), SDG 3 (Good Health and Well-being), and SDG 4 (Quality Education) are two areas that TSMC's two major Foundations can focus and make meaningful contributions.

**Step Two**
Integrating and Setting Goals

- **7 Newly added Sustainable Development Indicators**
  - In 2018, TSMC adopted guidelines from Business Reporting on the SDGs: An Analysis of the Goals and Targets to learn how to use feasible solutions to achieve the SDGs. We added 7 new sustainable development indicators and set up a long-term goal for 2025 to build concrete plans based on our connections with the SDGs and bring the SDGs into practice.

**Step Three**
Reporting and Communicating

- **25 Sustainable Approaches in Response to SDGs**
  - In 2018, TSMC adopted 25 sustainable approaches in response to the SDGs. The Company will continue to follow the reporting and communicating principles prescribed by the UN SDG Compass, and explore potential opportunities for further application of SDGs in relation to innovative and development abilities of the Company in response to external expectations. At the same time, we continue to make changes and incorporate SDGs into our sustainable DNA, making contributions to society with our long-term goals.
TSMC Material Issues and SDGs

Ethical Management
Fulfill the core value of “integrity,” keeping in mind that corruption and bribery can fundamentally undermine the foundation of corporate sustainability. Our open reporting system allows TSMC’s code of conduct to be deeply rooted in the daily operations of employees and suppliers.

Innovation and Service
Responding to rapid technology changes and global sustainability trends, TSMC introduces new technology applications through innovation, and resolves climate change issues through product and process innovation.

Responsible Supply Chain
As a leader in the semiconductor industry, TSMC aims to increase the dollar value of local purchases through purchasing power, and incorporate corporate sustainability mindset and requirements into supply chain management to uplift the entire supply chain.

Green Manufacturing
Building clean production fabs is a basic responsibility of corporate sustainability. The spirit of responsibility motivates TSMC to build green manufacturing fabs that emphasize dematerialization, decarbonization, and dehazardization across all aspects of our products, processes, and supply chain.

Inclusive Workplace
Employees are the most valuable assets of TSMC. By recruiting, cultivating and retaining the right people with shared vision and values, the Company is committed to building a diverse and encompassing workplace where each and every employee enjoys human rights, skill development, and a safe work environment.

Common Good
Society and Companies are interdependent. Through the TSMC Education and Culture Foundation and the TSMC Charity Foundation, TSMC has been deeply involved in issues such as education, the disadvantaged, elder people living alone, and culture. We aim to send the power of love and influence to society.
Linking SDGs and TSMC's Sustainable Development Goals for 2025

**No Poverty**
Provide various resources for disadvantaged groups
- Goal: Donate at least NT$10 million to disadvantaged groups per year

**Good Health and Well-being**
Improve medical care quality for elderly people living alone
- Goal: Provide service to at least 10,000 elderly people living alone through the Network of Love System

**Quality Education**
Promote filial piety among younger generations
- Goal: Promote filial piety education in 100 education institutions

**Clean Water and Sanitation**
Improve effluent quality
- Goal: Improve wastewater quality with standards stricter than the Effluent Standards

- Increase urban recycled water usage
- Goal: Replace tap water with recycled water for up to 50,000 metric tons per day

- Replace PFDA-related substances
- Goal: 100% compliance for product hazardous substance related regulations and customer requirements

**Affordable and Clean Energy**
Develop more energy-efficient manufacturing processes
- Goal: Reduce power consumption per unit product (kWh / 8-inch wafer equivalent – mask layer) by 12% (base year: 2010)

- Develop energy-efficient equipment with suppliers
- Goal: Accumulate 2,810 GWh of electricity savings for new energy conservation measures

- Promote energy conservation measures with suppliers
- Goal: Coach 30 suppliers to implement factory energy conservation, with accumulated electricity savings no less than 2% of the total electricity consumption of the 2018 base year

- Use renewable energy
- Goal: Purchase renewable energy; gradually reach a target of 20% renewable energy consumption for new fabs at 3nm technology node and beyond, and increase renewable energy purchasing based on its availability in Taiwan

**Decent Work and Economic Growth**
Provide Competitive Compensation
- Goal: Sustain employee's total compensation at top 25% of the industry

- Promote occupational safety
- Goal: Frequency of debilitating injuries <0.41; Severity of debilitating injuries <6

- Establish a sustainable supply chain
- Goal: Require 100% of critical suppliers to conduct annual self-assessment of their upstream suppliers and request them to sign the Suppliers Code of Conduct and Self-Assessment Questionnaire of Sustainability Management

- Support local suppliers
- Goal: 100% of local local suppliers to participate in the National United Circle Competition, with an accumulated 200 suppliers (base year: 2016)

**Responsible Consumption and Production**
Promote reduction of industrial waste output
- Goal: Reduce outsourced waste treatment per unit wafer to 0.30 kg / 8-inch wafer equivalent – mask layer

- Promote fab circular economy
- Goal: Develop electronic-grade materials recycling mechanisms with suppliers

**Climate Action**
Implement adaptation strategies for climate risk
- Goal: Reduce GHG emission per unit of production by 18% from 2010

- Days of manufacturing operations halted by natural disasters: 0 days

**Peace, Justice and Strong Institutions**
Mitigate corruption and bribery
- Goal: 98% of suppliers in compliance with the "TSMC Supplier Code of Conduct"

- Improve sense of ethical management among suppliers
- Goal: 100% completion rate of annual employee training on ethics and regulatory compliance

- Organize supplier emergency response drills for environmental safety management certificates such as ISO 14001, and environmental safety management certificates such as ISO 50001

- Support local suppliers
- Goal: Coach 38 local suppliers to improve manufacturing processes and quality (base year: 2016)

- Enforce quality culture among suppliers
- Goal: 100% of local local suppliers to participate in the National United Circle Competition, with 60% of them entering the final round

© TSMC’s Sustainable Development Goals for 2025
Note: 2020 Goals