# 3.5 SUSTAINABILITY IN GOVERNANCE AND ECONOMIC DIMENSIONS

## 3.5.1 CORPORATE GOVERNANCE

The Board of Directors of KCE Electronics Public Company Limited recognizes the importance of good corporate governance and is committed to developing the organization for sustainable growth by ensuring transparency, accountability, fairness, and respect for laws and ethics.

The Company has implemented a governance policy to ensure operations are conducted according to good corporate governance principles, in compliance with relevant laws, the guidelines of the Stock Exchange of Thailand (SET), and international best practices under the framework of the Organization for Economic Cooperation and Development (OECD). This aims to build confidence among all stakeholders, including shareholders, customers, employees, and the general public.

The Company believes that good corporate governance adds value to shareholders while creating long-term benefits for all stakeholders in a sustainable manner.

### CORPORATE GOVERNANCE POLICY AND ETHICAL STANDARDS

The Company has established a corporate governance policy, business ethics, and a corporate governance manual, which serves as a guide for conducting business based on good governance, transparency, and accountability. This policy is applied as a standard of practice for the board of directors, management, and employees within the Group. It is also communicated to employees to ensure they understand and can apply these principles in their work, creating sustainable value for stakeholders.

The Company regularly reviews the business ethics manual to ensure it is aligned with current risks and circumstances, and adheres to the best practices of the Thai Private Sector Collective Action against Corruption (CAC). The Company continues to operate according to the relevant standards, such as the OECD Principles of Corporate Governance and the Corporate Governance Principles for Listed Companies under the Securities and Exchange Act and the regulations of the Securities and Exchange Commission of Thailand.

The Company has disclosed its corporate governance policies and related policies in both Thai and English on its website, www.kce.co.th, under the "Investors" > "Sustainability" > "Corporate Governance" > "Policies and Procedure"

### MANAGEMENT APPROACH :

- Review corporate governance policies, business ethics, anti-corruption policies, and other related practices.
- Provide training on corporate governance practices and business ethics for executives and employees.
- Ensure regular monitoring and reporting of performance under the supervision of the Board of Directors.

- Disclose financial and operational information transparently.
- Comply with laws and ethical standards at all levels.
- Promote a corporate culture that emphasizes social responsibility.
- Effectively manage risks and internal controls.
- Effectively manage risks and internal controls.

**GOAL :** Zero complaint on business ethics violations

**PERFORMANCE :**

| Indicator | Target for 2024 | Performance of 2024 |
|---|---|---|
| Number of complaints on business ethics violations | 0 Case | 0 Case |
| Number of legal and regulatory violations | 0 Case | 0 Case |
| % of executives and employees trained and certified in business ethics | 100% | 100% |

In 2024, the Board of Directors supervised and ensured that directors, executives, and employees at all levels adhered to the principles of good corporate governance, as well as the ethics and work conduct manual. This was done with consideration for stakeholders in a comprehensive manner, creating value for the business, the environment, and society sustainably. The Company has not engaged in any actions that violate the principles of good corporate governance.

The Company received an evaluation score from the 2024 CG Scorecard, part of the Corporate Governance Report of Thai Listed Companies (CGR), from the Thai Institute of Directors Association (IOD). The Company earned an "Excellent" CG Scoring for the tenth consecutive year, starting from 2014.

Additionally, the Company was evaluated with a perfect score of 100 points for its Annual General Meeting (AGM) Checklist for 2024 by the Thai Investors Association.

**Excellent CG Scoring**

# 3.5.2 ANTI-CORRUPTION

The Company has an Anti-Fraud and Corruption Policy to ensure ethical and transparent business operations in accordance with good governance principles. The Company is a member of the Thai Private Sector Collective Action Against Corruption (CAC), having expressed its commitment to the CAC initiative on November 18, 2013. The Company was first certified as a CAC member on April 3, 2015, and received its fourth consecutive certification renewal on December 30, 2023.

To ensure the Company has sufficient measures to effectively detect and prevent fraud and corruption, the Company has conducted a risk assessment related to fraud within the organization, as well as reviewed the adherence to the policy set out in the Code of Conduct and Ethical Standards. This is communicated to Company employees and stakeholders to ensure alignment in operations across the entire supply chain.

To elevate operational approaches and foster global partnerships for sustainable development, the Company has supported and encouraged domestic business partners to join the Thai Private Sector Collective Action Against Corruption initiative, thereby expanding the network of transparent businesses to partner companies. In 2024, 10 SME partners declared their commitment to the CAC program, which led the Company to receive the CAC Change Agent Award at the CAC National Conference 2024 on December 7, 2024.

## MANAGEMENT APPROACH :

- Establishment of Anti-Fraud and Corruption Policy : The Company has set an Anti-Fraud and Corruption Policy and relevant practices, which can be viewed in detail on the Company's website www.kce.co.th under the Investor Information > Sustainability Development > Corporate Governance > Policies and Procedure.

- Internal Control System and Preventive Measures : A risk assessment of fraud is conducted, with transparent approval and audit systems in place, along with the use of technology and digital systems to reduce opportunities for fraud.

- Auditing and Reporting System : A secure and confidential whistleblowing system is provided, with an established investigation process and disciplinary actions for violations. Regular internal audits are conducted, and reports are disclosed to the Board of Directors.

- Training and Awareness : Employees at all levels are trained on anti-fraud laws and correct practices, fostering awareness of the impact of fraud on both the organization and society.

- Encouraging Participation with Partners: The Company promotes collaboration with business partners to ensure compliance with anti-fraud and corruption policies and practices.

## GOAL :   Zero complaints related to fraud and corruption.

## PERFORMANCE :

| Indicator | Target for 2024 | Performance of 2024 |
|---|---|---|
| Number of complaints related to fraud and corruption | 0 Case | 0 Case |
| % of executives and employees trained on anti-fraud and corruption | 100% | 100% |

## ANTI-CORRUPTION PROGRAMS AND ACTIVITIES IN 2024

**1.** A total of 2,287 employees have completed anti-fraud and corruption training courses, with all employees successfully assessed for their understanding.

**2.** The Company received the CAC Change Agent Award for inviting 10 SME partners to join the CAC initiative to promote transparency and sustainability within the supply chain.

**3.** Thai Laminate Manufacturer Co., Ltd., a subsidiary of the Company, was certified as a CAC member for the first time on September 30, 2024.



**4.** All partners signed an agreement to comply with the Company's anti-fraud and corruption policy.

**5.** The Company organized an online training session in collaboration with CAC, providing knowledge about the Thai Private Sector Collective Action against Corruption (CAC) initiative for its partners. A total of 14 partners received training.

**6.** The Company organized the International Anti-Corruption Day event for the year 2024, with the objective of raising awareness among employees and fostering cooperation in preventing corruption, as well as encouraging the reporting of any observed corruption activities.

# 3.5.3 TAX MANAGEMENT
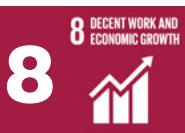
The Group places significant importance on tax management, adhering to the principles of accuracy, completeness, transparency, and accountability to support sustainable business operations. The Group's tax management approach reflects a commitment to transparent tax management and responsibility to society and all stakeholders as follows :

1. Compliance with Laws and Regulations : Ensure complete and accurate compliance with tax laws and regulations, including the optimal utilization of tax benefits to maximize benefits for shareholders and government agencies.

2. Compliance with Laws and Regulations : Ensure complete and accurate compliance with tax laws and regulations, including the optimal utilization of tax benefits to maximize benefits for shareholders and government agencies.

3. Proactive Tax Planning : Study relevant tax laws and regulations both domestically and internationally to assess benefits and impacts. Consult tax experts to ensure compliance with legal conditions without evading the law.

4. Tax Management and Coordination with Government Agencies : Appoint responsible personnel to coordinate with government agencies and provide accurate information during reporting or audits.

5. Tax Disclosure : Disclose the Company's tax payments in the annual report to demonstrate transparency and the intention to comply with tax obligations correctly.

6. Tax Knowledge Development for Personnel : Organize training and provide tax knowledge to relevant personnel to enhance their ability to perform their duties correctly and comprehensively.

# 3.5.4 INFORMATION SECURITY

**17** | 17 PARTNERSHIPS FOR THE GOALS

The Company implements an information technology system across the organization to enhance operational efficiency, accuracy, and convenience. Given the increasing complexity and impact of cyber threats, the Company places the utmost importance on Cyber security. To mitigate potential risks, a Cyber Security policy has been established, incorporating technology tools, processes, and best practices designed to prevent and respond to cyber-attacks targeting IT infrastructure, systems, and applications that could cause harm to the Company by unauthorized entities

## MANAGEMENT APPROACH :

- Establish an Information Security Management System (ISMS) Policy, available at www.kce.co.th under Investor Relations > Sustainability Development > Corporate Governance > Policies and Procedure.
- Implement an information security management system aligned with international standards, such as TISAX (Trusted Information Security Assessment Exchange).
- Define access control measures to prevent data breaches and protect against cyber threats.
- Manage information security risks through regular risk assessments, incident response planning, periodic incident response testing, and the implementation of a Business Continuity Plan (BCP) and Disaster Recovery Plan (DRP) to ensure preparedness for emergencies.
- Conduct cybersecurity awareness training for employees, including regular phishing simulations and other cybersecurity drills.
- Continuously monitor, assess, and improve information security systems to maintain resilience against evolving cyber threats.

## GOAL :   Zero incidents of customer confidential data breaches

## PERFORMANCE :

| Indicator | Target for 2024 | Performance of 2024 |
|---|---|---|
| Number of customer confidential data breach incidents | 0 case | 0 case |
| Number of cybersecurity violation | 0 case | 0 case |
| Number of IT system failures impacting business operations | 0 case | 0 case |
| % of employees trained on information security and cybersecurity awareness | 100% | 100% |

# INFORMATION SECURITY POLICY AND MANAGEMENT MEASURES

## INFORMATION SECURITY / CYBER SECURITY

1. Implemented the Information Security Management System Policy, comprising 14 policies, along with disciplinary actions for policy violations.

2. Conducted training for all employees on ISMS policies, cyber threats, and best practices for prevention, mitigation, and response.

3. Performed Vulnerability Assessments to identify and remediate technical weaknesses in the Company's IT systems, reducing cybersecurity risks and potential impacts.

4. Implemented Two-Factor Authentication (OTP) for remote access to the Company's IT systems via VPN

## ACCESS CONTROL

1. Established a Document Classification Procedure to categorize and safeguard confidential customer and corporate data, including procedures for usage and disposal.

2. Restricted access to sensitive customer data to authorized personnel only, ensuring data transmission is limited to essential business operations.

## CRYPTOGRAPHIC CONTROL

1. Developed a Secure File Portal for transmitting original customer data files, replacing email-based file transfers.

2. Implemented email encryption to protect content from unauthorized access and modifications during transmission, enhancing communication security.

## PHYSICAL AND ENVIRONMENTAL SECURITY

1. Designated Security Control Areas for storing confidential customer and corporate information, with Access Door Control systems to regulate physical entry.

# INFORMATION SECURITY MANAGEMENT SYSTEM

The Company has adopted TISAX (Trusted Information Security Assessment Exchange), a cybersecurity assessment standard developed by the German Association of the Automotive Industry (VDA). TISAX is based on ISO/IEC 27001 and follows the PDCA (Plan-Do-Check-Act) cycle to ensure comprehensive information security management, focusing on :

1. Confidentiality - Ensuring that corporate and customer data is protected and accessible only to authorized personnel.

2. Integrity - Preventing unauthorized modifications to IT systems and ensuring accurate data processing.

3. Availability - Maintaining the readiness of IT infrastructure and data for continuous business operations.

The Company and its subsidiary, KCE Technology Co., Ltd. (KCET), have implemented the TISAX standard and achieved TISAX Level 3 certification, assessed and certified by DQS GmbH, an ENX Association-certified audit provider. This certification enhances customer confidence in co-developing new automotive products with the Company, ensuring sustained business operations. The TISAX certificate is valid from March 22, 2023, to February 17, 2026, covering approximately 70% of the Company's IT infrastructure.

## EMPLOYEE TRAINING ON IT AND CYBERSECURITY AWARENESS

To enhance employees' knowledge and skills in IT security, the Company conducts the following activities :

- Annual Cybersecurity Awareness Training to educate employees on cyber risks, with updates communicated via internal IT systems and notice boards.
- Phishing Simulation Exercises conducted once per year to assess the Company's vulnerability to phishing attacks. Results are recorded and analyzed to refine anti-phishing measures and enhance employee awareness and response strategies.

## CYBER THREAT RESPONSE MEASURES

The Company conducts Business Impact Analysis (BIA) and risk management by implementing a Business Continuity Plan (BCP), which is tested annually to ensure effective incident prevention and recovery. The IT Support Request system provides structured procedures for reporting and addressing IT security incidents through IT Support Request System, Email Support, and Internal Phone Support.

## CYBERSECURITY INITIATIVES AND ACTIVITIES FOR 2024

1. Testing SAP ERP Backup/Recovery at the Disaster Recovery Center (DRC) to ensure emergency preparedness, in line with BCP policies (annual testing).
2. Virus and Cyber Threat Prevention for desktops, notebooks, and servers to enhance overall IT security.
3. KCE IT Infrastructure Penetration Test : In April 2024, the Company engaged cybersecurity experts to conduct an external penetration test on its IT systems. The test identified vulnerabilities, including outdated operating systems (OS) on certain servers and legacy programming weaknesses that allowed unauthorized access attempts. The IT team has addressed all identified vulnerabilities, updated the systems, and conducted a follow-up penetration test in July 2024 to verify the effectiveness of security improvements. These initiatives reinforce the Company's commitment to continuous enhancement of information security and cyber resilience.

# 3.5.5 PERSONAL DATA PROTECTION

**17** — 17 PARTNERSHIPS FOR THE GOALS

The Company recognizes the importance of protecting personal data, which is a fundamental right to privacy, and respects the privacy rights of data owners by preventing loss, unauthorized access, use, alteration, modification, or disclosure of data. In compliance with the Personal Data Protection Act (PDPA) B.E. 2562, effective personal data management not only ensures legal compliance but also builds trust with customers, employees, and business partners. It helps mitigate the risk of legal violations and promotes a positive organizational image.

## MANAGEMENT APPROACH :

- The Company has established a personal data protection policy as a guideline for those responsible for handling personal data to follow correctly and appropriately according to their roles. All personal data collected is considered a valuable asset of the organization, and any violation or misconduct will be penalized. Details of the personal data protection policy for the KCE Group can be found on the Company website at www.kce.co.th under the Investor Relations > Sustainability Development > Corporate Governance > Policies and Procedure.

- Appoint a Data Protection Officer (DPO) and a Personal Data Protection Committee.

- Collection and Use of Personal Data :
  1. Obtaining consent from data owners before collecting, using, or disclosing their data, with clear specification of the purpose.
  2. Data collection is done in accordance with the principles of necessity and proportionality (Data Minimization).
  3. Measures are in place to protect sensitive personal data, in compliance with the PDPA requirements.

- Data Subject Rights are clearly defined and communicated to data owners, including the right to access data (Right to Access), the right to rectify data (Right to Rectification), the right to erase data (Right to Erasure or Right to be Forgotten), the right to withdraw consent (Right to Withdraw Consent), and the right to data portability (Right to Data Portability).

- Data Security Measures are implemented through access control systems, data encryption, firewalls, and systems to monitor access and usage of personal data. There are also measures for managing and notifying when a data breach occurs (Data Breach Notification).

- Training and Awareness : Employees are trained and made aware of the PDPA requirements and the correct procedures to follow.

- Ongoing PDPA Compliance : The Company continuously reviews and improves its PDPA measures, conducting Data Protection Impact Assessments (DPIA) to evaluate the impact of data collection and use. A PDPA Compliance Audit is also carried out periodically to ensure operations comply with the law.

- Handling Complaints : The Company provides channels for employees and/or stakeholders to report personal data violations through email, complaint boxes, or phone. The Company has a process in place to investigate data or complaints and ensure appropriate resolution and remediation for affected individuals. Additionally, complaints are reviewed to improve operations and prevent recurrence.

**GOAL :** Zero personal data breach complaint

**PERFORMANCE :**

| Indicator | Target for 2024 | Performance of 2024 |
| --- | --- | --- |
| Number of Personal Data Breach Complaints | 0 case | 0 case |
| % Employees Trained on Personal Data Protection | 100% | 100% |

**PERSONAL DATA PROTECTION OPERATIONS IN 2024 :**

1. Quarterly Meetings of the Personal Data Protection Committee, held 4 times a year.

2. Training on the Preparation of ROPA (Records of Processing Activities) and the use of ROPA in the electronic system for relevant personnel.

3. Excel Development of a ROPA Guidelines Manual / ROPA Template and integration of ROPA into the electronic system, replacing Excel-based records.

4. Training and Appointment of the Internal Audit Committee for the PDPA system, and conducting audits of the PDPA system.

# 3.5.6 SUPPLY CHAIN MANAGEMENT

**8** DECENT WORK AND ECONOMIC GROWTH

**12** RESPONSIBLE CONSUMPTION AND PRODUCTION

**16** PEACE, JUSTICE AND STRONG INSTITUTIONS

**17** PARTNERSHIPS FOR THE GOALS

Currently, geopolitical tensions, including trade relations between the United States and China, have led to changes in the global supply chain and increased competition. As a result, sustainable supply chain management has become increasingly important. The Company is committed to success by delivering high-quality products and services while simultaneously managing and developing sustainable partnerships. The focus is on maintaining a balance of sustainability across environmental (E), social (S), and governance (G) dimensions. These issues are outlined in the Company's policies, practices, and procurement regulations, which serve as criteria for selecting new suppliers and developing existing ones. Additionally, a Supplier Code of Conduct has been established to inform suppliers and provide guidelines for joint operations.

## MANAGEMENT APPROACH :

■ Establish a Sustainable Procurement Policy that aligns with social and environmental responsibilities, as well as governance aspects, ensuring transparency, fairness, and accountability.

■ Set criteria for selecting and evaluating suppliers based on their responsibility toward Environmental, Social, and Governance (ESG) factors.

■ Define a Supplier Code of Conduct to ensure suppliers comply with labor and environmental standards.

■ Assess risks and establish risk management strategies within the supply chain.

■ Conduct Supplier Audits to ensure compliance with international standards and requirements.

■ Support and promote local procurement and develop local suppliers to strengthen the supply chain.

■ Develop suppliers by providing knowledge and understanding of sustainable business practices based on the principles of environmental responsibility, social responsibility, and governance to collectively pursue sustainability.

■ Establish channels for reporting complaints and whistleblowing in cases of violations of the business code of ethics.

## PERFORMANCE :

### 1 SUPPLIER CODE OF CONDUCT

The Company is committed to conducting business in a responsible and fair manner, giving due consideration to stakeholders throughout the supply chain. To align with the Company's Sustainable Development Policy (ESG Policy) and ensure fairness and transparency in the procurement process, as well as to strengthen relationships with suppliers, the Company has established a Supplier Code of Conduct. This Code mandates that suppliers acknowledge and comply with ethical standards encompassing environmental (E), social (S), and governance (G) issues. Strict adherence to these principles is required to foster shared sustainable growth.

## SUPPLIER CODE OF CONDUCT

| Labor Practices | Environment and Safety | Business Ethics |
|---|---|---|
| Compliance with human rights requirements and respect for human rights, in accordance with internationally recognized ethical standards, such as the prohibition of child labor, labor rights, fair employment practices, and the freedom of association. | Occupational safety and health in the workplace, emergency preparedness, environmental management, energy use, greenhouse gas emissions, waste management, hazardous substances, air quality control, and compliance with laws and regulations regarding prohibited substances | Compliance with laws, integrity, anti-corruption, fair and equal treatment, conflict of interest, protection of confidential information, intellectual property, compliance with laws and regulations regarding imports, and adherence to requirements related to the prohibition or restriction of the use of banned substances, including conflict minerals. |

Additionally, to promote stakeholder engagement both internally and externally in the governance process, the Company provides channels for submitting feedback and reporting violations of laws, regulations, and business ethics through the Company's website and the whistleblower email address at whistleblower@kce.co.th. This includes actions related to human rights violations and child labor within the supply chain. The Company also has a complaint investigation process, along with corrective measures, protection, and fair compensation for damages in cases where harm has occurred.

## TARGET AND PERFORMANCE :

| Indicator | Target | Year 2023 | Year 2024 |
|---|---|---|---|
| Communication of the Supplier Code of Conduct to all suppliers | 100% | 100% | 100% |
| Suppliers signed the Supplier Code of Conduct | 100% | 100% | 100% |
| Number of complaints and whistleblowing on unfair procurement practices | 0 case | 0 case | 0 case |
| Number of complaints related to child labor and forced labor | 0 case | 0 case | 0 case |

## 2  SUPPLY CHAIN MANAGEMENT

The Company is committed to managing its supply chain efficiently, with a focus on sustainable development. To ensure that all suppliers operate based on environmental, social, and governance (ESG) responsibility, the Company has established guidelines and expectations for its suppliers throughout the supply chain. These include the Supplier Code of Conduct, Sustainable Procurement Policy, KCE's Anti-Fraud & Corruption Policy, Conflict Minerals Policy Statement, Agreement on Non-Use of Conflict Minerals, and Supplier Diversity Policy. These policies are designed to ensure transparency, fairness, and the prevention of unfair competition while enhancing the competitiveness of suppliers.

## TARGET AND PERFORMANCE :

- Sustainable Procurement Policy
- Anti-Fraud & Corruption Policy
- Conflict Minerals Policy Statement
- Agreement of Non-Use of Conflict Mineral
- Supplier Diversity Policy

**100%**

In addition, the Company places significant emphasis on enhancing diversity, equality, and the acceptance of differences among its suppliers, including the involvement of women-owned businesses (Supplier Diversity Policy). The Company values equal potential and openness to diverse supplier groups, aiming to create opportunities for entrepreneurs from various groups to have equal chances in business competition. In 2024, the Company had 5 main suppliers that are women-owned businesses.

| Diverse Supplier Group | Year 2023 | Year 2024 |
|---|---|---|
| Women-Owned Business Owners | 2 | 5 |

## 3  SUPPLIER CLASSIFICATION AND RISK ASSESSMENT

The Company maintains an Approved Vendor List (AVL), which includes key suppliers providing critical raw materials for the production process and products. Criteria have been established to categorize the importance of key suppliers listed in the AVL as follows :

- **Critical Tier 1 Suppliers** refer to key suppliers that manufacture and sell raw materials listed in the AVL, with regular transactions and high purchase value, or suppliers that produce and sell raw materials specified by customers.

- **Critical Non-Tier 1 Suppliers** refer to key suppliers that manufacture raw materials listed in the AVL but do not engage in direct business transactions with the Company. Purchases are made through distributors, with regular transactions and high purchase value, or they are manufacturers of raw materials specified by customers.

In 2024, there were a total of 78 key suppliers in the AVL, which were classified into the following categories :

| Supplier Category | Critical Tier 1 Suppliers (Direct Business with the Company) | Critical Non-Tier 1 Suppliers (Indirect Business with the Company) |
|---|---|---|
| Number of Suppliers | 26 | 23 |
| % of Total Suppliers | 33% | 24% |

The Company's sustainability risk assessment of its suppliers is based on ESG criteria outlined in the Supplier Self-Assessment form, which includes the following :

■ Environmental Criteria (E) : Includes environmental management in compliance with laws and environmental standards (ISO 14001), natural resource management, waste reduction, and hazardous substance control in products.

■ Social Criteria (S) : Covers compliance with laws and international human rights principles, freedom of association and recognition of collective bargaining rights, prevention of child and forced labor, fair employment practices, corporate social responsibility, and workplace safety and environmental management.

■ Governance Criteria (G) : Encompasses anti-corruption measures, fair competition, and the protection of personal data and intellectual property.

## TARGET AND PERFORMANCE

100% of key suppliers have undergone an assessment of environmental (E), social (S), and governance (G) risks.

The Company has also established a risk assessment process related to conflict minerals. When selecting new suppliers of raw materials, as well as evaluating existing suppliers engaged in business with the Company in conflict mineral categories (3TG, cobalt, and mica), they are required to complete the standard reporting templates as prescribed by the Responsible Minerals Initiative (RMI). This includes the Conflict Minerals Reporting Template (CMRT) and the Extended Minerals Reporting Template (EMRT), using the most updated versions in accordance with RMI standards. The Company communicates these requirements annually through the Vendor Portal and publishes relevant information on its website (www.kce.co.th) under the Supply Chain section.

**ENVIRONMENTAL (E)**

**100%**
**OF KEY SUPPLIERS**

**SOCIAL (S)**  **GOVERNANCE (G)**

## TARGET AND PERFORMANCE

◎ **TARGET**     ⏱ **PERFORMANCE**

| Suppliers are required to complete the Conflict Minerals Reporting Template (CMRT) and the Extended Minerals Reporting Template (EMRT) | **100%** | **100%** |
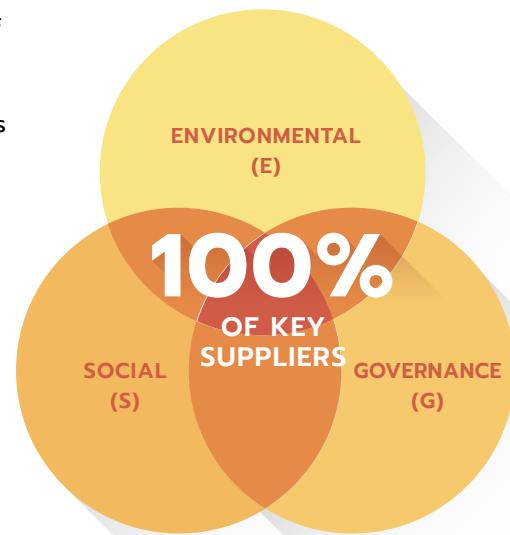
## 4   SELECTION OF ENVIRONMENTALLY RESPONSIBLE SUPPLIERS

The Company expects its suppliers to establish a systematic environmental management approach and to effectively respond and adapt to the impacts of climate change. To foster shared awareness of environmental responsibility and support suppliers in managing their environmental impacts efficiently, the Company has incorporated ISO 14001 Environmental Management System certification as a requirement in its supplier selection criteria.

## TARGET AND PERFORMANCE

ISO 14001 certification of key suppliers in the approved vendor list.

| Supplier Type | Target | Performance | | | |
|---|---|---|---|---|---|
| | | Year 2021 | Year 2022 | Year 2023 | Year 2024 |
| Key Supplier | 100% | 56% | 57% | 58% | 70% |

## 5   SELECTION OF NEW SUPPLIER

The Company has established guidelines for selecting new suppliers and registering key suppliers by verifying credibility information, such as the Company's registration status, financial condition, and initial Company policies. All new suppliers are required to sign a code of conduct agreement and undergo an assessment of environmental, social, and governance (ESG) risks. A Supplier Self-Assessment is conducted, covering the following evaluation areas : quality management, environmental management, social responsibility, and business ethics.

New suppliers who pass the preliminary risk screening must score at least 70% in the self-assessment. In 2024, a total of 6 new suppliers met the evaluation criteria.
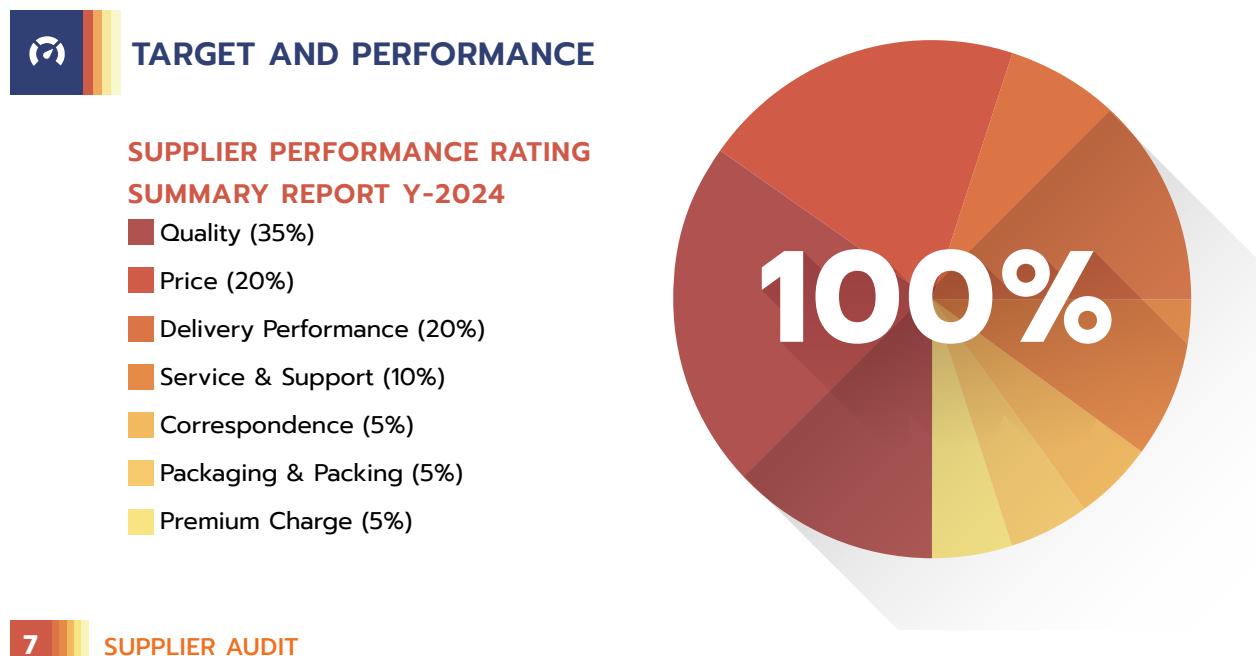
## TARGET AND PERFORMANCE

### 6 NEW KEY SUPPLIERS

- Signed a commitment to adhere to the Company's Supplier Code of Conduct
- Passed the Supplier Self-Assessment criteria

**100%**

## 6   PERFORMANCE EVALUATION OF EXISTING SUPPLIERS

To monitor risks and drive sustainability efforts with all key suppliers in the Approved Vendor List (AVL), the Company conducts quarterly performance evaluations of key suppliers. The evaluation criteria include product quality, pricing, delivery capabilities, after-sales service and technical support, responsiveness and negotiation, packaging and packaging materials, and additional costs outside the agreed terms. If a supplier's evaluation result falls below the threshold of 79%, a corrective action plan must be developed to improve their performance.

Additionally, the Company has established a self-assessment cycle for suppliers (Supplier Self-Assessment), which includes social, environmental, and governance aspects, with reviews conducted every two years.

## TARGET AND PERFORMANCE

### SUPPLIER PERFORMANCE RATING SUMMARY REPORT Y-2024

- Quality (35%)
- Price (20%)
- Delivery Performance (20%)
- Service & Support (10%)
- Correspondence (5%)
- Packaging & Packing (5%)
- Premium Charge (5%)

**100%**

### 7 SUPPLIER AUDIT

Suppliers approved for inclusion in the Company's Approved Vendor List (AVL) must undergo a Supplier Self-Assessment process, which is required every two years to ensure continuous improvement in operational standards. This assessment serves as a key tool for analyzing and evaluating the risks associated with long-term collaboration with suppliers.

Additionally, the Company has established a systematic evaluation process for assessing supplier operations through onsite audits, both domestically and internationally. These audits cover production, quality control, and compliance with environmental and social responsibility requirements. The audits are conducted every three years or when selecting new suppliers, ensuring that production standards and the ability to comply with the Company's requirements are met. The audits also foster strong cooperation between the Company and suppliers, as well as promote supplier development in areas such as production efficiency, product and service quality improvement, and environmental and social responsibility, which are critical for sustainable business operations.

## TARGET AND PERFORMANCE

In 2024, the Company developed a plan to evaluate 25 key suppliers, with the objective that suppliers must achieve at least a B grade in the evaluation. All suppliers passed the assessment criteria.

### KEY DOMESTIC SUPPLIERS: 11 SUPPLIERS.

| Grade A | Grade AB |
|---------|----------|
| 7 Suppliers | 4 Suppliers |

### KEY INTERNATIONAL SUPPLIERS: 14 SUPPLIERS.

| Grade A | Grade AB | Grade B |
|---------|----------|---------|
| 12 Suppliers | 1 Supplier | 1 Supplier |

## 8 | LOCAL SUPPLIER SUPPORT

To promote sustainable development at the local level and reduce reliance on overseas suppliers, the Company is committed to supporting procurement and creating opportunities for local businesses, as well as developing the capabilities of domestic suppliers. This also contributes to sustainability in terms of environmental and social impacts, reducing energy consumption and greenhouse gas emissions from long-distance transportation, minimizing risks related to delayed shipments, and offering advantages in terms of reduced production costs and delivery times.

In 2024, the Company purchased raw materials worth THB 5.6 billion from local suppliers, accounting for 58% of total raw material purchases.

## 9 | SUPPLIER AND PROCUREMENT STAFF CAPABILITY DEVELOPMENT AND TRAINING

The Company emphasizes business continuity and the sustainable growth of the organization by continuously conducting training programs for suppliers and procurement staff. These programs cover procurement processes that consider price, delivery, and qualifications, including environmental (Environmental), social (Social), and economic (Economics) issues. The training helps mitigate social and environmental impacts and engages relevant stakeholders in the supply chain. Furthermore, it promotes transparency between the Company and its suppliers, strengthening collaboration. The training is provided through E-Learning, where participants can study independently via the internet in collaboration with the Stock Exchange of Thailand (SET). Upon successful completion of the training, participants receive a certificate for the respective course.

The training courses for the year 2025 consist of 4 programs as follows

1. Sustainable Supply Chain Management (SSCM)

2. Fundamentals of Business Sustainability (P01)

3. Basic Knowledge of Sustainability (ESG101)

4. ESG Risk Management (ESG Risks) (ESG201)

## TARGET AND PERFORMANCE

| | TARGET | PERFORMANCE |
|---|---|---|
| Participation in Training by Procurement Officers in 2025 | 100% | 100% |

| | TARGET | PERFORMANCE |
|---|---|---|
| Participation of Procurement Staff in Training in 2025 | >50% | 54% |

# 3.5.7 INNOVATION DEVELOPMENT

In the fast-paced and ever-evolving landscape of PCB manufacturing, the Company stands as a beacon of innovation, consistently pushing the boundaries of what is possible. With a steadfast commitment to creativity, adaptability, and forward-thinking, our Company has become a leader in the Thailand PCB industry, setting new standards and redefining the notion of what is achievable.

## MANAGEMENT AND PERFORMANCE RESULTS :

### 1 CULTIVATING A CULTURE OF INNOVATION :

At the heart of the Company's success is its unwavering dedication to fostering a culture of innovation. From the leadership team to every individual contributor, innovation is not just encouraged, it's ingrained in the Company's DNA. Employees are empowered to think outside the box, challenge the status quo, and pursue novel ideas fearlessly.

Regular brainstorming sessions provide a platform for cross-functional collaboration, enabling employees to share diverse perspectives and pool their talents. This collaborative approach ensures that innovation is not confined to a particular department but permeates every aspect of the organization.

| Initiatives | No. of projects Goal 2024 | No. of projects Performance 2024 | Hard Saving (Million Baht/Year) |
|---|---|---|---|
| Six Sigma | 21 | 21 | 11.9 |
| QCC | 35 | 35 | 7.6 |
| Total | 56 | 56 | 19.5 |

### 2 INTEGRATION OF CUTTING-EDGE TECHNOLOGY :

Innovation at the Company is central to maintaining a leadership position in the rapidly evolving Printed Circuit Board (PCB) industry. The Company remains committed to staying at the forefront of technological advancements by consistently investing in research and development. As the PCB industry evolves with new materials, advanced processing methods, and enhanced capabilities, the Company is quick to integrate these innovations into its operations.

■ Inner and Outer Circuit Imaging Process : the Company has fully implemented Laser Direct Imaging (LDI) to replace traditional UV Exposure Imaging. This transition allows the Company to produce higher-density circuits, improve PCB quality with much higher accuracy to achieve today's requirements.

■ Ply up Process : the Company has introduced advanced bonding machines. This upgrade improves layer-to-layer registration, resulting in better PCB registration.

■ Solder Mask Printing : the Company is planning to implement an automatic screen printing machine to replace the current semi-auto process. This automation will reduce handling damage, improve throughput, contributing to overall efficiency in the production line.

■ Solder Mask Exposure : Similar to its work with circuit imaging, the Company has introduced Laser Direct Imaging (LDI) in the solder mask exposure process. The Company has qualified LDI for multiple solder mask inks, further enhancing the quality of its PCBs.



■ The Company is committed to Industry 4.0 smart manufacturing by integration of intelligent digital technologies, including Robotics automation, wireless connectivity, IoT, and data analytics to enhance productivity, efficiency, and flexibility.

■ The Company has introduced AI into defect detection systems for improved yield analysis and has also developed new test methods to ensure long term reliability under extreme environment conditions.

This commitment to staying ahead of the technological curve not only enhances our products and services but also positions KCE as an industry leader, attracting top talent and strategic partnerships.

## 3 | CUSTOMER-CENTRIC INNOVATION

Innovation at the Company is not solely about internal advancements; it's about creating solutions that directly address the evolving needs of our customers. Through rigorous market research, customer feedback channels, and a keen understanding of industry trends, KCE remains agile and responsive to the dynamic demands of the market.

Our customer-centric approach to innovation has led to the development of groundbreaking products such as Semi-flex PCB, that is not only meet but exceed customer expectations. The Company investigates new PCB process technologies such as embedded components and optical waveguides for our customer future products. This commitment to understanding and anticipating customer needs positions KCE as a trusted partner, capable of delivering solutions that not only solve existing challenges but also anticipate future trends.

| Market Sector Application | Technology Driver | Influence on PCB Design | Enabling Technology | Technical Development Roadmap | | | |
|---|---|---|---|---|---|---|---|
| | | | | 2023 | 2024 | 2025 | 2026-2028 |
| Artificial Intelligence (AI) | Interconnect Complexity | Cireuit Density | mSAP & LDI Vacuum Etching | 65 μm | 50 μm | 35 μm | 20 μm |
| 5G Network Telecommunications | Increasing Bandwidth / Datarate | Increasing Layer Count | Advanced Registration System | 18 Layer | 22 Layer | 24 Layer | 30 Layer |
| Internet of Things (IoT) Smart Devices Wearables | Component Package Size | HDI Microvia | Laser Drill Copper Filled holes Thin Core Plating | HDI 4 level stacked microvia | ELIV Every layer Interconnect | SLP Substrate Like Packaging | 3D Printing Flexible Circuit Embedded Components |
| Cloud Computing Data Center Server Farms | High Speed Signa Integrity | Low Permitivity low Loss Materialsr | Plasma Desmear Back Drill | Modified Epoxies | Hydrocarbon PPO/ PPE | Extreme Low Loss Dielectrics | Liquid Crystal Polymer Optical Waveguide |
| Electric Drive Power Systems | High Voltage High Power | Heavy Copper Heat Dissipation | Heat Sink Attach Metal Core Copper Insert | 6 - 12 oz/sqft Heavy Copper IMS & Heat Sink | Press fit Copper Coins | Conductive Resins | Busbar Heat Sink Attach |

## 4 | SUSTAINABILITY, ENVIRONMENT AND SOCIAL RESPONSIBILITY

Innovation at KCE extends beyond products and services; it encompasses a responsibility to the environment and society at large. The Company is committed to sustainable practices and social responsibility, incorporating eco-friendly initiatives, ethical sourcing, and community outreach programs into its operations.

By aligning innovation with sustainability, the Company not only contributes to a better future but also meets the growing demands of environmental and socially conscious consumers. This commitment enhances the Company's reputation, fostering trust and loyalty among customers, partners, and the community.

# PERFORMANCE IN 2024 :

## INNER AND OUTER CIRCUIT IMAGING PROCESS

The Company has fully implemented Laser Direct Imaging (LDI) technology to replace UV Exposure in both the Inner and Outer Circuit Imaging processes. This transition enables the Company to produce higher-density circuits and enhances PCB quality with much higher accuracy.



| ESG Benefits | | |
|---|---|---|
| **Environment** | **Social** | **Economic / Governance** |
| 1. Reduced Chemical Waste : LDI eliminates the need for photo artwork films and artwork chemical developers.<br><br>2. Energy Efficiency : LDI systems consume less energy compared to UV exposure, so the greenhouse gas emission of imaging process is reduced.<br><br>3. Material Efficiency & Waste Reduction : Reduces plastic waste of photo artwork film. Reduces misalignment and defects, minimizing scrap rates | 1. Safer Workplace : Reduces risks associated with handling and disposing of toxic substances.<br><br>2. Skill Development : The use of automated machinery provides employees with opportunities to develop technological skills. | 1. Compliance with ESG Regulations : LDI supports compliance with green manufacturing policies and ISO 14001 environmental standards.<br><br>2. Enhanced Production Accuracy & Quality : LDI improves pattern alignment and resolution, reducing rework and increasing PCB reliability. |

## ADVANCE BONDING FOR PLY UP PROCESS

The Company has introduced advanced bonding machines in Ply up process. This upgrade improves layer-to-layer registration, resulting in better PCB registration.



| ESG Benefits | | |
| --- | --- | --- |
| **Environment** | **Social** | **Economic / Governance** |
| 1. Waste Reduction : Precise alignment and bonding reduce defective, minimizing production waste.<br><br>2. Energy Efficiency : New-generation machines consume less energy than older models. | 1. Safer Workplace : Minimizes human error in the production process.<br><br>2. Skill Development : The use of automated machinery provides employees with opportunities to develop technological skills. | 1. Cost Efficiency & Competitiveness : Reduces material and energy costs, enhancing the company's competitiveness in markets that demand eco-friendly products. |

## AUTOMATIC BALL CLEANING FOR CHILLER SYSTEM

The Company has introduced the ball cleaning for chiller systems. The Ball Cleaning System is a continuous tube-cleaning technology used in chiller systems to maintain heat exchanger efficiency. It utilizes specially designed sponge balls that circulate within the system, removing scale buildup, biofouling, and other contaminants that can reduce heat transfer efficiency.



| ESG Benefits | | |
|---|---|---|
| **Environment** | **Social** | **Economic / Governance** |
| 1. Energy Efficiency : Keeping the tubes clean ensures optimal heat transfer, reducing electricity consumption.<br><br>2. Water & Chemical Reduction : Minimizes the need for chemical-based descaling agents, reducing chemical discharge into the environment.<br><br>3. Lower GHG Emissions : Enhanced energy efficiency leads to lower GHG emissions | 1. Safer Workplace : Reduces maintenance personnel's exposure to hazardous chemicals used in conventional cleaning processes.<br><br>2. Operational Reliability : Prevents system blockages, minimizing the risk of unexpected downtime and improving system performance. | 1. Sustainable Business Practices : Supports eco-friendly technological adoption and compliance with international standards such as ISO 50001 (Energy Management System).<br><br>2. Cost Savings & Competitiveness : Reduces energy, maintenance, and chemical costs, enhancing overall operational efficiency and market competitiveness. |