

# Chapter 2

## Corporate Governance and Operational Performance



### Material topics in this chapter

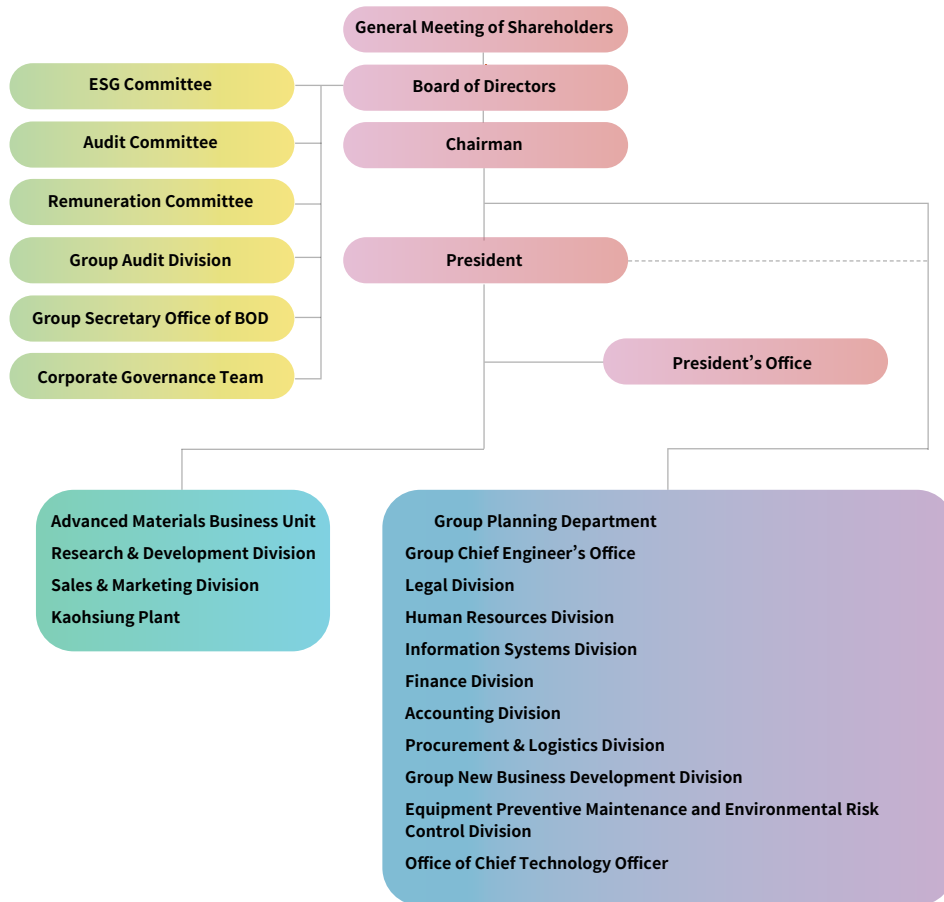
Economic performance

### Performance Highlights

- ✓ Individual revenues: **NT\$15.6 billion**, second highest in USI history.
- ✓ UE4055 annual sales accumulated **5,894MT**, the highest in USI history.
- ✓ **Top 6-20%** at the 9th Corporate Governance Evaluation
- ✓ Same rating by Taiwan Ratings at **twA/twA-1** with a “**steady**” outlook.

## 2.1 Corporate Governance

### USI management organization framework GRI 2-9, 2-11, 2-12, 2-19, 2-23, 2-24



About USI

<https://www.usife.com.tw/en-us/dirAbout/frmAbout>


### Board of Directors

#### Selection and operation of the Board GRI 2-9, 2-10, 2-12

The board of directors (Board) is formed by nine directors with rich experience in each professional field. There are four independent directors, accounting for 44% of all directors. The term of each director is three years, and each director is entitled to a second term. We adopt the candidate nomination system for the directorial (including independent directors) election. The Board along with shareholders holding over one percent of the total issued shares may propose the candidates to add to the List of Candidates for Directors and Independent Directors. After candidate qualification by the Board, the List of Candidates for Directors and Independent Directors is presented at the AGM for shareholders to vote on. In 2022, we held a total of five Board meetings, and the attendance of directors (including independent directors) was 91.11% (or 100% including proxy attendance).

For details regarding Board operation, please refer to (p.31) of the USI Annual Report 2022.



For information regarding the Board Election Regulations, please visit our corporate website at:

[https://www.usife.com.tw/USIWebFiles/Others/USI\\_DirectorElection.pdf](https://www.usife.com.tw/USIWebFiles/Others/USI_DirectorElection.pdf)

#### Current team

June 12, 2020-June 11, 2023

#### Member

Directors:

Quintin Wu (chairman), Jing-sho Yu, Zhe-Yi Gao, Guang-zhe Huang, Pei-Chi Wu (president), Hong-Ting Wu

Independent directors:

Sean Chen, Woody Duh, and Yancey Hai

#### Gender of members

All male

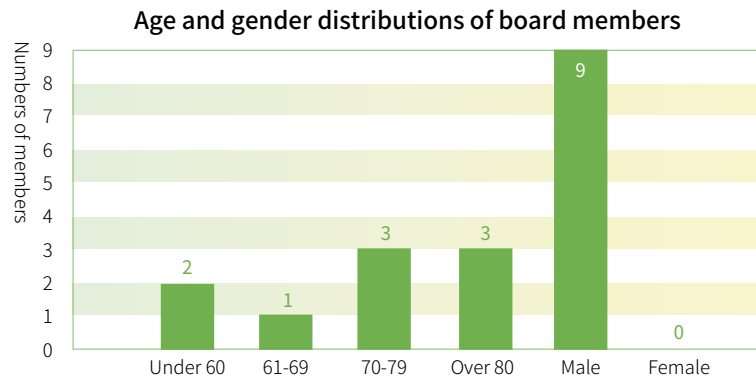
#### Age of members

60 years old and below: 2

70-79 years old: 3

61-69 years old: 1

80 years and older: 3



The chairman convenes and chairs at least one board meeting each quarter (please refer to the [Rules of Procedure of Meetings of Board of Directors](#)). Under the Board there are functional meetings including the Remuneration Committee, Audit Committee, and ESG Committee. Each committee holds committee meetings to report, discuss, and resolve proposals before referring them to the Board for reporting, discussion, and resolution.

Board proposal submission process flow: → Proposal by business responsible units → Report, discussion, and resolution of respective functional committees → Submission to the Board for report, discussion, and resolution. After the meeting, functional committees and the Secretary Office of the Board produce the meeting minutes containing the procedure and resolution of meetings. Additionally, we have established the Secretary Office under the Board to plan and prepare matters relating to the Board meeting so as to enhance the efficiency of board meeting and help implement Board resolutions. [GRI 2-12](#)



Important Board resolutions of 2022 (please visit our [corporate website](#) or refer to our [annual report](#)) [GRI 2-16](#)

## Performance of the board member diversity policy [GRI 2-10](#)

### I. Performance of the board diversity policy

Referring to Article 20 of the [USI Corporate Governance Best Practice Principles](#), the composition of the board of directors shall be determined by taking diversity into consideration and board members shall be equipped with the knowledge, skills, and experience required for performing their duties. To achieve the ideal goal of corporate governance, the board of directors shall possess the following abilities:

- ✓ Ability to make operational judgments
- ✓ Ability to perform accounting and financial analysis
- ✓ Ability to conduct management administration
- ✓ Ability to conduct crisis management
- ✓ Industry background knowledge
- ✓ An international market perspective
- ✓ Ability to lead
- ✓ Ability to make policy decisions

In addition to the above eight professional abilities required for carrying out their duties, and in response to the increasing global concerns about issues relating to corporate governance and environmental protection, four directors are also “legal” and “environmental” specialists, some directors also specialize in risk control and sustainable development to supervise the management team and effectively control operational risks and promote various corporate sustainable development plans.

### II. Targets for management of board diversity

Current directors were elected on June 12, 2020. To introduce external outstanding talents into the Board to achieve board diversity, Director Hung-Lin Wu completed a double major in finance and commercial law at the School of Business, Boston University, USA, and has been the CLO cum CFO of a high-tech company. Specializing in financial risk control, he helps the Board improve proposal deliberation quality and achieve the policy goal of board diversity. In the future, a director with professional experience in sustainability development will be the next target for board diversity. Such experience can help us realize the carbon reduction goal and implement the green power policy. A director specializing in operational risk control is another target to enhance our corporate competitiveness. With such an establishment, the Board functions will be more complete.

### III. Performance in board diversity

Diversity of board members

Name of Directors		Quintin Wu	Jing-sho Yu	Zhe-Yi Gao	Guang-Zhe Huang	Pei-Chi Wu	Hong-Ting Wu	Sean Chen	Woody Duh	Yancey Hai
Diversity of Core Competence	Gender	Male	Male	Male	Male	Male	Male	Male	Male	Male
	Operational judgments	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Accounting finance	✓	✓				✓	✓		✓
	Management administration	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Crisis management	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Industry background knowledge	✓	✓	✓	✓	✓			✓	
	International market	✓				✓				
	Ability to lead	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Ability to make policy decisions	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Law	✓						✓		
	Eco-friendly								✓	✓

\* Currently, 22% of directors are also employees, and 33% of them are independent directors.

\* Regarding age distribution, 3 directors are aged over 80 years old; 3 directors are aged 70-79 years old; 1 director is aged 60-69 years; and 2 directors are under 60 years old.

\* No independent director is in office for over three terms.





## Avoidance of conflicts of interest of directors GRI 2-11, 2-15

For directors to avoid conflicts of interest (including impact on the economy, environment, and people), the Board has established complete systems and measures, including:

### 1 System for avoidance of interest

(1) To ensure positive governance and for the Board to understand matters causing conflicts of interest with the organization so as to protect the rights and interests of investors, we have specified in Article 16 of the Rules of Procedure for Meetings of Board of Directors: "If a director or a legal person that the director represents is an interested party in relation to an agenda item, the director shall state the important aspects of the interested party relationship at the respective meeting. When the relationship is likely to prejudice the interest of this Corporation, that director may not participate in discussion or voting on that agenda item and shall recuse himself or herself from the discussion and the voting on the item and may not exercise voting rights as proxy for another director."

(2) To reinforce disclosures of directors' involvement in proposals or situations having interests in themselves, we have also specified in paragraph 1, Article 17, the Rules of Procedure for Board of Directors Meetings: "Discussions at a board meeting shall be recorded in detail in the meeting minutes, the name of director(s) involving a conflict of interest, an explanation of the important aspects of the relationship of interest, the reasons why the director was required or not required to avoid the conflict of interest."

2 To develop sound corporate governance and independent director systems so that independent directors may demonstrate their functions on the Board and in corporate operations, we have established the "Rules Governing the Scope of Powers of Independent Directors" to stipulate that: "When an independent director expresses objections or reservations about any of the matters, they shall be recorded in the board meeting minutes", "the Company shall not obstruct, refuse, or avoid the actions of independent directors in business execution," and "as they deem necessary for business execution, independent directors may request the board to appoint relevant personnel or may hire by themselves professionals for assistance" to enable independent directors to carry out their duties so as to effectively enhance the efficiency of Board operation and improve the Company's operational performance.

3 Measures for avoidance of conflicts of interest: When discussing a proposal constituting a conflict of interest for one or more directors, the meeting chair shall remind such directors to recuse themselves from the discussion. If the chair should also be recused, she/he shall assign a director having no conflict of interest with the proposal to act as the chair.

4 The secretary unit of the Board has recorded contents involving conflicts of interest with directors in the board meeting minutes in accordance with Article 17, the Rules of Procedure for Meetings of Board of Directors.

5 To address the avoidance of conflicts of interest, the Board has established complete systems and measures (please refer to the Code of Ethical Conduct for Directors and Managerial Officers, Ethical Corporate Management Best Practice Principles, and Procedures for Ethical Management and Guidelines for Conduct).

Our performance in avoidance of conflicts of interest in proposals in 2022:

Name of Directors	Proposal	Reasons for Avoidance	Participation in voting	Remarks
Quintin Wu Sean Chen Ko-shun Wang	Proposal of abolition of non-compete restriction on directors.	Directors recusing themselves from the proposal were also the directors with non-compete restrictions.	Abstained from voting	The 10 <sup>th</sup> meeting of the 20 <sup>th</sup> Board 2022.3.10
Quintin Wu Ko-shun Wang	Donation to the USI Education Foundation	Directors recusing themselves from the proposal were also the directors of the Foundation.	Abstained from voting	
Quintin Wu	Equipment procurement from related parties.	Directors recusing themselves from the proposal were also the directors of those related parties.	Abstained from voting	The 11 <sup>th</sup> meeting of the 20 <sup>th</sup> term of Board 2022.5.5
Quintin Wu Ko-shun Wang	Endorsement or guarantee for subsidiary Chong Loong Trading Co., Ltd.	Endorsement or guarantee for subsidiary Chong Loong Trading Co., Ltd.	Abstained from voting	The 12 <sup>th</sup> meeting of the 20 <sup>th</sup> Board 2022.8.4
Ko-shun Wang	Non-compete behavior of managerial officers	A conflict of interest with directors.	Abstained from voting	The 12 <sup>th</sup> meeting of the 20 <sup>th</sup> Board 2022.8.4
	Personnel change of the general manager	A conflict of interest with directors.	Abstained from voting	The 13 <sup>th</sup> meeting of the 20 <sup>th</sup> term of Board 2022.9.2
Quintin Wu Pei-Chi Wu	Endorsement or guarantee for subsidiary Chong Loong Trading Co., Ltd.	Endorsement or guarantee for subsidiary Chong Loong Trading Co., Ltd.	Abstained from voting	The 14 <sup>th</sup> meeting of the 20 <sup>th</sup> Board 2022.11.3
Pei-Ji Wu	Non-compete behavior of managerial officers.	A conflict of interest with directors.	Abstained from voting	The 14 <sup>th</sup> meeting of the 20 <sup>th</sup> Board 2022.11.3

## Board performance assessment 2022 GRI 2-18

### I. Results of performance evaluation of the Board and directors in 2022

- 1 In accordance with the “Regulations for Performance Evaluation of the Board of Directors” amended and passed by the Board in November 2019, the performance of the Board and directors Self-Evaluation or Peer Evaluation in the year will be evaluated after the end of each fiscal year.
- 2 The Board Secretary Office conducts the performance evaluation of the Board and individual directors by means of self-assessment. The results of performance evaluation will serve as the reference of corporate reviews and improvements and the reference for the remuneration and nomination for election of individual directors.
- 3 The performance evaluation for the period from 1 January 2022 to 31 December 2022. The results of evaluation are consolidated as follows:

#### (1) Overall board performance

Aspects of evaluation	Score*	Results of evaluation and supplementary notes
Participation in the company’s operations.	4.83	1. The results of the overall Board performance evaluation show that the average score of the five major aspects is 4.6, which means “good”. 2. The unstable international situations and the continuation of the Russo-Ukrainian War and pandemic in the last year all affected corporate operations. Facing the uncertain future political and economic conditions, the Board and management should keep close track on the various challenges and risks that the Company faces and supervise all responsible units to propose countermeasures. Additionally, to achieve corporate sustainable development, we will continue to implement carbon reduction and plan green power solutions to meet the international standards.
Improvement of the decision quality of the board of directors.	5	
Composition and structure of the board of directors.	5	
Selection and continuing education of directors.	4.67	
Internal control	5	

\* Score range: 0-5, 5 is the highest.

#### (2) Director performance

Aspects of evaluation	Score*	Results of evaluation and supplementary notes
Corporate targets and mission control	4.93	The results of director self-assessment show that the average score of all six major aspects is over 4.7, which means “good”.
Duty awareness of directors	4.79	
Participation in the company’s operations.	4.75	
Internal relationship development and communication	4.83	
Expertise and continuing education of directors.	4.81	
Internal control	4.85	

\* Score range: 0-5, 5 is the highest.

- 4 The results of 2022 performance evaluation of the overall Board and individual directors were reported to the 2023 Q1 board meeting.

## II. Results of performance evaluation of functional committees in 2022

1 The performance evaluation for the period from 1 January 2022 to 31 December 2022. The results of evaluation are consolidated as follows:

(1) Performance assessment of the Audit Committee

Aspects of evaluation	Score*	Results of evaluation and supplementary notes
Participation in the company's operations.	5	The results of the performance assessment of Audit Committee show that the average score of the five major aspects is 5, which means "excellent".
Duty awareness of the Audit Committee	5	
Improvement of the decision-making quality of the Audit Committee	5	
Composition and member selection of the Audit Committee	5	
Internal control	5	

\* Score range: 0-5, 5 is the highest.

(2) Performance assessment of the Remuneration Committee

Aspects of evaluation	Score*	Results of evaluation and supplementary notes
Participation in the company's operations.	4.75	The results of performance evaluation of the Remuneration Committee show that the average score of all four major aspects is over 4.7, which means "good".
Duty awareness of the Remuneration Committee	5	
Improvement of the decision-making quality of the Remuneration Committee	5	
Composition and member selection of the Remuneration Committee	5	

\* Score range: 0-5, 5 is the highest.

2 The results of 2022 performance evaluation of functional committees were reported to the 2023 Q1 board meeting.

Recommendation and implementation: In view of the increasing global attention to

ESG issues, we have substantively implemented various measures in accordance with the Corporate Governance 3.0 Sustainability Roadmap published by the competent authorities. We have also reported those measures to the ESG Committee meeting and Board meeting to explain to the directors, who have also made valuable suggestions to those measures.

Apart from continuously enhancing corporate governance, we have also planned carbon reduction targets and implemented carbon reduction and planned and implemented green power development strategies to meet the international standards so as to achieve the ultimate goal of corporate sustainable development.

### Professional competence enhancement of directors in 2022 GRI 2-17

To improve the professional competence of directors, we provided information of related further education courses for directors and assisted them with the registration. We arranged a total of six hours of internal continuing education courses, including the 3-hour "Risks on and Opportunities for corporate operations of climate change and the net zero emissions policy" course given by Director Tsai-Yi Wu of Taiwan Research Institute (TRI) on July 14, 2022 and the 3-hour "Takeover and Introduction to the Commercial Case Adjudication Act" course given by Yung-Chin Hsu, attorney-at-law and partner of PwC Legal, on October 13, 2022. In 2022 we arranged 66 hours of external continuing education courses for all directors and independent directors. All 9 directors (including independent directors) completed training for the length (hours) as stipulated in the Directions for the Implementation of Continuing Education for Directors and Supervisors of TWSE Listed and TPEX Listed Companies. Please refer to [p. 36](#) of the USI Annual Report 2022 for the details of the courses and their lengths.

### Chief corporate governance officer (CCGO)

To protect the rights and interests of shareholders and improve the competence of the board of directors, the Board made a resolution on May 13, 2019 to assign Director of Legal Division, Erik Chen to be the Chief Corporate Governance Officer (CCGO) as the top officer of USI's corporate governance. Director Erik has been the chief legal officer (CLO) of a public company for over seven years, with handling the affairs of board meetings and meetings of shareholders as the main duty.

Please visit our corporate website at <https://www.usife.com.tw/zh-tw/dirInvestor/fmInvestor1.aspx> for the details regarding the duties and continuing education in 2022.

## Functional Committees

Under the Board, we have established three functional committees: Audit Committee, Remuneration Committee, and ESG Committee to establish and review policies that relate to the responsibility and authority of each committee in an effort to strengthen corporate governance.

Title	Name	Audit Committee	Remuneration Committee	ESG Committee
Chairman	Quintin Wu	—	—	✓
Director	Pei-Chi Wu	—	—	✓ Deputy Chief
Independent Director	Sean Chen	✓ Convener	✓	—
Independent Director	Woody Duh	✓	✓	✓ Chief
Independent Director	Yancey Hai	✓	✓ Convener	✓

### Audit Committee

- 1 The term of the current committee commenced on June 12, 2020 and will end on June 11, 2023. There are three seats in the committee formed by all independent directors.
- 2 The Audit Committee holds at least one committee meeting each quarter and extraordinary meetings as necessary. Four committee meetings were held in 2022, and the personal attendance rate of members was 92%.

### Remuneration Committee GRI 2-19, 2-20, 2-21

- 1 The term of the current committee commenced on June 15, 2020 and will end on June 11, 2023. All three seats of the committee are taken by independent directors.
- 2 The Remuneration Committee holds at least two committee meetings each year. Three committee meetings were held in 2022, and the personal attendance rate of members was 89%. Please visit our [corporate website](#), refer to our [annual report](#), or visit the Market Observation Post System (MOPS) for the details regarding the operation of this committee.

3 Apart from periodically reviewing the (1) performance evaluation and (2) salary and remuneration policy, system, standard, and structure of directors and managerial officers, the Remuneration Committee also determines and assesses the salary and remuneration of directors and managers with reference to the median earnings in the industry; the duration of engagement, duty, and target accomplishment of each role; the salary and remuneration for the same role; achievement of the Company's short- and long-term sales targets; and the Company's financial condition; and submit the results to the Board for approval.

• **Salary and remuneration:** The remuneration for directors covers remuneration, director profit sharing, and income for professional practice; and the compensation for managerial officers includes the monthly salary, fixed-amount bonuses, year-end bonus, employee profit sharing, annual special bonus, pension contribution and benefit payments by law. The profit sharing for directors and employees are subject to Article 34 of the articles of incorporation.

The total compensation ratio and ratio of the percentage change in total compensation in 2022 were 11.55:1 and 54.86% respectively.

• **Performance evaluation:** The performance evaluation of directors covers the alignment with the corporate goals and missions, awareness of the directorial duties, development and communication of internal relationships, expertise and continuing professional development, and internal controls. The performance evaluation of managerial officers covers the finance (revenues, profits, and net income before tax), customers (customer satisfaction, service quality, and others), products (branding, quality innovation, and others), talents (talents development, potential development, and others), safety and profits (digital transformation, energy conservation and carbon reduction, circular economy, net zero emissions, and others), and medium- and long-term goals for corporate sustainable development.

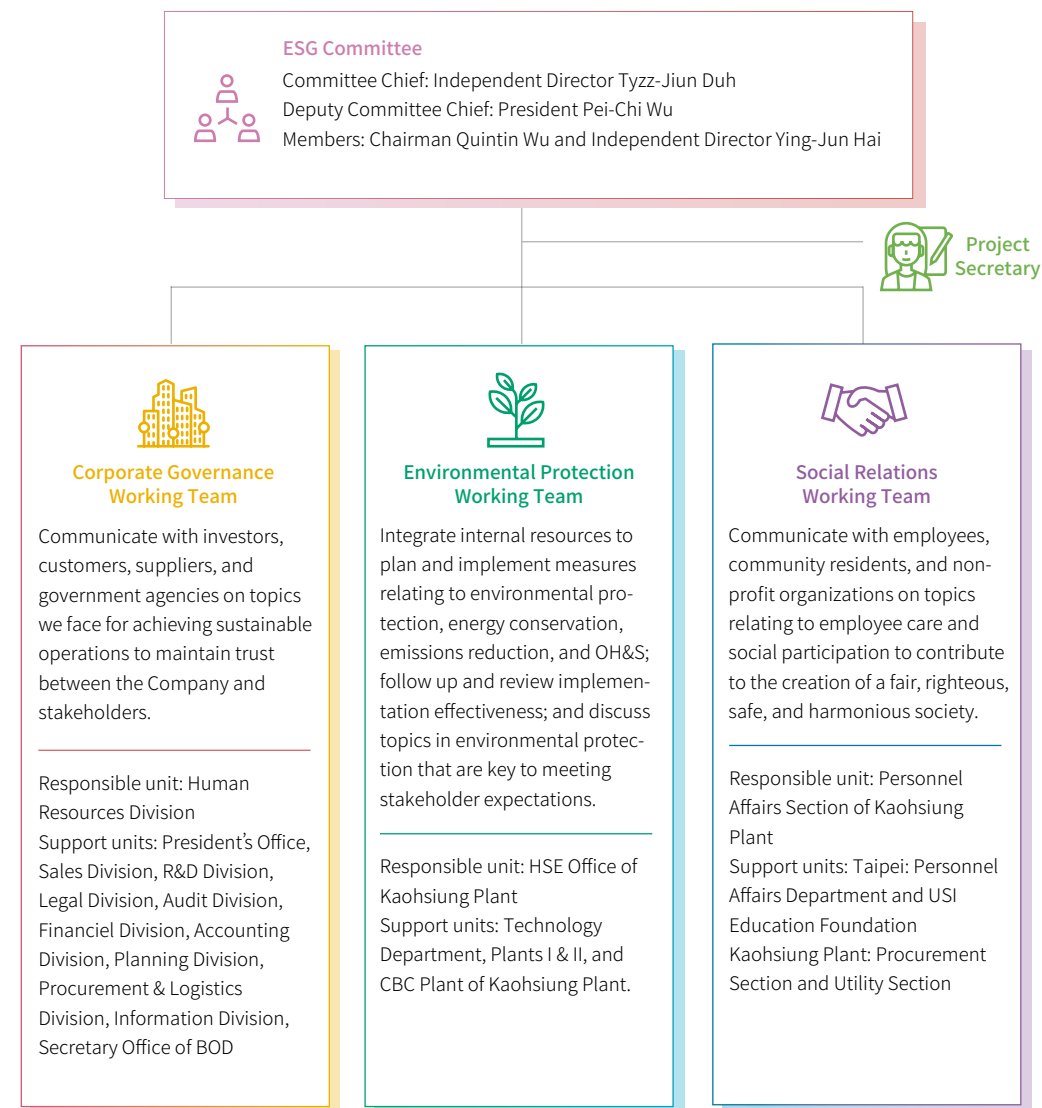
Note 1: Total compensation ratio: The ratio of the total compensation for the organization's highest-paid individual to the median annual total compensation for all employees (excluding the highest-paid individual).

Note 2: Ratio of the percentage change in total compensation: The ratio of the percentage change in the total compensation for the organization's highest-paid individual to the median percentage increase in the total compensation for all employees (excluding the highest-paid individual).



## ESG Committee GRI 2-10, 2-14

- 1 This Committee is formed by the chairman, president and two independent directors selected by the Board. One of them will be the committee chief, with the president being the deputy chief.
- 2 The term of the current committee commenced on June 15, 2020 and will end on June 11, 2023. The four members include Chairman Quintin Wu, President Pei-Chi Wu, Independent Director Woody Duh, and Independent Director Yancey Hai.
- 3 Duties of the committee include:
  - Discussion and establishment of the ESG policy.
  - Discussion and establishment of ESG strategy planning, annual plans, and project plans.
  - Supervision of the implementation of ESG strategy planning, annual plans and project plans, and assessment of their performance.
  - Review of the ESG report.
  - Report of the annual ESG results to the Board every year.
  - Other assignments instructed by the Board.
- 4 The committee holds meetings at least two times each year. Two committee meetings were held in 2022, and the personal attendance rate of members was 100%. Minutes of committee meetings over the years: <https://www.usife.com/ESG/zh-tw/ESG21.aspx>
- 5 The three working groups of the Committee include corporate governance, environmental protection, and social relations as shown below:



Note: General Manager Ko-shun Wang resigned on September 2, 2022. In accordance with the Regulations of ESG Committee Organization, new General Manager Pei-Chi Wu took up this deputy chair post of the ESG Committee.

## ESG Committee Annual Tasks and Next-Year Annual Plan:

### Summary of ESG Performance in 2022 reported to the Board of Directors

- 1 Implemented carbon footprint and water management.
- 2 Awards
  - (1) Won the 2022 “Top 100 Sustainability Exemplary Awards” and “Platinum Award of Corporate Sustainability Report Awards” of Taiwan Corporate Social Responsibility Awards (TCSA)
  - (2) Passed the certification of Taiwan i-Sports certification for 2022.
  - (3) Pipeline 6 of Kaohsiung Plant was awarded the Model Pipeline Award by the Industrial Development Bureau, Ministry of Economic Affairs.
- 3 Included CBC Plant in the ISO 9001 quality management system.
- 4 Published the Chinese and English versions of the 2021 ESG Report in June and August respectively.
- 5 Donated for Forestation Adoption Program Phase II.

### 2023 ESG Work Plan

- 1 Constantly implement the USI 5-Year Operational Plan.
- 2 Seek opportunities for cooperation with external suppliers to promote green power development and carbon neutrality response.
- 3 Continuously participate in sustainability-related ratings.
- 4 Participate in social welfare activities.
- 5 Published the Chinese and English versions of the 2022 ESG Report in June and August respectively.
- 6 Donate to Forestation Adoption Program Phase III.

For information relating to the Board’s sustainability performance supervision, please visit [pp. 70 of the USI Annual Report 2022](#).

## Maintenance and shareholder rights and interests and information transparency

Individuals and foreign corporate and individual investors are the major shareholders of USI. By April 2, 2023, the closing date of stock transfer for the 2023 AGM, the name and stake of shareholders holding over 5% of USI shares and the top ten shareholders of USI are disclosed in our [annual report](#).

We are committed to providing shareholders with transparent and timely corporate information. Apart from providing information to shareholders through four investor conferences, the AGM, MOPS, Investor Relations section of the corporate website, annual report, and ESG report, we constantly collected opinions from shareholders and sent them to the management team for the reference in decision-making in 2022.

Every year, we hold investor conferences and the AGM regularly to state the company’s financial performance and business status. In addition, we post information regarding our business performance, financial information, and material information on TWSE’s MOPS. We have also set up the “Investors” section on our Chinese and English websites to disclose information relating to the company’s governance, business announcements, financial statements, investor conferences, and latest news. We value the rights and interests of foreign investors and the trend of enterprise internationalization. Therefore, since 2018, we began to enhance information disclosures in English in the annual report and on the MOPS and corporate website. Through various methods, we actively develop unfettered channels for two-way communication with shareholders to maintain their rights and interests.

\* In 2022 we increased the chief information security officer (CISO) to fulfill the need for a responsible unit, officer, and staff for the information security.

## Risk Management Organization Framework

For effective risk management, the Board, Audit Committee, President’s Office, Audit Office, all risk management units, and all subsidiaries participate in and operate the risk management mechanism. Please refer to [Risk Management](#)- USI Corporation (usife.com) for the organizational structure

Please refer to [2.3 Risk Management](#), for the policy, process, and performance of risk management

## 2.2 Economic Performance GRI 2-25, 3-3, SDG 8

### Sustainability Principle: Unity Governance

Significance and Strategy	Impact Management	Achievement and Goal	Management
<p style="text-align: center;"><b>Significance to USI</b></p> <hr/> <p>Sustainable business operations, legal compliance, pursuit of profit, maintenance of stakeholder rights and interests, and development of high value-added products.</p> <p style="text-align: center;"><b>Strategy</b></p> <hr/> <p>Vertical integration to reduce feedstock and production costs, increase product added value, and enhance custom product development.</p> <p style="text-align: center;"><b>Commitment</b></p> <hr/> <p>Maintain the rights and interests of shareholders and create profit constantly. Data scope: USI coverage 100%</p>	<p style="text-align: center;"><b>Short-, Medium- &amp; Long-Term Positive/Negative Impacts</b></p> <hr/> <ul style="list-style-type: none"> <li>• Positive actual impact: Develop ESG to raise the investment willingness of investors</li> <li>• Negative potential impact: Customer order transfer due to the plastic reduction policy which limits industry development by regulations.</li> <li>• Short-term positive actual impact: Increased investment willingness of investors due to ESG development.</li> <li>• Short-term negative impact: Excessive capacity.</li> <li>• Medium-term negative impact: Order transfer due to the plastics reduction policy, limited industry development due to legal and regulatory requirements.</li> </ul> <p style="text-align: center;"><b>Impact Boundaries</b></p> <hr/> <p>Global customers and investors, USI employees</p> <p style="text-align: center;"><b>Process to Remediate and Prevent Negative Impacts</b></p> <hr/> <p>Enhance the development of green energy and eco-friendly products and advance industrial transformation</p>	<p style="text-align: center;"><b>2022 Goals</b></p> <hr/> <ol style="list-style-type: none"> <li>1. Commercial operations of the Gulei Integrated Refinery Project</li> <li>2. Completion of the High-Value R&amp;D Center</li> <li>3. Construction of the Kaohsiung Intercontinental Container Terminal Project</li> <li>4. Equipment replacement</li> <li>5. Development of high-value products</li> </ol> <p style="text-align: center;"><b>2022 Achievements</b></p> <hr/> <ol style="list-style-type: none"> <li>1. Developed new products and the low VOC-corrosive heat-shielding coating series.</li> <li>2. EPS NT\$1.45. Individual revenues: NT\$15.6 billion, second highest in USI history. Individual annual net income at NT\$3.47 billion, also the second highest in USI history.</li> </ol> <p style="text-align: center;"><b>2023 Goals</b></p> <hr/> <ol style="list-style-type: none"> <li>1. Commercial operations of the Gulei Integrated Refinery Project</li> <li>2. Construction of the Kaohsiung Intercontinental Container Terminal Project</li> <li>3. Development of high-value products and markets.</li> <li>4. Promotion of eco-friendly products</li> </ol> <p style="text-align: center;"><b>Medium- &amp; Long-Term Goals</b></p> <hr/> <ol style="list-style-type: none"> <li>1. Completion and operation of the Kaohsiung Intercontinental Container Terminal</li> <li>2. Large equipment replacement</li> <li>3. New product development</li> <li>4. Planning of and investment in the downstream development projects of the Gulei Integrated Refinery Project.</li> </ol>	<p style="text-align: center;"><b>Effectiveness Assessment</b></p> <hr/> <ol style="list-style-type: none"> <li>1. Annual report</li> <li>2. Governance evaluation</li> <li>3. ESG Report</li> </ol> <p style="text-align: center;"><b>Grievance Mechanism</b></p> <hr/> <ul style="list-style-type: none"> <li>• Meetings of shareholders</li> <li>• “Investor Service” on the corporate website</li> <li>• Investor conferences</li> </ul> <p style="text-align: center;"><b>Chapter Summary</b></p> <hr/> <ol style="list-style-type: none"> <li>1. Financial performance</li> <li>2. Major investments</li> </ol>

\* Short-term: 1-2 years; medium-term: 3-5 years, and long-term: over 5 years. They apply to the impact of materials issues throughout the report.

The 2022 EPS was NT\$1.45. The war between Russia and Ukraine at the beginning of the year, and the oil price surging past US\$100 per barrel around the world also padded the cost of raw materials. The continuing spread of the pandemic slowed down the global economic recovery, and the Federal Reserve Board of the US resolved to have large rate hikes, which further induced global recession concerns. Benefiting from the green economy, the demand for EVA for solar power was strong at the beginning of the year, which pushed up the EVA price. The price reached the highest point in May. Due to the subsequent surge in the price of raw materials, module manufacturers had weaker demand, which in turn affected the demand for packaging films. After shoe manufacturers also had lower demand, the price of EVA in the market had a downturn in June. The price stopped falling in September, but it did not have a significant rebound. The price again went down in October, before stabilizing in December. The annual EVA sales reduced by 14% over the last year to 126,000MT. As HDPE is mainly sold for domestic consumption, COVID-19 significantly reduced the 2022 demand, reducing sales by 22% over the last year to 81,000MT. In production, the rupture of the TO furnace

tube caused the one-month production shutdown in the year, and the annual EVA/PE production thus reduced by 17% over the last year to 207,000MT. In renewables development, the accumulated on-grid capacity from solar power projects has reached 5.9 MW to generate about 7.3 GWh of green power and reduce carbon emissions by about 3,700 tCO<sub>2</sub>e each year, achieving the goals for corporate sustainable development and carbon reduction. In terms of research and development, we have continued to optimize the production process of optical-grade cyclic block copolymers to improve the quality and performance of raw materials, and develop new specifications with high heat resistance to target electronic applications and other applications with high heat resistance requirements. We continued to expand production applications in ink, shoe styrene, and electrical wires/cables for high value-added EVA products. The production of high MI HDPE materials was stabilized, and sales and shipment of products for use in injection molding continued. We also made continual process improvement of existing PE products for quality improvement to promote products to optical application market.

**USI Financial Performance 2020-2022** GRI 201-1

(Unit: NTD thousands)

Item	Basic Element	2020		2021		2022	
Direct economic value	Revenue (Note 1)	10,172,220		16,034,251		15,632,151	
Distributed economic value	Operating cost (Note 2)	9,263,780		12,512,341		12,163,445	
	Employee wages and benefits (Note 3)	665,430		864,134		753,360	
	Payment to investors (Note 4)	2020 cash dividends distributed in 2021	1,188,763	2021 cash dividends distributed in 2022	2,615,280	The 2022 cash dividend to be distributed in 2023 as approved by the Board.	
		Interest expense	105,041	Interest expense	94,746	Interest expense	73,666
	Payment to the government expense (Note 5)	133,648		156,246		739,262	
	Investments in community (Note 6)	3,623		4,000		5,000	
Residual economic value (Note 7)	2,409,778		5,191,394		1,555,097		

Note 1: Revenue refers to sales income.

Note 2: Operating cost refers to sales cost + operating expenses

Note 3: Employee wages and benefits are included in the said operating cost.

Note 4: Interest expense is included in the said operating cost.

Note 5: Payment to the government refers to the business income tax.

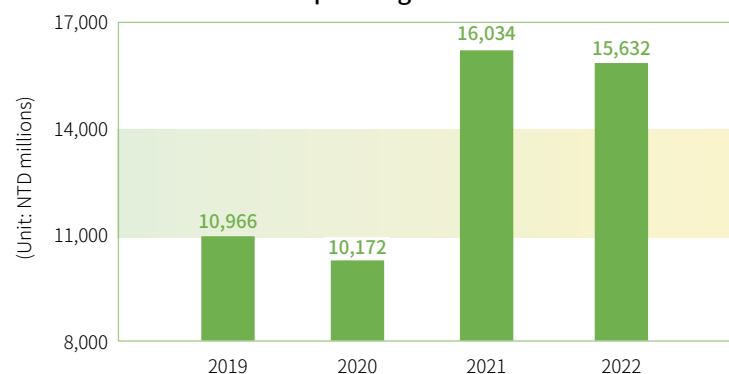
Note 6: Investments in community include contributions to local communities and donations to USI Education Foundation. Both are included in the said operating cost.

Note 7: Residual economic value refers to net income after tax.

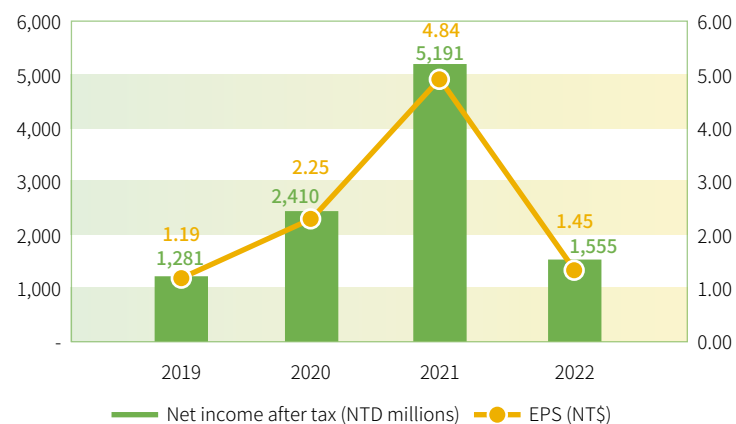
## Profit distribution

In 2022, the revenue was NT\$15.63 billion, income tax (excluding estimates) was NT\$739 million, accounting for 4.73% of the individual revenue, distributable earnings were NT\$1.48 billion, and estimated cash dividend was NT\$0.7 per share. This profit distribution was approved by the AGM on May 31, 2023.

### Operating revenues



### Net income after tax



Dividend distribution over the years:  
<https://www.usife.com.tw/zh-tw/dirInvestor/frmlInvestor4.aspx>



Financial statements over the years:  
<https://www.usife.com/en-us/dirInvestor/frmlInvestor2>



## Innovative Operations and Management

Each year we invest a huge fund in R&D and actively recruit and cultivate professional talents. The R&D investments in 2021 and 2022 were NT\$150 million and NT\$160 million respectively. In 2022, the High-Value R&D Center in Kaohsiung was completed, with an investment of NT\$170 million. It provides services including process and product optimization, material quality and property improvement, added value and production efficiency enhancement, and energy consumption reduction. In 2022 we also invested another NT\$150 million in R&D.

The revenue proportion of new products in recent years accounted for 9.2%.





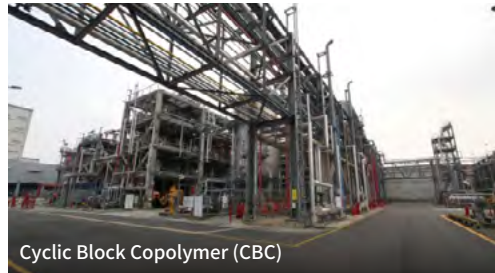
## Major Investments

### Local Major Investments

#### 1 Cyclic Block Copolymer (CBC)

This CBC project can be considered as one of the blueprint items for high-value petrochemical industry promotion and is the first “Process Scale-Up Project to Shorten Gaps in the Supply Chain for Key Chemicals” approved by the Industrial Development Bureau, Ministry of Economic Affairs. After acquiring CBC-related patented technologies in 2011, we have been implementing at full steam the CBC and other relevant projects in order to lead Taiwan’s petrochemical industry to transform toward a high-value petrochemical industry through collaboration among industry, government, academe and research.

The High-Value R&D Center, with an investment of NT\$170 million, started operations in 2022 Q3. So far, it can facilitate and support the process and product optimization of a trial mass production factory and product development of CBC and provides services including process and product optimization, materials quality and property improvement, added value and production efficiency enhancement, and reduction of energy consumption.



Cyclic Block Copolymer (CBC)



HV R&amp;D Center

#### 2 Ethylene Storage Tank Project of Kaohsiung Intercontinental Container Terminal

To increase the import sources of ethylene raw materials to secure sufficient supply, enhance future competitiveness, and ensure sustainable development, we built a new plant for the CGTD Kaohsiung Plant at the Petrochemical Oil Product Center in Kaohsiung Intercontinental Container S14 Terminal phase II with a total investment of NT\$5.221 billion. The project period is 2017-2024.

With an investment of NT\$906 million, the construction of the CGTD Kaohsiung Plant at the Petrochemical Oil Product Center in Kaohsiung Intercontinental Container S14 Terminal phase II started on July 31, 2019. It will be an ethylene storage tank of 80,000m<sup>3</sup> and auxiliary system. The construction is in progress.



Kaohsiung Intercontinental Container Phase II Plant



Ethylene storage zone

#### 3 Investment in Equipment Improvement of the Kaohsiung Plant

USI constantly improves various production processes and HSE equipment. In 2021, we invested in about NT\$617 million. In 2022, we invested in about 418 million.

The estimated total investment in 2023 will be NT\$166 million. to constantly engage in various energy conservation, carbon reduction, and new product development projects to improve product quality and increase custom products.



Invested  
**NT\$1.201**  
billion  
2021-2023

##### Enhance efficiency reliability

- DCS renewal and switch project
- Plastic packaging system renewal
- Motor maintenance/renewal
- MV/HV distributor renewal

##### Enhance efficiency quality

- Purification Catalytic System Replacement
- New catalytic system
- Filter automatic replacement system
- Foreign particles inspection machine

##### Pollution Prevention

- Construction of the thermal oxidizer (TO)
- Installation of material loading arm
- Compressor cylinder renewal
- Control valve replacement

##### Save energy and water

- Improvement of Steam
- Condensate Recovery
- Wastewater Tank Improvement

##### Electricity Saving

- Inverter Motor/High-Efficient Motor
- Freezer/Chiller Replacement/Nitrogen
- Compressor Replacement
- Process Exhaust Recovery
- Process condition adjustment

## Major Overseas Investments

### 1 Gulei Project

#### Investment objective

Many changes have emerged in the global petrochemical industry in recent years. They included the rise of the petrochemical industry in emerging regions and shale oil mining in North America, which have brought not only huge impacts to the energy structure and petrochemical material supply but also significant changes to development of the petrochemical industry across the Taiwan Strait.

To get prepared for future trends and challenges, petrochemical companies of Taiwan and China co-established the Gulei Integrated Refinery Project to achieve the vertical integration of the mid- and down-stream products.

#### Investment Item

The project engages in the production and sales of petrochemical products including ethylene, propylene and butadiene, EVA, ethylene oxide (EO), and ethylene glycol (EG).

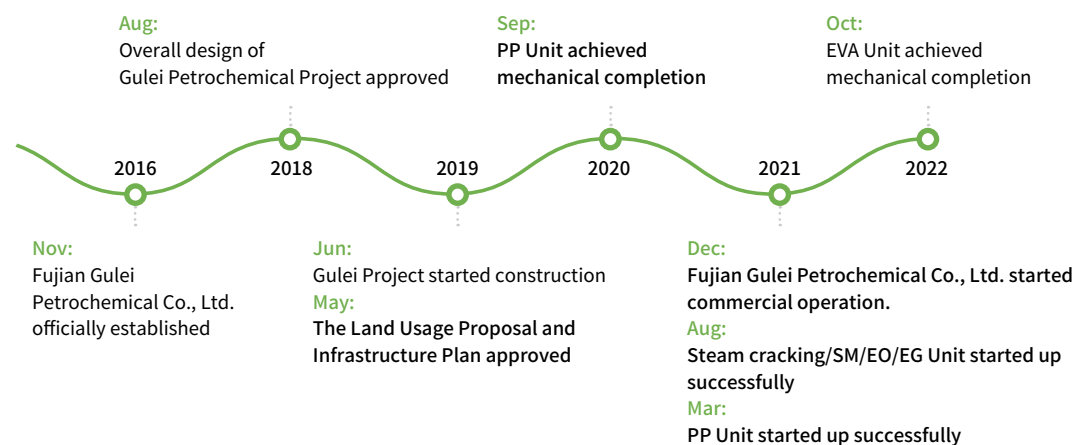
#### Investment amount and efficiency

- After the approval of the relevant competent authorities, re-investment in the Gulei Port Economic Development Zone Project in Zhangzhou, Fujian Province, mainland China, was made through a third region with a maximum amount of NT\$8 billion.
- In the future, the project will stabilize upstream material supplies, vertically integrate steam cracking, petrochemical intermediate materials, and plastic products, reduce transportation costs, and enhance competitive niche to facilitate deployment in the Greater China market and sales competition in the international market.

## Progress of Investment Items

- The steam cracker is the core processing unit, and hot commissioning was completed smoothly in August 2021.
- The first shipment of ethylene monomers from Gulei Petrochemical was already sold to Taiwan in November 2021.
- Fujian Gulei Petrochemical Co., Ltd. started commercial operations in December 2021.
- Eva item of the Gulei Project achieved mechanical completion in October 2022.

## Project Milestones



Panorama of the Gulei Integrated Refinery Project



Aerial view of the steam cracking unit



Mid-term handover of EVA equipment



Panorama of the EVA facility

## 2.3 Risk Management GRI 2-13

Based on ethical corporate management, we actively promote and implement the risk management mechanism to ensure steady operations and sustainable development and lower potential operational risk. In 2020, the Board approved the establishment of the "Risk Management Policy and SOP." Accordingly, the President's Office will supervise the operation and performance of each risk management unit and periodically assess risk every year.

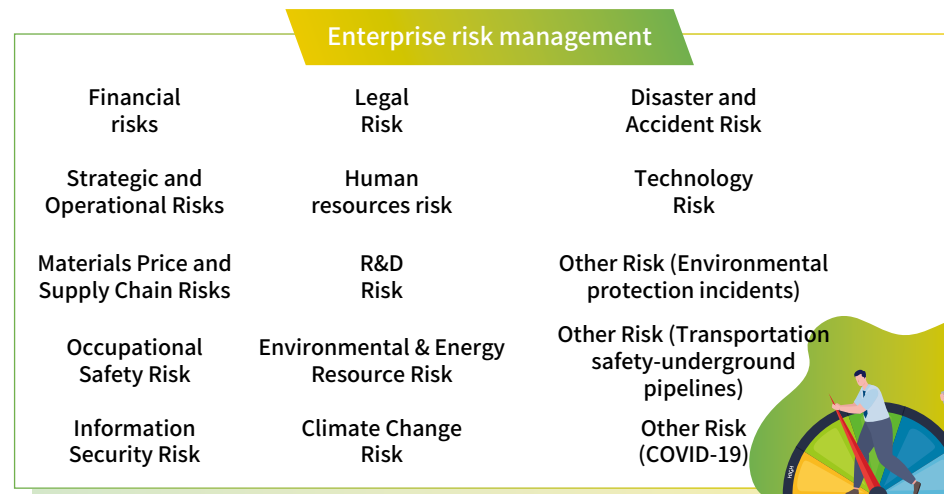
The complete policy includes the risk management organization, risk management process, and risk management category and mechanism. Please refer to [Risk Management-USI Corporation \(usife.com\)](https://www.usife.com) for details.

### Scope of Risk Management

After integrating the major risk sources of business operations and considering the feasibility of operation, we establish the risk categories and periodically identify the likelihood of occurrence of risks and the significance of their impacts, and each risk management unit periodically adjusts the controls with respect to the changes in the internal (external) operational environment

**Risk Management Matrix**

High ↑ Impact Level ↓ Low	Financial Risk Occupational Safety Risk	Strategic and Operational Risks	Materials Price and Supply Chain Risks
	Information Security Risk Legal Risk Human Resource Risk R&D Risk Disaster and Accident Risk	Environmental & Energy Resource Risk Climate Change Risk	
	Technology Risk Other Risks (Environmental protection incidents) Other Risks (Transportation safety-underground pipelines)	Other Risks (COVID-19)	
	Low	Likelihood	High



### Operation of Risk Management

In November 2022, the president reported to the Audit Committee and the Board the risks that USI was facing, mitigating controls, and performance of risk management.

Please refer to the [Risk Management](#) in the ESG section on the USI website for details.

Please refer to [4.5 Climate Change and Energy Management](#) for the financial impacts of climate-related opportunities and risks.

## Cybersecurity management

### Strategy and framework of cybersecurity risk management

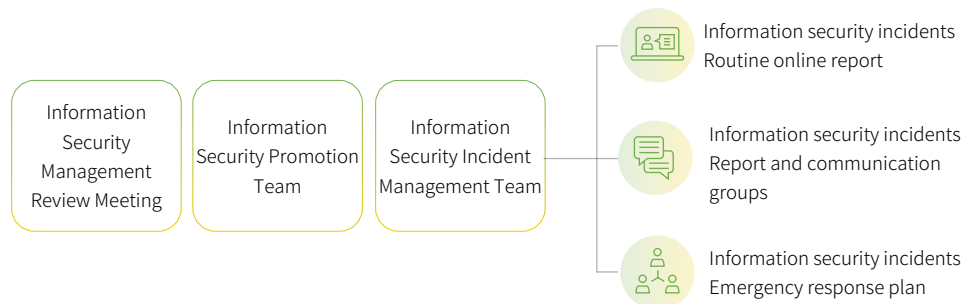
#### 1 Framework of cybersecurity risk management

##### (1) Organization of information security governance

Each year we hold the information security management review meeting to judge the six review inputs (the status of actions from previous management reviews, changes in external and internal issues that are relevant to the information security management system, feedback on the information security performance, results of risk assessment and status of risk treatment plan, and opportunities for continual improvement) and determine the two management review outputs (decisions related to continual improvement opportunities and any needs for changes to the information security management system) to achieve the information security management system.

##### (2) Framework of the information security organization

We have established the Information Security Promotion Team in accordance with the Regulations for Establishment of the Information Security Organization, an internal SOP, to supervise the operation of the group's information security management and stipulate the roles and responsibilities of each promotion organization. The organization holds a regular meeting each year and extraordinary meetings when there are significant information security incidents. The director of the Information Division shall be the convener to convene the information security promotion team meeting and resolve and determine meeting opinions. Under the Information Division, department heads are members. The director of the Information Division shall report significant information security incidents to the president or relevant department heads.



##### (3) Establishment of CISO and the responsible information security unit:

In 2022 we established the CISO and responsible unit, supervisors, and staff for information security in accordance with the addition of Article 9-1 to the Regulations Governing Establishment of Internal Control Systems by Public Companies promulgated by the Financial Supervisory Commission.

#### 2 Information security policy

(1) ISO 27001 information security system: We established the ISO/IEC 27001:2013 information security management system (ISMS) in 2014 and hired BSI Taiwan, an external third-party certification body, to review and audit the system. So far, the system has passed the certification by BSI Taiwan for 8 consecutive years.

(2) NIST Cybersecurity Framework (CSF): We included the Cybersecurity Framework (CSF) developed by the US National Institute of Standards and Technology (NIST).

(3) By integrating ISO 27001 ISMS and NIST CSF, we enhance risk control, improve information security resilience, and equip the Company with the capabilities to tolerate, stop, and quickly recover from information security incidents to maintain business continuity of the supply chain.

#### 3 Please visit (link): [for the details of the management programs and cybersecurity risks.](#)

### Routine Operation and Management Procedures





#### 4 Resources for cybersecurity management

- (1) SOP: Established 16 SOPs.
- (2) Information security standard: Passed the certification of ISO 27001 for 8 consecutive years.
- (3) Number of employees using cloud mail: 2,172 persons.
- (4) Investment in information security: About NT\$13 million.
- (5) Information security notices: Issued 17 notices.
- (6) Social engineering drill: Held 2 drills for a total of 4,344 persons.



## Audit operations and reporting channels

### Audit operations

An independent audit unit is established under the Board to help management inspect and review the internal control system, measure the effectiveness and efficiency of operations, and establish and implement the annual audit plan based on the identified risks. The chief auditor holds the certified internal auditor (CIA) certificate and practices based on objectivity and integrity. The chief auditor attends the Audit Committee and the Board meetings as a guest, reports material findings in the audit, and follows up the subsequent improvement. The internal audit is the unit specializing in accepting reports on illegal acts or unethical or dishonest behavior from the Audit Committee email or hotline.

In 2022, the internal audit unit implemented audits according to the annual audit program and completed 52 audit reports and 17 follow-up reports summarized as follows:

Audit Item	Recommendation	Improvement Status
Purchase and payment cycle and compliance matters	Timely revision was advised and supervision was implemented on basic system data requiring enhanced control and operations non-compliant with the regulations.	Improved as recommended
Production Cycle and Compliance Cycle	Some operations were not implemented as instructed, and some forms were inconsistent with the requirements. Unfailing supervision and revision were recommended.	Improved as recommended
OH&S	Enhanced supervision was advised to the imperfect part of contractor management and permit implementation.	Improved as recommended
Subsidiary audits	Enhanced implementation and supervisions were advised for the non-conforming parts of operation and the imperfect forms and records.	Improved as recommended

### Whistleblower report channels GRI 2-25, 2-26

On August 10, 2017 the Board and the Audit Committee passed the proposal to establish the “Regulations for Handling Reports of Illegal and Unethical or Dishonest Behaviors” specifying the reporting and processing procedures and related protection mechanisms. Grievance channels include personal reports, telephone reports, and correspondence reports. The Regulations also specify the responsible units.

- ✓ **Personal reporting** Face-to-face description.
- ✓ **Phone reporting** (02) 2650-3783.
- ✓ **Correspondence reporting** Audit Division, 7F, No. 37, Jihu Road, Neihu District, Taipei City.

We assure full protection of the confidentiality of informers, investigators and case contents to prevent them from unfair treatment or retaliation. If the informer is a USI employee, we guarantee no discrimination on him as a result of reporting a case.

No report was received so far.



## 2.4 Ethical Corporate Management and Legal Compliance GRI 2-16, 2-17, 2-27, SDG16

### Ethical Corporate Management

To optimize ethical corporate management, we have established the Codes of Ethical Conduct for Directors and Managerial Officers, Ethical Corporate Management Best Practice Principles, and Procedures for Ethical Management and Guidelines for Conduct; planned integrity-based policies; and built a sound mechanism for governance and risk control. Please visit our [corporate website](#) for more about our anti-corruption policies, Codes of Ethical Conduct for Directors and Officers, and Ethical Corporate Management Best Practice Principles.

In addition to the Company's work rules and the Group's regulations, we have also included sexual harassment prevention, no discrimination, no harassment, work hours management, protection for humane treatment, health and safety workplace environment, and the integrity and probity policy in the orientation training for new employees. Additionally, we also request new employees to sign the commitment to comply with the relevant regulations.

### Legal compliance SDG16 RT-CH-530a.1

#### Sustainability Principle: Unity Governance

Significance and Strategy	Achievement and Goal	Management
<p><b>Significance to USI</b></p> <p>Ethical corporate management and legal compliance are USI's belief in sustainable development.</p> <p><b>Strategy and Approach</b></p> <ol style="list-style-type: none"> <li>1. Periodic compliance audit.</li> <li>2. Keeping up with the direction of legal/regulatory updates and amendments.</li> <li>3. Participation in association discussions on legal acts.</li> <li>4. Internal awareness education, education, and training.</li> </ol> <p><b>Commitment</b></p> <p>Strict legal compliance</p> <p><b>Data scope</b></p> <p>USI coverage 100%</p>	<p><b>Sustainability Goal</b></p> <p>No legal and/or regulatory noncompliance.</p> <p><b>2022 Projects</b></p> <ol style="list-style-type: none"> <li>1. Participation in legal outreach activities organized by government agencies.</li> <li>2. Identification of HSE regulations.</li> </ol> <p><b>2022 Achievements</b></p> <ol style="list-style-type: none"> <li>1. No violation or fine relating to product labeling was reported</li> <li>2. No violation of economic laws and regulations.</li> <li>3. IP management</li> <li>4. Offense of environmental regulations and/or regulations: 3 offenses</li> <li>5. Offense of the Occupational Safety and Health Act: 1 offense</li> </ol>	<p><b>Effectiveness Assessment</b></p> <p>Monetary Fine and Non-Monetary Sanctions</p> <p><b>Grievance Mechanism</b></p> <ul style="list-style-type: none"> <li>• "Contact us" on the corporate website.</li> <li>• Stakeholder contact information</li> <li>• List of HSE Information</li> </ul>

## Management Approach Description

In addition to practicing ethical USI management, we emphasize legal compliance in all areas. Therefore, units within the organization keep track of the trends of statutory and regulatory changes to ensure our compliance with up-to-date legal requirements and to make early planning for their impacts.



## Management Approach

For employees to understand compliance-related topics, we publicize information and trends regarding the latest regulatory and statutory requirements through education/training activities for employees and departmental routine meetings for them to acquire information regarding new laws and regulations and amendments of existing laws and regulations. The Group Division also provides legal consultation and recommendations. Moreover, besides arranging internal training or external training courses, we further invite external legal experts to give talks or seminars to enrich employees' knowledge and competencies in business-related policies and regulations.

We investigate and identify legal noncompliance to find the causes and take action to control and correct it to reduce negative impacts and prevent its recurrence. Additionally, to supervise legal compliance in employees, we have included environmental protection and OH&S incidents as evaluation items for productivity bonuses, and no bonus will be distributed for any monetary fine and non-monetary sanctions caused by environmental protection and OH&S offenses.

In 2022, neither monetary fine nor non-monetary sanctions for legal noncompliance relating to product labeling or for violation of economic laws and regulations was reported. However, we were sanctioned three times in 2022, including three times for violation of environmental protection laws and/or regulations and one time for violation of the Occupational Safety and Health Act. After completing corresponding corrective and preventive actions, we passed the re-inspection by the competent authorities for all violations. In the future, we will continue to implement and enhance HSE management to achieve the goal of five zeros: zero pollution, zero emission, zero accident, zero occupational hazard, and zero failure.

GRI 307-1, 419-1

RT-CH-140a.2, RT-CH-530a.1

## Monetary Fine and Non-Monetary Sanctions for Industrial Safety Incidents in 2022 and Improvement

### Counts/Fine Total Amount

### Causes for Violation and Corrective Action

\*Monetary fine and non-monetary sanctions in the year are based on the date of notice issuance.



**Offense of environmental regulations and/or regulations: Air pollution**  
3 offences/ NT\$600K

#### Ticketed defect

1. In addition to the annual maintenance, we also used the flare tower many days during January and September 2021, thus being sanctioned by the Environmental Protection Bureau in 2022.
2. R-302-TO pipeline cracking of the waste gas treatment equipment.
3. Flame ions of the fan motor at the front-end waste gas inlet of process control equipment RTO (A055) were 1,006.3ppm as detected by the flame ionization detector (FID).

#### Corrective Action

1. Replaced with the GR flowmeter with better accuracy and stability than that of other brands.
2. Added the low-flow interlocking function to low-intensity VOC vents.
3. Added rubber washers and the value of the VOC recheck was zero.



**Offense of the Occupational Safety and Health Act**  
1 case/ NT\$60K

#### Ticketed defect

1. R-302-TO pipeline cracking of the waste gas treatment equipment.

#### Corrective Action

1. Added the low-flow interlocking function to low-intensity VOC vents. Added the pipeline N2 purge procedure and reverified the pipeline VOC intensity value.
2. intensity value.
3. Added the VOC monitoring equipment to monitor VOC intensity.

## 2022 IP Management Performance

### 1 Patent management

#### 1. Innovation patent and invention application platform

We have established an application platform on the employee portal. After registration, R&D personnel can record in detail their innovation ideas and experiment outcomes from work and store them in the encrypted folder. After data is complete and the review and approval of related supervisors, employees may apply for patents according to the procedures.

#### 2. Patent

Title	Project No.	Country	Remarks
HYDROGENATED BLOCK COPOLYMER AND COMPOSITION THEREOF	US 10,450,455 B2 (application no.15/914,878)	USA	Awarded the patent (expired on 2038/03/07) on 2019/10/22.
Hydrogenated block copolymer and composition thereof	I660975	Taiwan	Awarded the patent (expired on 2038/03/05) on 2019/06/01.
MULTILAYER SHEET STRUCTURE FOR DENTAL APPLIANCE (orthodontic materials)	US-2020-0237478	USA	Awarded the patent (expired on 2040/8/10) on 2022/5/31.
Fire retardant composite structure (utility model patent)	M597795	Taiwan	Awarded the patent (expired on 2030/03/12) on 2020/07/01.

### 2 Trade secret management

The R&D Division stores the reports, documents, and related IPs from each R&D project individually in USI's internal encrypted web folders with access control. The system also automatically audits abnormal access and alerts the responsible supervisor to check the access to ensure the proper management of trade secrets.

## 2.5 Intelligent Management GRI 2-25, 3-3

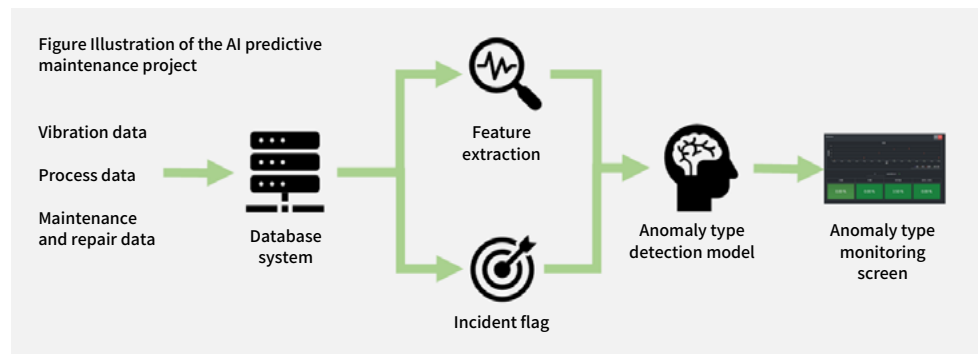
Significance and Strategy	Impact Management	Achievement and Goal	Management
<p style="text-align: center;"><b>Significance to USI</b></p> <hr/> <p>Through intelligent management, we have sped up analysis, optimized decision-making, enhanced industrial safety protection, and improved operational performance towards smart petrochemical industry.</p> <p style="text-align: center;"><b>Strategy</b></p> <hr/> <p>Integrate platform resources to break through data silo, and enhance safety, quality, and efficiency with intelligent technology.</p> <p style="text-align: center;"><b>Commitment</b></p> <hr/> <p>Actively introduce intelligent management systems to improve operational performance.</p> <p>Data scope: USI coverage 100%</p>	<p style="text-align: center;"><b>Short-, Medium- &amp; Long-Term Positive/Negative Impacts</b></p> <hr/> <ul style="list-style-type: none"> <li>• Short-term positive actual impact: Develop AI systems for use in production and industrial safety management</li> <li>• Medium-term positive potential impact: Enhance efficiency with automated processes</li> <li>• Long-term Negative potential impact: Workforce simplification affects the right to work.</li> </ul> <p style="text-align: center;"><b>Impact Boundaries</b></p> <hr/> <p>USI employees and contractors</p> <p style="text-align: center;"><b>Process to Remediate and Prevent Negative Impacts</b></p> <hr/> <p>Enhance employee education and training and assistance for internal transfer to protect the right to work</p>	<p style="text-align: center;"><b>2022 Goals</b></p> <hr/> <ol style="list-style-type: none"> <li>1. Enhance industrial safety protection</li> <li>2. Improve product quality</li> <li>3. Reduce environmental hazards</li> </ol> <p style="text-align: center;"><b>2022 Achievements</b></p> <hr/> <ol style="list-style-type: none"> <li>1. Smart predictive maintenance for key equipment</li> <li>2. AI quality prediction</li> <li>3. Energy management system</li> <li>4. AI industrial safety image recognition</li> <li>5. Facial recognition for the access control of contractor personnel.</li> <li>6. Virtual reality (VR)-Tank car leakage emergency response training</li> <li>7. Reverse pipeline scan engineering</li> </ol> <p style="text-align: center;"><b>2023 Goals</b></p> <hr/> <ol style="list-style-type: none"> <li>1. Develop the data integration platform</li> <li>2. Enhance energy conservation and carbon reduction</li> <li>3. Enhance production management efficiency</li> </ol> <p style="text-align: center;"><b>Medium- &amp; Long-Term Goals</b></p> <hr/> <ol style="list-style-type: none"> <li>1. Optimize various AI models to enhance prediction accuracy.</li> <li>2. Enrich the data management knowledge of employees to enhance analysis efficiency and optimize strategy implementation.</li> <li>3. Invest in developing Intelligent management applications to enhance production management efficiency.</li> </ol>	<p style="text-align: center;"><b>Effectiveness Assessment</b></p> <hr/> <ol style="list-style-type: none"> <li>1. Hold meetings periodically to follow up the development progress and implementation effectiveness</li> <li>2. Publish patent achievements and share technology</li> </ol> <p style="text-align: center;"><b>Achievements and Directions of Technology</b></p> <hr/> <ol style="list-style-type: none"> <li>1. Engage in interdisciplinary collaboration with external units to accelerate new technology introduction.</li> <li>2. Enhance information security governance to prevent data leakage.</li> </ol>

In recent years, we have been actively promoting the use of various intelligent management systems in the smart predictive maintenance of key equipment, AI industrial safety image recognition system, contractor personnel access facial recognition system, energy management system, VR-tanker leakage emergency response training, cooling water energy conservation system, and quality prediction.

### Predictive maintenance of high pressure reactors reactors to enhance industrial safety.

We continuously promote the reactor predictive maintenance project to predict the operating life of ultrahigh pressure reactors, optimize shutdown timing, and reduce process of control possibility through AI analysis of the vibration data to lower the risk of occurrence of industrial safety incidents and so to enhance operating safety.

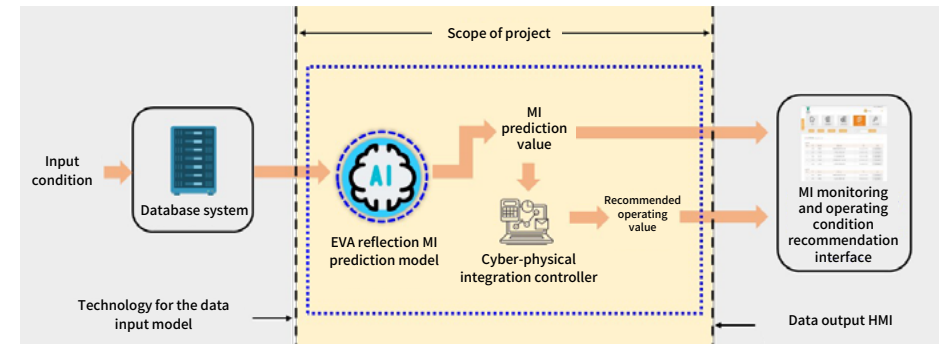
In 2022, we collaborated with investee DataWise to enhance the prediction accuracy of AI models with DataWise's AI model specialization.



### Reduce defective outputs with AI quality prediction

Through collaboration with the National Taiwan University and National Taiwan University of Science and Technology, we implemented the cyber-physical integration technology development industry-academia collaboration project to predict quality with AI.

Prediction is run with the process quality prediction model developed with Python, DCS dynamic data, QC data, and product type operation conditions and through GRU sequence neural network model. We also developed the cyber-physical integrated control architecture to make recommendations for factory process operation.



### Building 3D model for pipeline and equipment reverse scan and producing pipeline 3D drawings for risk-based inspection (RBI) analysis to lower the risk in pipeline and equipment use.

A 3D model is produced after scanning the actual condition of key equipment and pipelines with reverse scanning technology to restore the original look of equipment and pipelines.

Based on the parameters of the 3D models of key equipment and pipelines, we assess and analyze the risks of equipment and pipelines in accordance with the API 580 standard. The analysis results and 3D model and pipeline 3D drawings produced by reverse scan engineering are nondestructive testing (NDT). Completing the tests and correcting anomalies with NDT can reduce high-risk equipment and pipelines to medium- or low-risk.

