

Chapter 2

Corporate Governance and Operational Performance



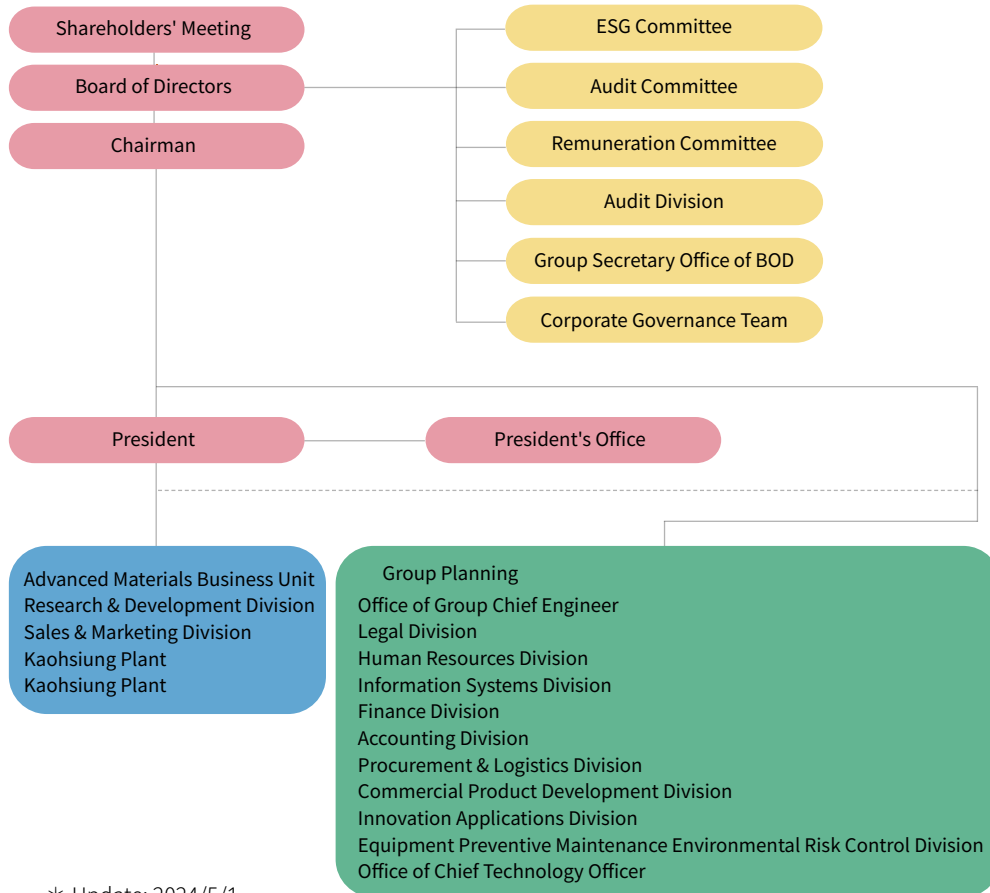
Material topics in this chapter: Performance Highlights

Economic performance

- ✓ In May 2023, Gulei Project successfully initiated the trial run of the EVA unit.
- ✓ UE4055 annual sales accumulated **5,244MT**, the second highest in USI history.
- ✓ The corporate governance evaluation for the year 2023 ranks the company among the **top 6~20%** of listed companies.
- ✓ Same rating by Taiwan Ratings at twA/twA-1 with a "**steady**" outlook.

2.1 Governance

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



* Update: 2024/5/1



About USI

<https://www.usife.com.tw/zh-tw/dirAbout/frmAbout4.aspx>



Board of Directors

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

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 proposal is presented at the meetings of shareholders for shareholders to vote on from the List of Candidates for Directors and Independent Directors. The current Board of Directors was elected in 2023 and is composed of nine directors with rich experience in their respective professional fields. Among them, four positions are assigned to independent directors, who make up 44% of the Board. The term of each director is three years, and each director is entitled to a second term.



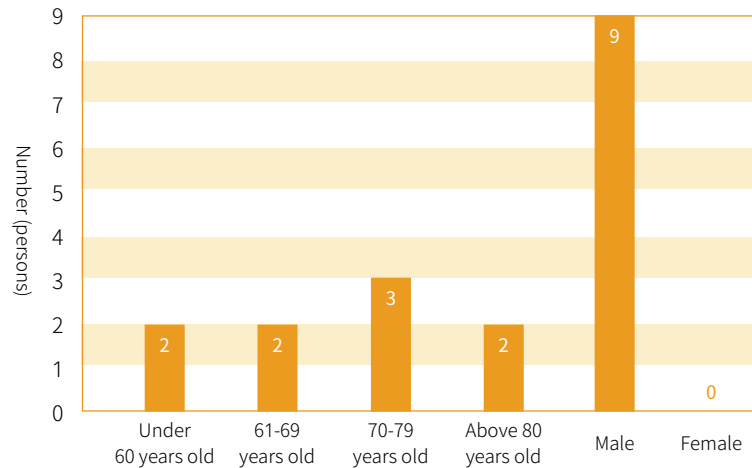
For information regarding the Board Election Regulations, please visit our corporate website at:

<https://www.usife.com/zh-tw/dirInvestor/frmInvestor1>

Please refer to the table below for information about the Board members.

Term of Office	May 31, 2023-May 30, 2026
Member	Directors: Quintin Wu (chairman), Jing-Sho Yu, Zhe-I Gao, Pei-Ji Wu (President), Hong-Ting Wu Independent Director: Sean Chen, Woody Duh, Yancy Hai, and Sun-Te Chen
Gender of members	All male
Age of members	Under 60 years old: 2, 60-69 years old: 2, 70-79 years old: 3, 80 years old and older: 2

Age and Gender Distributions of Board Members



Our company convened a total of 6 Board of Directors meetings in 2023, with an attendance rate of 92.59% (including independent directors) in person (100% including proxy attendance). The Board of Directors, led by the Chairman, operates in detail as described in the USI's 2023 Annual Report: Part III, Corporate Governance Report_Corporate Governance Operations.

Board proposal submission process flow:

Proposals are submitted by the responsible business units to various functional committees for reporting, discussion, and resolution, before being forwarded to the Board of Directors for reporting, discussion, and resolution. After the meetings, the functional committees and the Board of Directors' office prepare meeting minutes detailing the discussion process and resolution outcomes.

For details on the process for submitting proposals to the Board, the units responsible for Board affairs, and key resolutions of the Board of Directors in 2023, please refer to the table below.

Performance of the board member diversity policy

1

Business responsible units

Submitting proposals

2

Functional Committees

Convening meetings within the scope of relevant authorities, conducting agenda reports, discussions, resolutions, and preparing meeting minutes reflecting the outcomes of the resolutions.

3

Board submission

Conducting agenda reports, discussions, resolutions, and preparing meeting minutes reflecting the outcomes of the resolutions.

For important resolutions of the Board of Directors for the year 2023, please refer to the USI Corp. Annual Report for 2023: Section on Corporate Governance - Information on Board Operation and Resolutions of the Board of Directors available on the company's official website. Additionally, the company has established the "Board Secretary Department" as the operational unit for the Board of Directors, responsible for planning and handling board affairs to enhance the efficiency of board meetings and assist in the implementation of resolutions.

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, three directors are also "legal" and "environmental" specialists; The current members all possess the necessary knowledge, skills, and qualities required for their roles, with expertise in accounting and finance, international markets, law, and environmental protection.

II. Targets for management of board diversity

The goal of board member diversity is to propose the addition of a female director in order to achieve gender diversity objectives. Additionally, in response to the global trend of increasing emphasis on corporate sustainability, the company plans to add directors who are familiar with and proficient in relevant fields to enhance the company's sustainable competitiveness, thus making the board more proficient in its functions.(Board member diversity policy implementation status: Refer to page 44 of the USI's 2023 Annual Report and the company's official website).

III. Performance in board diversity

Diversity of board members:

Director's name	Gender	Diversity of Core Competence									
		Operational judgments	Accounting finance	Management administration	Crisis management	Industry background knowledge	International market	Ability to lead	Ability to make policy decisions	Law	Eco-friendly
Quintin Wu	Male	✓	✓	✓	✓	✓	✓	✓	✓		
Jing-sho Yu	Male	✓	✓	✓	✓	✓		✓	✓		
Zhe-Yi Kao	Male	✓		✓	✓	✓		✓	✓		
Pei-Ji Wu	Male	✓		✓	✓	✓	✓	✓	✓		
Hong-Ting Wu	Male	✓	✓	✓	✓			✓	✓		
Sean Chen	Male	✓	✓	✓	✓			✓	✓	✓	
Woody Duh	Male	✓	✓	✓	✓	✓		✓	✓		✓
Yancy Hai	Male	✓	✓	✓	✓			✓	✓		✓
Sun-Te Chen	Male	✓	✓	✓	✓			✓	✓		

※ Currently, 22% of directors are also employees, and 44% of them are independent directors.

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

The Board of Directors has established comprehensive regulations for avoiding conflicts of interest, adopted measures of avoidance in procedures, and recorded the process in the minutes of meetings, as described below:

- 1 In order to strengthen corporate governance, our company has established comprehensive regulations within the board of directors to mitigate conflicts of interest among directors, thus safeguarding the rights of investors.
- 2 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.
- 3 The secretary unit of the Board, in accordance with the Board Meeting Regulations, records the reasons for recusal and the implementation status regarding agenda items where directors have a conflict of interest in the minutes of the Board meetings.
- 4 In 2023, the execution of recusals for conflict of interest agenda items by the Board complied with legal regulations (please refer to the 2023 USI Annual Report - Board Operations).
- 5 For details on responses to conflicts of interest between Board members and stakeholders, please refer to the 2023 USI Annual Report, sections "Information on Board Members," "Top Ten Shareholders by Shareholding Percentage," and "Related Party Transactions" in the 2023 Financial Report.

Our performance in avoidance of conflicts of interest in proposals in 2023:

Director's name	Motion content	Reason for recusal	Participation in voting	Remarks
Quintin Wu Pei-Ji Wu	Proposal of abolition of non-compete restriction on directors.	Directors recusing themselves from the proposal were also the directors of the Foundation.	Abstained from voting	The 15th meeting of the 20th Board, 2023.3.7
Sean Chen Woody Duh Yancy Hai Sun-Te Chen	Appointing independent directors Sean Chen, Woody Tyzz-Jiun Duh, Yancy Hai, and Sheng-De Chen as members of the company's Compensation Committee.	A conflict of interest with directors.	Abstained from voting	The 1th meeting of the 21th term of Board, 2023.6.6
Pei-Ji Wu	Competitive behavior of executives.	A conflict of interest with directors.	Abstained from voting	The 3th meeting of the 21th term of Board, 2023.11.7

Performance Evaluation Execution of the Board of Directors and Functional Committees GRI 2-18

Set assessment methods and approaches for the performance of the Board, execute regular self-assessment of the performance of the Board as a whole, individual directors, and Functional Committees every year. The Board Secretary Office is responsible for conducting these assessments through self-evaluation, using the assessment results as a reference for the company's review and improvement.

The overall internal performance assessment results for the Board, individual directors, and Functional Committees in 2023 are as follows:

Overall board performance		Individual board members		Audit Committee		Remuneration Committee		ESG Committee	
Aspect of Evaluation	Score	Aspect of Evaluation	Score	Aspect of Evaluation	Score	Aspect of Evaluation	Score	Aspect of Evaluation	Score
Participation in the operation of the company	4.75	Corporate targets and mission control	4.85	Participation in the operation of the company	5	Participation in the operation of the company	5	Participation in the operation of the company	5
Improvement in the quality of the board's decision-making	5	Duty awareness of directors	4.89	Duty awareness of the Audit Committee	4.95	Duty awareness of the Remuneration Committee	5	Awareness of the responsibilities of the ESG Committee.	4.85
Composition and structure of the board	5	Participation in the operation of the company	4.87	Improvement of the decision-making quality of the Audit Committee	5	Improvement of the decision-making quality of the Remuneration Committee	5	Enhancing the decision-making quality of the ESG Committee.	5
Election and continuing education of directors	4.67	Internal relationship development and communication	4.89	Composition and member selection of the Audit Committee	5	Composition and member selection of the Remuneration Committee	5	Composition and selection of members for the ESG Committee.	5
Internal control	5	Professionalism and continuing education of directors	4.89	Internal control	4.92				
The results of the overall Board performance evaluation show that the average score of the five major aspects is 4.6, which means "good".		The results of the individual board members performance evaluation show that the average score of the five major aspects is 4.8, which means "good".		The results of Audit Committee self-assessment show that the average score of all five major aspects is over 4.9, which means the overall assessment result is good.		The results of director self-assessment show that the average score of all six major aspects is 5, which means "excellent".		The results of ESG Committee self-assessment show that the average score of all four major aspects is over 4.8, which means the overall assessment result is good.	

Note: Scores are assessed on a scale of 0 to 5, with 5 being the highest score. The assessment period is from January 1, 2023, to December 31, 2023.

The overall performance evaluation results of the board of directors, individual board members, and functional committees are to be reported at the first quarter board meeting of 2024.

Recommendation and implementation:

In view of the increasing global attention on Environmental, Social and Governance (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 green power development strategies to meet the international standards so as to achieve the ultimate goal of corporate sustainable development.

Enhancing the execution status of directors' professional competencies. 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 "PRC Political Economy, International Situation, and Cross-Strait Relations" course given by Professor Chu-cheng Ming from the Department of Political Science at NTU on July 5, 2023, and the 3-hour "How Directors Supervise Corporate Risk Management and Crisis Handling" course given by Lin-Shun Hsu, a partner accountant from PwC Taiwan, on October 13, 2023. In 2023 we arranged 62 hours of external continuing education courses for all directors and independent directors. Following the re-election of the board in 2023, all directors met the required training hours as specified in Article 14, Paragraph 3 of the "Taiwan Stock Exchange Corporation Operation Directions for Compliance with the Establishment of Board of Directors by TWSE Listed Companies and the Board's Exercise of Powers" and the "Directions for the Implementation of Continuing Education for Directors and Supervisors of TWSE Listed and TPEX Listed Companies" Please refer to p. 34 of the USI Annual Report 2023 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 9, 2019 to assign Director

of Legal Division, Erik Chen to be the Chief Corporate Governance Officer (CCGO) as the top officer of the Company's corporate governance. Director Erik Chen has over 20 years of experience as a practicing attorney and nearly 10 years of experience as the head of legal affairs in listed companies. His main responsibilities include handling affairs related to the meetings of the Board and shareholders according to the law, preparing minutes for the meetings of the Board and shareholders, assisting directors in taking office and continuing education, providing information needed by directors in conducting business, assisting directors in complying with laws and regulations, reporting to the Board on the results of reviewing whether the qualifications of Independent Directors are in compliance with relevant laws and regulations during their nomination, appointment, and tenure, and handling affairs related to changes in directors.



For detailed business execution priorities and professional development in 2023, please refer to the company's official website:

<https://www.usife.com.tw/zh-tw/dirlInvestor/frmlInvestor1.aspx>

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-Ji Wu	—	—	Deputy Committee Chief
Independent Director	Sean Chen	Convener	✓	—
Independent Director	Woody Duh	✓	✓	Committee Chief
Independent Director	Yancy Hai	✓	Convener	✓
Independent Director	Sun-Te Chen	✓	✓	✓

Audit Committee

- 1 The current term is from May 31, 2023, to May 30, 2026, with 4 members appointed, all of whom are composed of the company's 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 2023, and the personal attendance rate of members was 100%.

Title	Name	Actual attendance rate (%)	Remarks
Independent Director (Convener)	Sean Chen	100%	Re-election
Independent Director	Woody Duh	100%	Re-election
Independent Director	Yancy Hai	100%	Re-election
Independent Director	Sun-Te Chen	100%	Newly appointed director

Note: The actual attendance rate (%) is calculated based on the number of board meetings during their tenure and their actual attendance.

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

- 1 The current term is from June 6, 2023, to May 30, 2026, with a total of 4 members appointed, all of whom are composed of independent directors.
- 2 The Remuneration Committee holds at least two committee meetings each year. Three committee meetings were held in 2023, and the personal attendance rate of members was 100%. 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) salary and remuneration policy, system, standard, and structure and (2) performance evaluation 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. (GRI 2-19) The total compensation ratio and ratio of the percentage change in total compensation in 2023 were 12.75:1 and 54.70% respectively.

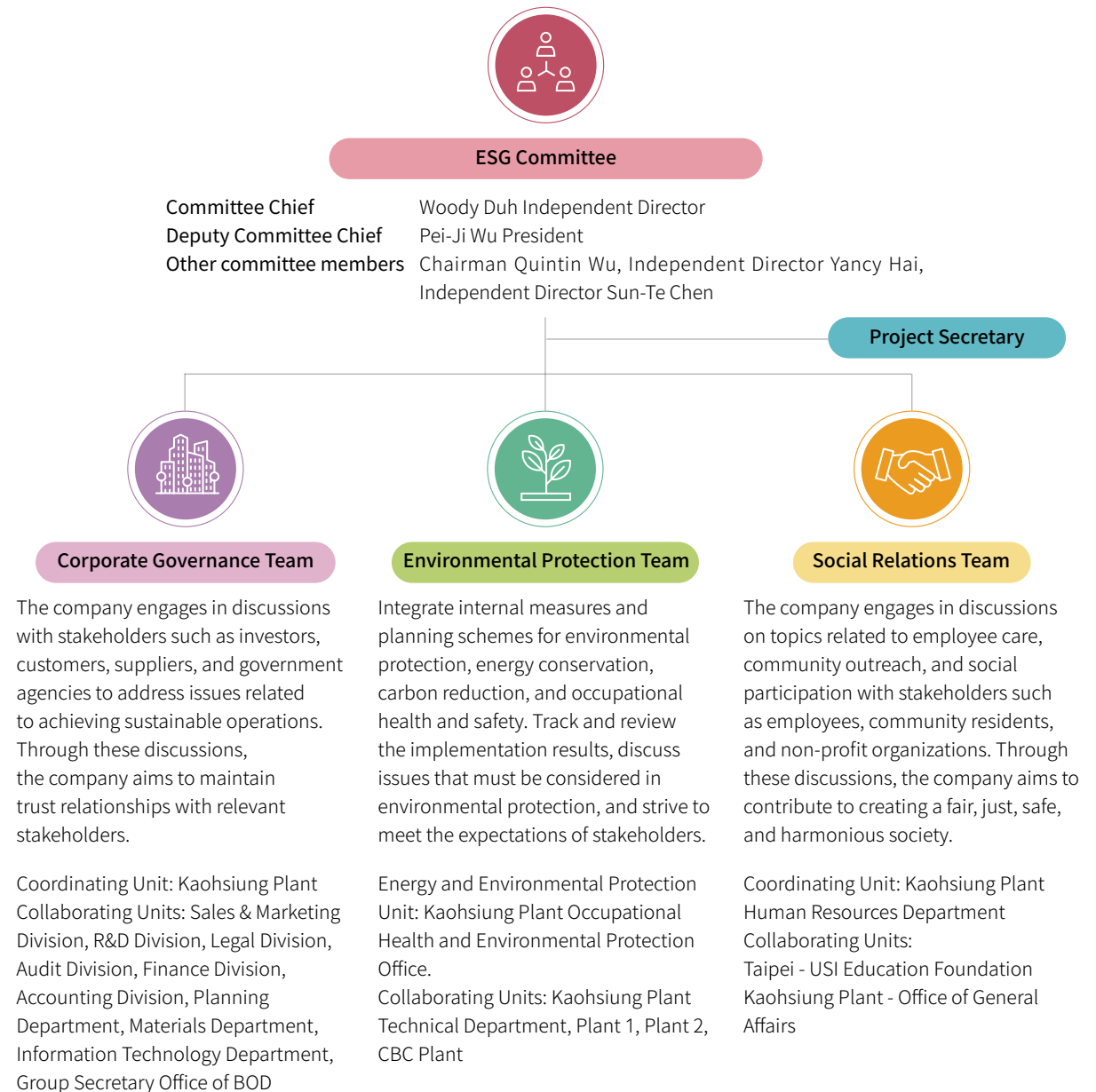
Performance evaluation: The performance evaluation of directors covers the alignment with the corporate goals and missions, awareness of the directorial duties, development and communication of internal relationships, expertise and continuing professional development, and internal controls. The performance 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). Among them, the weight of sustainability-related indicators is at least 5%. In 2023, the performance indicators for the President, including sustainability-related items, consist of 10% for new product development, 8% for carbon reduction achievement rate, 7% for achieving the "Five Zeroes" safety goals, and 7% for talent development programs.

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).
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, the President and three independent directors selected by the Board. One of the independent director will be the Committee Chief, with the President being the Deputy Chief.
- 2 The term of the current committee commenced on June 6, 2020 and will end on May 30, 2026. The five members include Chairman Quintin Wu, President Pei-Ji Wu, Independent Director Woody Duh, Independent Director Yancy Hai and Independent Director Sun-Te Chen.
- 3 Duties of the committee include
 - Agreement on the sustainability development policy.
 - Agreement on the sustainability development strategy planning, annual plans, and project plans.
 - Oversight of the implementation of sustainability development strategy planning, annual plans, and project plans, and evaluation of execution status.
 - Approval of the ESG report.
 - Annual reporting to the board of directors on the implementation results of sustainability development for the year.
 - Other matters instructed by the board of directors that the committee should handle.
- 4 The committee shall convene at least twice a year. Two committee meetings were held in 2023, and the personal attendance rate of members was 100%. Committee meeting records over the years: <https://www.usife.com/ESG/en-us/ESG21.aspx>
- 5 The three working teams of the Committee include corporate governance, environmental protection, and social relations as shown below:



ESG Committee Annual Tasks and Next-Year Annual Plan

Key Achievements in Sustainable Development Execution in 2023 Presented to the Board of Directors

- 1 Constantly implement the USI 5-Year Operational Plan.
- 2 Award:
 - In 2023, TCSA awarded the "Taiwan Top 100 Sustainable Exemplary Enterprise Award" and the "Taiwan Corporate Sustainability Report Platinum Award."
 - The CDP Water Security Management evaluation survey received an A- rating.
 - Won the High Distinction Award in the Second Net-Zero Industry Competitiveness Competition.
 - Pipeline 6 of Kaohsiung Plant was awarded the Model Pipeline. Award by the Industrial Development Administration, MOEA.
 - Awarded the Excellent Contribution Trophy for continuous adoption of air quality purification area
- 3 Published the Chinese and English versions of the 2022 ESG Report in June and August respectively.
- 4 In 2023, we signed up for the Ministry of Economic Affairs' "Gudeng Supply Chain Low-carbon Transition Coaching Program." We are collaborating with our customer and its supply chain to collectively strive towards the goal of reducing carbon emissions.
- 5 Organize Group Tree Planting Activities and Donate to the Third Phase of the Reforestation Adoption Plan.



2024 Work Plan

- 1 Constantly implement the USI 5-Year Operational Plan.
- 2 In response to "Gudeng Supply Chain Low-carbon Transition Coaching Program.", we are collaborating with our customer and its supply chain to collectively strive towards the goal of reducing carbon emissions by ten thousand tons by 2025.
- 3 Seek opportunities for cooperation with external suppliers to promote green power development and carbon neutrality response.
- 4 Continuously participate in sustainability-related ratings.
- 5 Participate in social welfare activities.
- 6 Publish the Chinese and English versions of the 2023 Sustainability Report in August.
- 7 Donation for the fourth phase of the afforestation adoption project.

Note: The board's supervision of sustainability performance-related actions: Please refer to pages 6 to 9 of the USI Annual Report for the 2023.

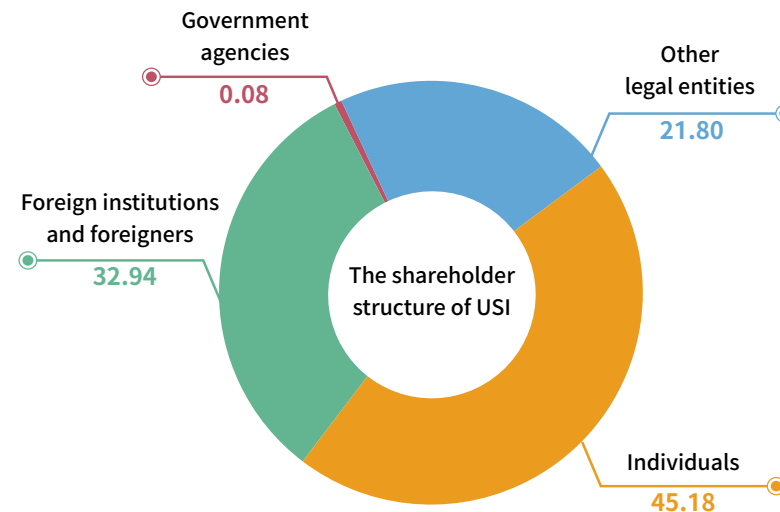
Maintenance and shareholder rights and interests and information transparency

Until the end of the shareholders' meeting in 2024, the cutoff date for the transfer of shares is April 2nd. Regarding the shareholder structure of USI, it is primarily composed of individuals and other legal entities. For shareholders with ownership stakes of 5% or more, or those among the top ten shareholders in terms of ownership percentage, please refer to page 104 of the USI's Annual Report for the 2023 for their names, holdings, and percentages. 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 2023.

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.

As of the book closure date on April 2, 2024, the data is as follows:

The shareholder structure of USI	Government agencies	financial institution	Other legal entities	Individuals	Foreign institutions and foreigners
Shareholding ratio (%)	0.08	0.00	21.80	45.18	32.94



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. For detailed organizational structure, please refer to [Risk Management](#) for details.

For the policy, process, and performance of risk management, please refer to 2.3 Risk Management for details.

2.2 Economic performance

Sustainability Principle: Unity Governance GRI 2-25, 3-3, SDG 8

Significance and Strategy	Impact Management	Achievement and Goal	Management
<p>Significance to USI</p> <p>Sustainable business operations, legal compliance, pursuit of profit, maintenance of stakeholder rights and interests, and development of high value-added products.</p> <hr/> <p>Strategy</p> <p>Vertical integration to reduce feedstock and production costs, increase product added value, and enhance custom product development.</p> <hr/> <p>Commitment</p> <p>Maintain the rights and interests of shareholders and create profit constantly.</p> <p>Data scope: USI coverage 100%</p>	<p>Positive/Negative Impacts</p> <p>Short-term positive actual impact: Developing ESG to enhance investor willingness.</p> <p>Short-term actual negative impact: Overcapacity.</p> <p>Medium-term potential negative impact: Plastic reduction policies causing customer shift, regulatory restrictions on industry development.</p> <hr/> <p>Impact Boundary</p> <p>Global customers and investors, USI employees, government agencies</p> <hr/> <p>Processes to remediate and prevent negative impacts</p> <p>Improvement of existing products and customer development, development of green energy and environmental protection products, industrial transformation.</p>	<p>2023 Goals</p> <ol style="list-style-type: none"> 1. Commercial operations of the Gulei Integrated Refinery Project 2. Construction of the Kaohsiung Intercontinental Container Terminal Project 3. Value-added product and market development 4. Promotion of eco-friendly products <hr/> <p>2023 Achievements</p> <ol style="list-style-type: none"> 1. Developed new products and the low VOC-corrosive heat-shielding coating series. 2. Actively experimenting with profit-based products, the annual production volume of EVA/PE reached 217,000 MT, an increase of 5% compared to the previous year. <hr/> <p>2024 Goals</p> <ol style="list-style-type: none"> 1. The Ethylene Underground Pipelines construction of the second phase of Kaohsiung Intercontinental port area is ongoing, with a projected completion in the fourth quarter of 2024. 2. Increase production of hot melt adhesives and compounds (for cables). <hr/> <p>Medium- & Long-Term Goals</p> <ol style="list-style-type: none"> 1. Large equipment replacement 2. New product development 3. Planning of and investment in the downstream development projects of the Gulei Integrated Refinery Project. 	<p>Effectiveness Assessment</p> <ol style="list-style-type: none"> 1. Annual report 2. Corporate governance evaluation 3. ESG Report <hr/> <p>Grievance Mechanism</p> <ul style="list-style-type: none"> • Shareholders' Meeting • Company Website: "Investor Services" • Corporate Briefing Meeting <hr/> <p>Chapter Summary</p> <ul style="list-style-type: none"> • Financial performance • Major investments

Note: Short-term: 1-2 years, Medium-term: 3-5 years, Long-term: 5 years or more. The following chapters have significant impact across short, medium, and long-term ranges.

Business Outlook

USI recorded a basic loss per share of NT\$ 0.19 for the fiscal year 2023. The operating conditions for this year were affected by the slow recovery following the post-pandemic reopening in China during the first half of the year. Although OPEC+ implemented production cuts to boost oil prices, the ongoing sluggish economic data led to a moderation in crude oil prices. Additionally, the substantial supply of ethylene from the United States led to a decline in spot prices for ethylene. In the third quarter, oil prices experienced a short-term increase due to the conflict in Israel and Palestine. However, market concerns about the economic outlook in China led to weak expectations for oil demand, resulting in downward fluctuations. Ethylene prices also followed the fluctuation of oil prices, and oversupply in the Asian ethylene market further contributed to this trend. Downstream demand remained sluggish, leading to low operating rates for cracking plants. Regarding EVA, at the beginning of the year, EVA prices continued to rise as traders actively purchased materials and demand for photovoltaic-grade EVA improved. However, from late March onwards, downstream demand weakened, compounded by the anticipation of the upcoming production launch of EVA by Fujian Gulei Petrochemical Co., Ltd. (hereinafter referred to as Gulei Petrochemical), a company in which our company has invested. This created a cautious market sentiment, leading to sustained low prices. Gulei Petrochemical's EVA successfully commenced production in May, leading the market to believe that the EVA market had bottomed out. Consequently, there was an increased willingness to purchase materials, and prices began to rebound from the trough in late July. By late September, photovoltaic plant inventories were high, demand weakened again, and with no improvement in other application demands, prices began to decline towards the end of the year. Overall, EVA sales for the year reached 142,000 tons, an increase of 13% compared to the previous year, while prices fell by approximately 40%. HD/LLD mainly targeted the domestic market. However, due to inflationary pressures and successive maintenance overhauls at CPC Corporation's Third and Fourth Naphtha Cracker Plants, production plans were affected. Total sales amounted to 85,000 tons, an 8% decrease from the previous year, with prices dropping by approximately 10%. In terms of production, efforts were made to continuously improve production processes, upgrade equipment, enhance production efficiency and quality to reduce production costs, and actively trial production of high-value products.

The total production of EVA/PE for the year was 217,000 tons, a 5% increase from the previous year. Efforts were also made to improve occupational safety and environmental protection, including the implementation of Process Safety Management (PSM) to ensure public safety, execute energy-saving and carbon-reduction schemes, and invest in renewable energy development. By the end of 2023, the cumulative grid-connected capacity of solar energy projects reached 7.2 MW, generating approximately 9.15 GWh of green energy annually and contributing to a reduction of over 4,500 tons of carbon dioxide emissions equivalent, aligning with the company's sustainable development and carbon reduction goals. 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. Additionally, low MI encapsulation film-grade EVA was developed to meet the needs of key encapsulation film customers. Overall, due to the greater decline in product prices than in raw material costs, operating profit decreased for the year.



USI Financial Performance 2021-2023 GRI 201-1

(Unit: NTD thousands)

Item	Basic Element	2021	2022	2023
Direct economic value	Revenue (Note 1)	16,034,251	15,632,151	11,449,372
Distributed economic value	Operating cost (Note 2)	12,512,341	12,163,445	10,420,578
	Employee wages and benefits (Note 3)	864,134	753,360	627,636
	Payment to investors (Note 4)	2021 cash dividends distributed in 2022 2,615,280	The 2022 cash dividends distributed in 2023. 832,134	The 2023 cash dividend of NT\$0.35 per share, to be distributed in 2024. 416,067
		Interest expense 94,746	Interest expense 73,666	Interest expense 58,644
	Payment to the government expense (Note 5)	156,246	739,262	777,756
	Investments in community (Note 6)	Donation of NT\$4,000 thousand for the foundation.	Donation of NT\$5,000 thousand for the foundation.	Donation of NT\$5,000 thousand for the foundation.
Residual economic value (Note 7)		5,191,394	1,555,097	(207,006)

Note: 1. Operating income refers to sales revenue

2. Operating costs refer to cost of goods sold + operating expenses.

3. Employee salaries and benefits are already included in the above operating costs.

4. Interest expenses are already included in the above operating costs.

5. Government payments refer to corporate income tax expenses.

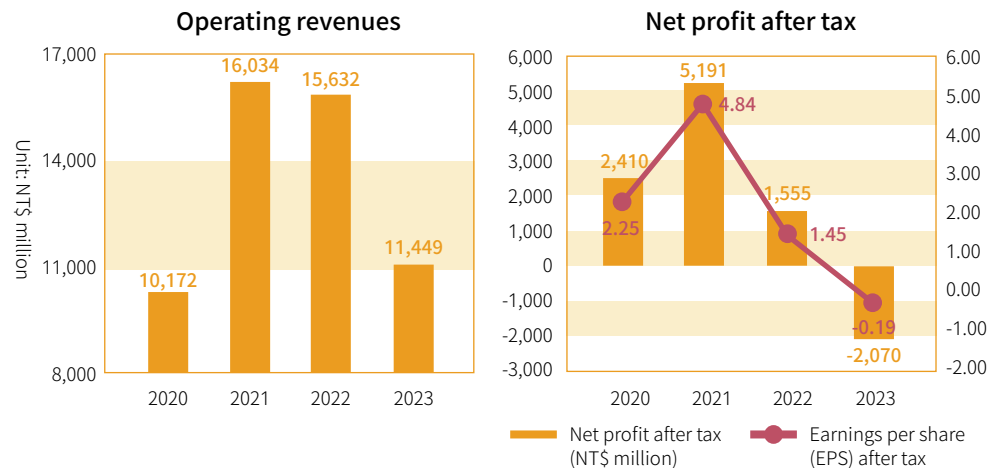
6. Community investment includes contributions to local communities and donations to the USI Education Foundation, already included in the above operating costs.

7. Retained economic value refers to net profit after tax.

Profit distribution

In 2023, the revenue (same as below) was NT\$11.4 billion, income tax (excluding estimates) was NT\$780 million, accounting for 6.79% of the individual revenue and estimated cash dividend was NT\$0.35 per share. This profit distribution proposal was approved by the AGM on May 31, 2024.


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

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


Innovative Operations and Management

USI invests a large amount of funds in research and development every year, actively recruiting and nurturing professional talents. The R&D expenses for the fiscal years 2023 and 2022 were NT\$140 million and NT\$150 million, respectively.

In recent years, new R&D products accounted for 8.56% of consolidated revenue.

Major Investments

Local Major Investments



Cyclic Block Copolymer (CBC)



High-Value R&D Center



Ethylene storage zone


Kaohsiung Intercontinental Container
Terminal Phase II

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 Administration, MOEA. 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.

HV R&D Center

The high-value R&D center, with an investment of NT\$170 million, officially commenced operations in the third quarter of 2022. In 2023, it supported product development and assisted the CBC plant in implementing trial production of the new ViviOn™ 0645 and 1608 specifications. The R&D center provides process and product optimization to enhance material quality and properties, increase added value and production efficiency, and reduce energy consumption.

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.

Kaohsiung Intercontinental Container Terminal (ICT) Project Phase 2 commenced construction on July 31, 2019. USI invested NT\$906 million in participating in the construction of 80,000 M³ ethylene tanks and associated systems. It is expected to be completed in the fourth quarter of 2024.

Investment in Equipment Improvement of the Kaohsiung Plant

USI continues to carry out various production process, environmental protection, and occupational safety equipment improvement projects. In 2022, approximately NT\$418 million was invested, and in 2023, approximately NT\$252 million was invested.

The total estimated investment amount for 2024 is NT\$113 million. To constantly engage in various energy conservation, carbon reduction, and new product development projects to improve product quality and increase custom products.

Investment of NT\$783 million

2022-2024



Enhanced Efficiency and Quality

New catalytic systems
Automatic filter replacement systems
Foreign matter screening machines



Enhanced Efficiency and Reliability

Update of extra-high voltage cables
Maintenance/update of motors
Update of low, medium, and high-voltage distribution panels
Maintenance/update of synchronous motor coils



Electricity Saving

Update of variable frequency motors/high-efficiency motors
Update of refrigeration units/chillers
Update of nitrogen compressors
Process exhaust gas recovery
Process operation adjustments



Energy and Water Conservation

Improvement of steam condensate water recovery
Improvement of wastewater treatment facilities



Pollution Prevention and Control

Improvement of Thermal Oxidizers/Regenerative Thermal Oxidizers (TO/RTO)
Update of environmental/process monitoring systems
Update of compressor cylinders
Replacement of control valves

Major Overseas Investments

Gulei Project

Investment objective

Many changes have emerged in the global petro-chemical 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, petro-chemical 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.
- The intermediate delivery of EVA plant was completed in October 2022*
- Gulei Integrated Refinery Project has been completed and fully operational in May 2023

Note: Intermediate delivery refers to the delivery of a construction project in the middle of the construction period. It suggests that the contractor has completed the construction of all processing routes, including running the pressure and utilities test, while the remaining projects will not affect the trial run.

Project Milestones

- May 2023 ○ Smooth hot commissioning of EVA plant
- Oct 2022 ○ Mid-term delivery of EVA facility
- Dec 2021 ○ Fujian Gulei Petrochemical Co., Ltd. started commercial operations.
- Aug 2021 ○ Smooth hot commissioning of steam crackers, SM, EO/EG.
- Mar 2021 ○ PP hot commissioning succeeded.
- Sep 2020 ○ Intermediate delivery of the PP processing units.
- Jun 2019 ○ Project construction started.
- May 2019 ○ Approval of the land for project planning by the Gulei Committee.
- Aug 2018 ○ Official approval was granted to the Gulei Refining & Chemical Plant Project.
- Nov 2016 ○ Established Fujian Gulei Petrochemical Co., Ltd.

Panorama of the Gulei Integrated Refinery Project



Panorama of the EVA facility



Aerial view of the steam cracking unit



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.

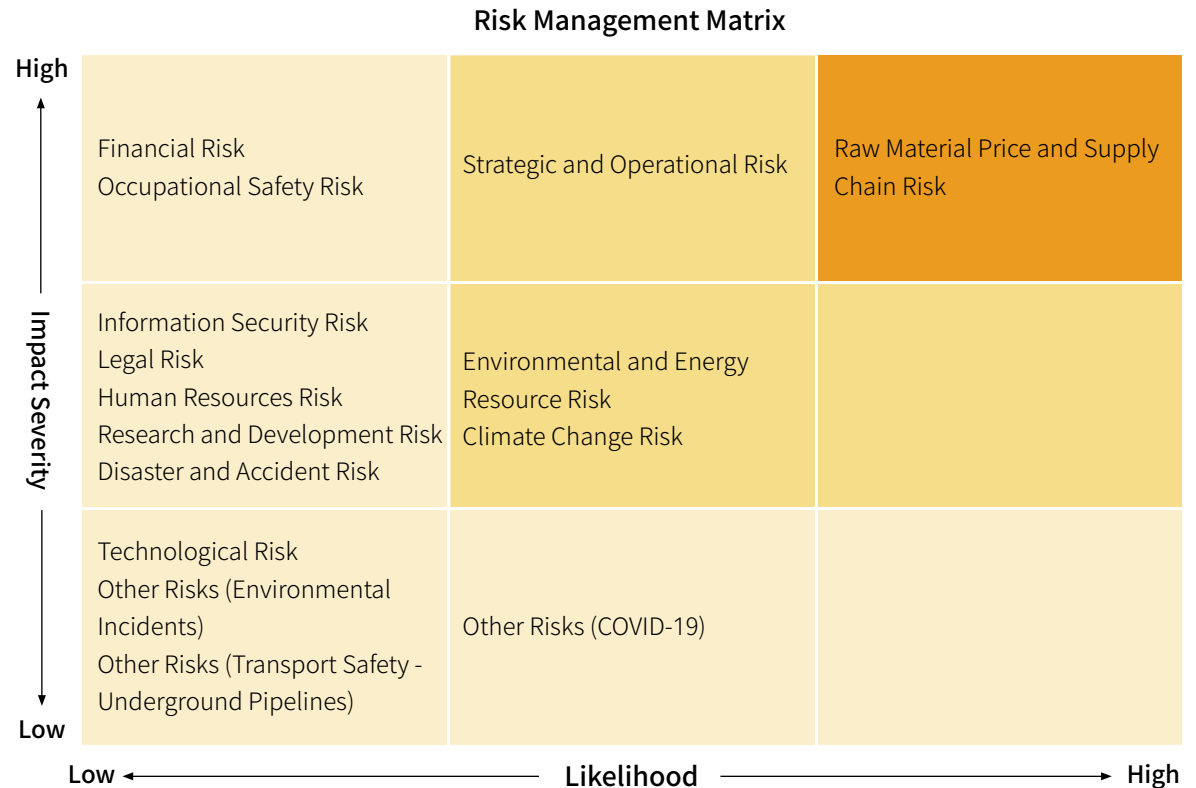
The complete policy includes the risk management organization, risk management process, and risk management category and mechanism. Please refer to [Risk Management-USI Corporation](#)

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 annually adjusts the controls with respect to the changes in the internal (external) operational environment.

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

I. Strategy and framework of cybersecurity risk management

1 Framework of cybersecurity risk management

1. Organization of information security governance: Each year the information security management review meeting is held 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 to decide on the two major output items of the information security management system (decisions related to opportunities for continuous improvement, and any necessary changes to 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 management 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 9 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 [Risk Management / Information Security Risk](#) for the details of the management programs and cybersecurity risks.

Routine Operation and Management Procedures



4 Resources for cybersecurity management

1. Dedicated Personnel: Established a dedicated corporate organization called the "Information Security Network Division," with a designated Information Security Manager and personnel responsible for information security planning, technology implementation, and related audit matters to maintain and continuously enhance information security.
2. Certification: Successfully obtained ISO 27001 information security certification for nine consecutive years, with no significant deficiencies found in related security audits.
3. Customer Satisfaction: No major security incidents and no complaints of customer data loss.
4. Education and Training: Information personnel have completed biannual information security education and training and assessments. A total of 4,070 employees across the group participated in two social engineering phishing email drills annually.
5. Investment in Information Security: Total investment in information security amounted to approximately NT\$12.96 million.
6. Information Security Notices: Issued a total of nine security notices.

Audit operations and reporting channels

Audit operations and reporting channels

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 2023, the internal audit unit implemented audits according to the annual audit program and completed 53 audit reports and 12 follow-up reports summarized as follows:

Audit Item	Recommendation	Improvement Status
Purchase and payment cycle and compliance matters	Some operations were not implemented. Unfailing supervision and revision were recommended.	Improved as recommended.
Production Cycle and Compliance Cycle	Some operational procedures or forms records are inconsistent or require revision. Unfailing supervision and revision were recommended.	Improved as recommended.
OH&S	Some aspects of access control, facility management, operation forms, and license management execution are not yet perfect. Unfailing supervision were recommended.	Improved as recommended.
Subsidiary audits	Enhanced implementation and supervisions were advised for the non-conforming parts of operation and the imperfect forms and records. Unfailing supervision and implementation were recommended.	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.

I. Personal reporting

Face-to-face description.

II. Phone reporting

02-26503783

III. 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

Sustainability Principle: Unity Governance

Significance and Strategy	Achievement and Goal	Management
<p>Significance to USI</p> <p>Ethical corporate management and legal compliance are USI's belief in sustainable development</p> <hr/> <p>Strategy and Approach</p> <ol style="list-style-type: none"> 1. Periodic compliance audit. 2. Keeping up with the direction of legal/regulatory updates and amendments. 3. Participation in association discussions on legal acts. 4. Internal awareness education, education, and training. <hr/> <p>Commitment</p> <p>Strict legal compliance</p> <hr/> <p>Data scope</p> <p>USI coverage 100%</p>	<p>Sustainability Goal</p> <p>No legal and/or regulatory noncompliance.</p> <hr/> <p>2023 Projects</p> <ol style="list-style-type: none"> 1. Participation in legal outreach activities organized by government agencies. 2. Identification of HSE regulations. <hr/> <p>2023 Achievements</p> <ol style="list-style-type: none"> 1. No violation or fine relating to product labeling was reported 2. No violation of economic laws and regulations. 3. Offense of environmental regulations and/or regulations: 4 offenses 4. There were no incidents of violation of Occupational Safety and Health Act resulting in fines. 	<p>Effectiveness Assessment</p> <p>Monetary Fine and Non-Monetary Sanctions</p> <hr/> <p>Grievance Mechanism</p> <ul style="list-style-type: none"> · "Contact us" on the corporate website. · Stakeholder contact information · List of HSE Information

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.

Environment	Employee
<ul style="list-style-type: none"> ✓ Compliance with HSE and energy regulations. ✓ Management of toxic and concerned chemical substances ✓ Pollution control and waste management ✓ Safety and disaster prevention ✓ Certification of the ISO14001, ISO50001, and ISO45001 management systems. ✓ Verification of the ISO14064 GHG Inventory Management System. ✓ Implementation and certification of the ISO 46001 Water Efficiency Management System. ✓ Implementation of ISO 14067 Carbon Footprint of Products and verification. ✓ Education/training and publicity of industrial safety 	<ul style="list-style-type: none"> ✓ Respect for human rights ✓ Protection of freedom of association ✓ Compliance with labor laws and regulations ✓ Occupational safety and health laws and regulations
Product	Corporate Governance
<ul style="list-style-type: none"> ✓ Strengthening Board functions ✓ Functional Committees ✓ Information transparency ✓ Risk Management ✓ Internal control and audit systems ✓ Sustainable Development Best Practice Principles 	<ul style="list-style-type: none"> ✓ Product labeling ✓ Product quality and safety ✓ Fair trade ✓ Respect for IP rights ✓ ISO 9001 system certification

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

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 2023, 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 4 times for violation of environmental protection laws and/or regulations. No violation of the Occupational Safety and Health Act was reported. 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.

Monetary Fine and Non-Monetary Sanctions for Industrial Safety Incidents in 2023 and Improvement



Counts

* 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
4 offence

Causes for Violation and Corrective Action

Ticketed defect

1. RTO: The combustion temperature in the furnace dropped due to the misalignment of the damper. Fine amount: NT\$450,000.
2. The total net exhaust gas does not comply with Article 5 of the "Volatile Organic Compounds Air Pollution Emission Standards". Fine amount: NT\$150,000.
3. The operating conditions are inconsistent with the license approval content. Fine amount: NT\$300,000.
4. Flare has been used for multiple days during the repair period. Fine amount: NT\$150,000.

Corrective Action

1. Inspect and correct the poppet valve positioner.
2. Add natural gas pipelines to supplement Flare exhaust gas when the calorific value is insufficient to meet regulatory requirements.
3. Submit an application for change of operating license.
4. Propose changes to the flare usage plan and modify it to meet actual operating conditions.

IP Management

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 on 2019/10/22 (expired on 2038/03/07)
Hydrogenated block copolymer and composition thereof	I660975	Taiwan	Awarded the patent on 2019/06/01 (expired on 2038/03/05)
MULTILAYER SHEET STRUCTURE FOR DENTAL APPLIANCE	US-2020-0237478	USA	Awarded the patent on 2022/05/31 (expired on 2040/08/10)
Fire retardant composite structure (utility model patent)	M597795	Taiwan	Awarded the patent on 2020/07/01 (expired on 2030/03/12)
Fire retardant composite structure (utility model patent)	CN213675870-U	China	Awarded the patent on 2021/07/13 (expired on 2030/06/1)
Recyclable Crosslinked Polymer Foam Material and Its Applications	I824566	Taiwan	Awarded the patent on 2023/12/01 (expired on 2042/06/15)

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 Smart management GRI 2-25, 3-3

Significance and Strategy	Impact Management	Achievement and Goal	Management
<p>Significance to USI</p> <p>Through smart management, we have sped up analysis, optimized decision-making, enhanced industrial safety protection, and improved operational performance towards smart petrochemical industry.</p> <hr/> <p>Strategy</p> <p>Integrate platform resources to break through data silo, and enhance safety, quality, and efficiency with smart technology.</p> <hr/> <p>Commitment</p> <p>Actively introduce smart management systems to improve operational performance.</p> <p>Data scope: USI coverage 100%</p>	<p>Positive/Negative Impacts</p> <p>Positive potential impact: Develop AI systems for use in production and industrial safety management</p> <p>Positive actual impact: Enhance efficiency with automated processes</p> <p>Negative potential impact: Workforce simplification affects the right to work.</p> <hr/> <p>Impact Boundary</p> <p>USI employees and contractors</p> <hr/> <p>Processes to remediate and prevent negative impacts</p> <p>Enhance employee education and training and assistance for internal transfer to protect the right to work</p>	<p>2023 Goals</p> <ol style="list-style-type: none"> 1. Develop the data integration platform 2. Enhance energy conservation and carbon reduction 3. Enhance production management efficiency <hr/> <p>2023 Achievements</p> <ol style="list-style-type: none"> 1. DCS + Field Data System Implementation 2. High-Pressure Reactor Vibration Monitoring 3. AI quality prediction 4. Soot detection system 5. Digital Product Data Management System <hr/> <p>2024 Goals</p> <ol style="list-style-type: none"> 1. Continuously develop various AI projects and optimize existing systems <hr/> <p>Medium- & Long-Term Goals</p> <ol style="list-style-type: none"> 1. Optimize various AI models to enhance prediction accuracy. 2. Enrich the data management knowledge of employees to enhance analysis efficiency and optimize strategy implementation. 3. Invest in developing smart management applications to enhance production management efficiency. 	<p>Effectiveness Assessment</p> <ol style="list-style-type: none"> 1. Hold meetings periodically to follow up the development progress and implementation effectiveness 2. Publish patent achievements and share technology <hr/> <p>Achievements and Directions of Technology</p> <ol style="list-style-type: none"> 1. Engage in interdisciplinary collaboration with external units to accelerate new technology introduction. 2. Enhance information security governance to prevent data leakage.

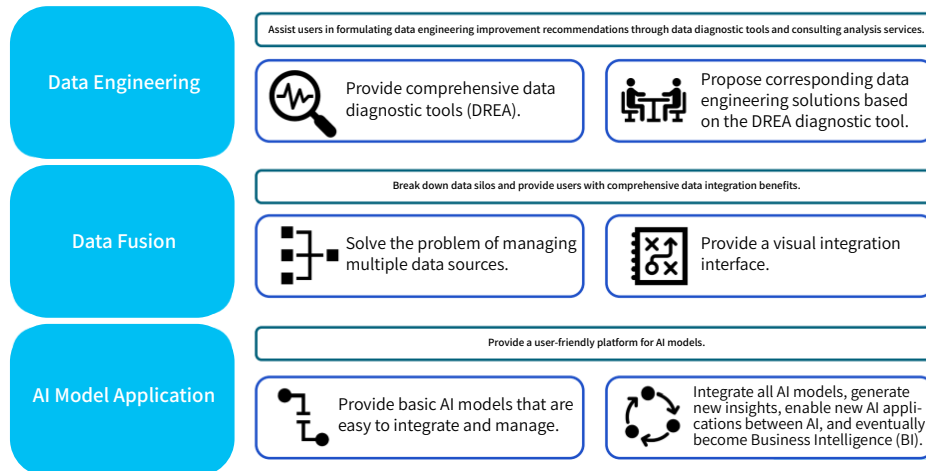
In recent years, we have been actively promoting the use of various smart management systems in the smart predictive maintenance of key equipment, AI industrial safety image recognition system, contractor personnel access facial recognition system, Energy Management System, VR-tanker leakage emergency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

DCS+ Field-based Data System Implementation

DCS+ breaks down data silos by integrating on-site field data through data engineering, solving the problem of multiple data sources, and providing an integrated data platform for the development of AI model applications.

Provide comprehensive data transformation to digital transformation empowerment services.

DCS+ Digital Transformation Empowerment Services.



The real-time monitoring of the high-pressure reactor's vibration status and the development of AI model analysis for predictive maintenance.

Implement real-time monitoring of the high-pressure reactor's vibration, integrate process operation parameters, and develop an AI model to analyze the real-time operating status of the high-pressure reactor. Utilize a visual interface system to monitor the health status of the high-pressure reactor at any time, predict the operating life, determine the shutdown timing, reduce the probability of process deviation, lower the risk of occupational incidents, and enhance operational safety.

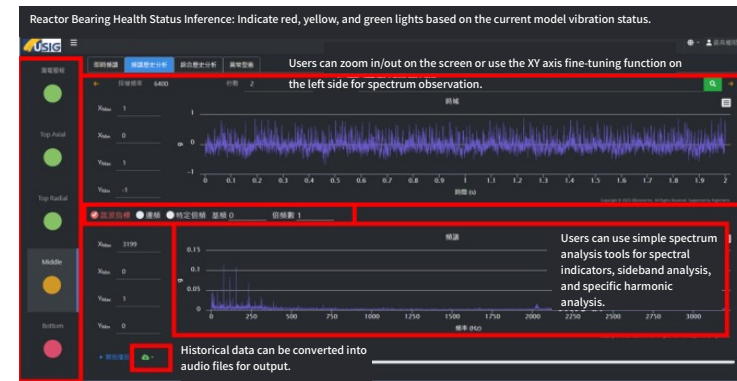


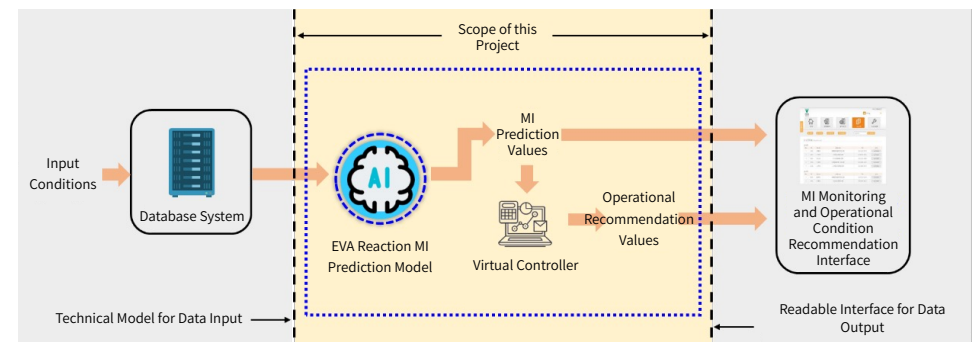
Diagram: Visualization of Operational Status System

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.

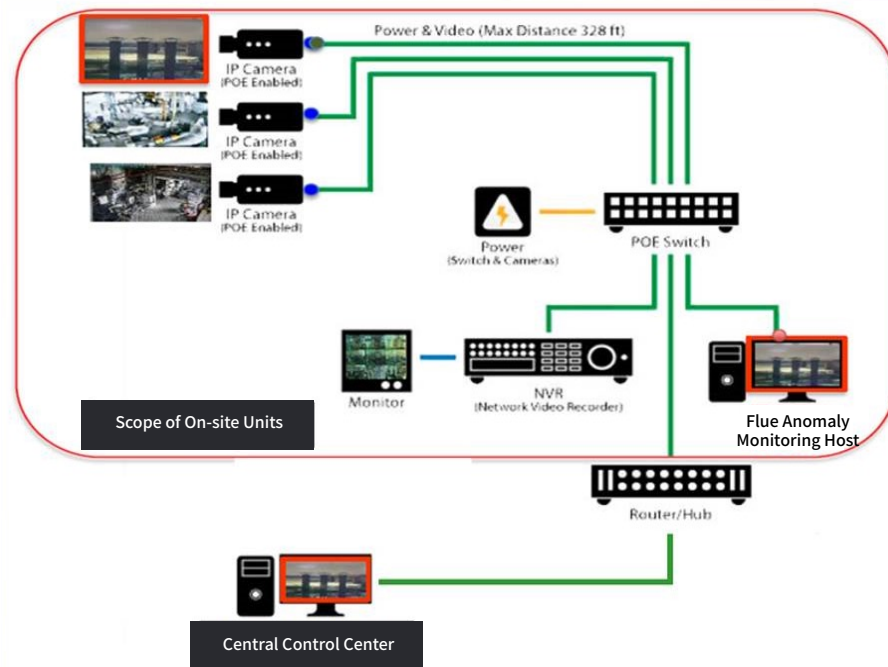
This plan is expected to be implemented in three phases. The second phase has been completed in 2023 and the third phase will continue in 2024.



Soot detection system

Previously, the monitoring and judgment of abnormal chimney emissions were manually performed by operators, but on-site personnel were too busy to monitor screens 24/7. By introducing a Soot detection system, the burden on manpower is reduced. When soot is emitted from the chimney, the system immediately notifies on-site personnel to make adjustments, preventing continuous occurrence of soot. After a year and a half of learning, the AI system has achieved a recognition rate of 90%, effectively controlling and avoiding soot emissions, thus reducing production losses.

Chimney Smoke Detection System



Digital Product Data Management System

In 2023, completed pipeline and equipment reverse scanned 3D models, along with corresponding files and process diagrams, will be linked to the digital graphics and text management system. This integration will enable linking and interaction between 3D models, live point clouds, related drawings, data files, design and operating attributes, process diagrams, and other data. The goal is to establish digital data management and visualization capabilities, achieving effective integration of equipment, pipeline, and process data.

