



Hengyi Petrochemical Co.,Ltd.

2022 Social Responsibility Report





About this report

Purpose This report aims to respond to the expectations and concerns of stakeholders regarding the sustainable development concept and policies of Hengyi Petrochemical Co., Ltd. and its efforts in environmental protection, social responsibility, and corporate governance in 2022.

Organizational Coverage The report covers Hengyi Petrochemical Co.,Ltd. and its branches, subsidiaries, and affiliates.

Reporting Period This report covers the period from 1 January 2022 to 31 December 2022. Some contents and data are from previous years.

Publication This is the forth social responsibility report issued by the company.

References This report has been prepared in accordance with the requirements of Chapter 8 "Social Responsibility" of the "Regulations of Shenzhen Stock Exchange for Self-Discipline of Listed Companies on the Main Board" and with reference to the "Global Reporting Initiative (GRI) Standards," as well as the "Guidelines for Social Responsibility Reporting Compilation" (GB/T 36000-2015) and the "Guidelines for Chinese Enterprise Social Responsibility Reporting Compilation (CASS-CSR4.0)" issued by the Chinese Academy of Social Sciences.

Abbreviations For ease of presentation and readability, Hengyi Petrochemical Co.,Ltd. is also referred to as "Hengyi", the "Company" and "We" in this report.

Data Sources The information and data cited in this report come from official company documents, statistical and financial reports, provided by Hengyi employees and partners. It's only for disclosing Hengyi's sustainable development progress, not for commercial use. The financial data in this report is subject to the annual report data. Other data is from internal statistics. The currency used in this report is RMB unless otherwise noted.

Language Versions This report has been reviewed and approved by the board of directors of the company on April 19, 2023.This report is available in simplified Chinese and English. In case of inconsistency, please refer to the simplified Chinese version as it shall prevail.

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Chairman's Statment



In 2022, which was an extraordinary and challenging year, Hengyi upheld its strategic resolve and adjusted its business strategies to effectively combine its operations and sustainable development. Under the relentless efforts of all employees, Hengyi overcame the downward pressure in the industry and gained valuable entry into the next round of competition.

In the past year, Hengyi actively implemented its sustainable development philosophy and strengthened environmental protection, committed to energy conservation and emissions reduction. During production, Hengyi adhered to a bottom-line mentality and focused on its core business, resulting in a continuously improving production safety situation and significantly improved risk resistance capability. Hengyi's Brunei Refining and Chemical project won the national-level "Luban Award" engineering prize and was praised as a model for building a Asia-Pacific community of shared destiny by People's Daily. In product R&D, Hengyi persistently drove innovation and increased R&D investment, and was the first in the industry to break through the bottleneck of environmental-friendly phthalate-free polyester industrialization, opening a new era of green development. Through technological innovation and management transformation, Hengyi continuously advanced the company's green, low-carbon and environmental protection processes, comprehensively enhancing its sustainable development level.

Facing the complex and changing international situation and macro environment, Hengyi adheres to a strategic outlook, enhances its sense of urgency and mission, and always maintains a humble and grateful heart. With the goal of "reducing costs, increasing efficiency and improving quality," Hengyi works hard and improves its operations and management efficiency, in order to achieve Hengyi's long-term development goals.

In 2023, Hengyi will continue to be guided by the spirit of the CPC's 20th National Congress, enhance its sense of urgency, responsibility, and mission, and continuously improve its own quality. With a high sense of social responsibility and mission, Hengyi will make persistent efforts to achieve the grand vision of "Green Hengyi, Building a Harmonious society." In the future, Hengyi will adhere to the development strategy continuously improve green management, continuously promote green production, actively promote resource conservation, and continuously explore the circular economy. Hengyi will also strengthen its R&D efforts on recyclable and biodegradable products, and jointly build a green ecological circle of circular development with upstream and downstream industries in the industrial chain. At the same time, Hengyi will also continue to fulfill its corporate social responsibility, committed to community development, employee welfare, public welfare and charity projects, contributing to the realization of the goal of common prosperity and rural revitalization.

I believe that with the joint efforts of all Hengyi employees, the future Hengyi will usher in a better tomorrow.

About Hengyi

Hengyi is committed to becoming a leading and first-class petrochemical company in China and the world, continuously improving its competitiveness through resource sharing and industry collaboration. The company expands its industrial supporting functions and enriches its petrochemical products through multi-level, three-dimensional industrial layout and integration of production and finance strategies. Its main products include purified terephthalic acid (PTA), caprolactam (CPL), polyethylene terephthalate (PET) chips, bottles, pre-oriented yarn (POY), draw-textured yarn (DTY), and short fibers. Polyester products are widely used and closely related to national and people's livelihood needs, mainly for textile clothing, home textiles, and industrial applications. Hengyi has successfully launched differentiated products such as "YiTaiKang" environmental-friendly polyester chips and fibers, cationic polyester chips and fibers, ultra-high elastic fibers, imitated rabbit hair fibers, special shape fibers, colored fibers, mother fibers, bamboo fibers, dragon fibers, and colored fibers, leading the field in differentiation and high-value-added products

Through resource sharing and industrial synergy, the company enhances its overall competitiveness, creating a dual "polyester + nylon" driving mode and forming a multi-level and three-dimensional industrial layout with the petrochemical industry chain as the core business, supply chain service business as the growth business, and differentiated fiber products, industrial intelligent technology applications as emerging businesses.



Since its inception, the company has focused on the strategic policy of "strengthening and enhancing its core business competitiveness." In collaboration with strategic partners, it continuously expands upstream in the petrochemical industry chain. The company will advance by leveraging the Brunei PMB Petrochemical Project, a joint venture with the Brunei government. It is a key "Belt and Road" initiative, holding strategic significance and marking a crucial step toward international capacity cooperation and integrated industrial chain goals. The project will exemplify China-Brunei friendly cooperation.

The revenue amounted in 2022: 152.05 billion

Hengyi Culture

Hengyi has developed a unique "54354" corporate culture mechanism over 40 years, focusing on five sub-cultures: shared creation, dedication to excellence, pioneering, stability and security, and mutual cooperation. It adheres to four principles, aiming for harmony between culture and strategy, growth and employee development, and cultural advantage and competitiveness. By building five driving systems, Hengyi aspires to be a century-old enterprise deeply respected, welcomed, trusted, and loved by society, customers, shareholders, and employees. Core values include pragmatism, responsibility, surpassing, and sharing.

- Philosophy** Persistence rewards diligence, noble aspirations reach far
- Mission** Build a century-old, evergreen foundation and stand among the world's renowned enterprises
- Vision** Become one of the world's top-tier petrochemical industry groups
- Spirit** Never stop moving forward, create brilliance



ESG HIGHLIGHTS

Awards and Honors

Hengyi was awarded the "2022 ESG Gold Medal"

The "2022 China Manufacturing Listed Companies Social Responsibility Five Star Gold Award List" is an annual social responsibility and ESG award published by the Times Responsibility 40 Forum think tank as an independent third-party evaluation. Winning this award recognizes Hengyi's commitment as a model of shared prosperity development.



01

Governance

- 6 shareholder meetings
- 0 major fraudulent event
- 25 management and special audits

02

Common Prosperity-Responsibility

- 15,637 employees
- Female employees ratio of 26.37%
- 98 hours of training time per person
- 100% of physical examination coverage
- Issued skill certification to 1,500 people
- Primary school donation of RMB 27 million

03

Green Production-Carbon Net-zero

- Solar power generation of 44.2 million kWh
- Emission index compliance rate 100%
- Water saving of 423 million tonnes
- Environmental protection cost of RMB 80.10 million

04

Ecosystem-Accountability

- 1,661 suppliers
- 919 safety training sessions
- 0 major casualties
- 100% safety training pass rate
- Safety cost of RMB 31.13 million

05

Innovation-Sustainability

- 1,065 R&D personnel
- R&D investment of RMB 690 million
- 23 projects under research

Governance

Hengyi upholds fairness, transparency, and compliance, aiming to establish a robust corporate governance system. The company emphasizes optimized management, reinforced internal controls, and risk management to ensure steady growth and protect investors' interests.

- ◎ Governance
- ◎ Business Ethics
- ◎ Compliance
- ◎ Investor Relationship
- ◎ Stakeholder Communication
- ◎ Materiality Analysis

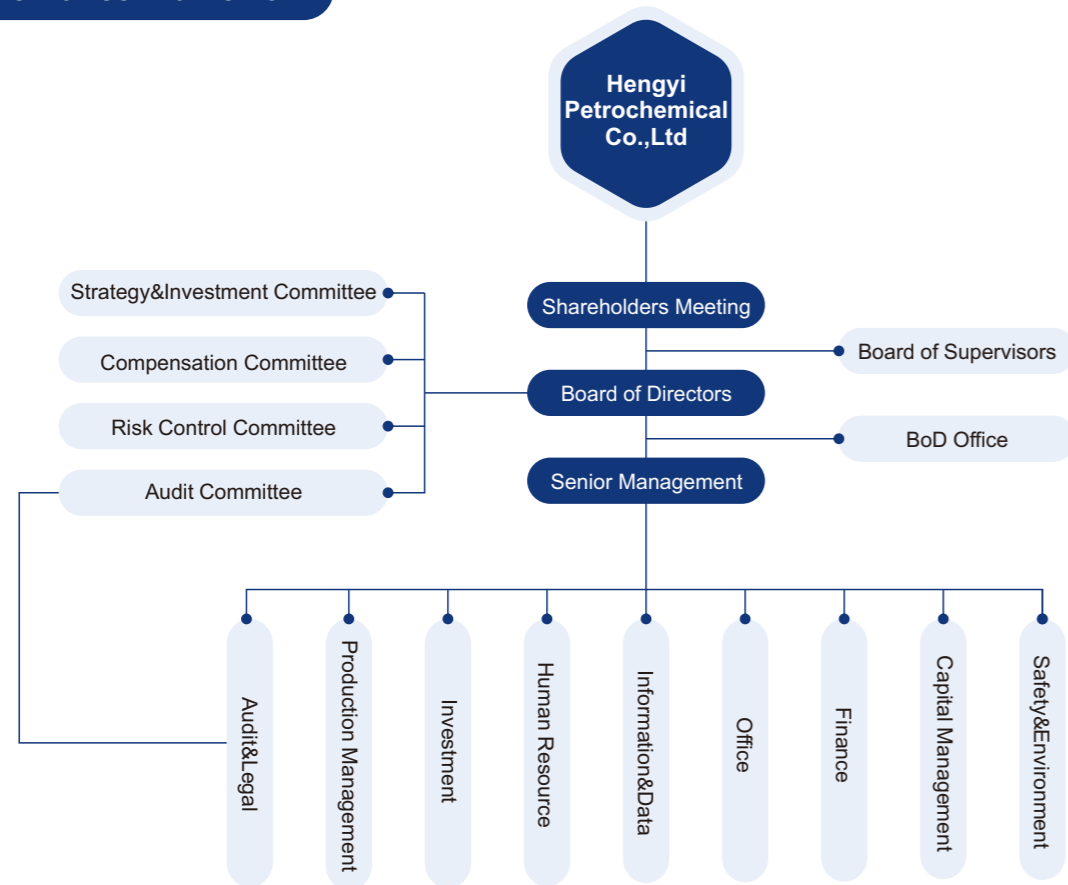
SDGs we focused in this section:



Corporate Governance

Hengyi is dedicated to high-level corporate governance, focusing on diligent boards and robust internal supervision. Complying with the 'Company Law,' 'Securities Law,' 'Corporate Governance Guidelines for Listed Companies,' 'Shenzhen Stock Exchange Listing Rules,' 'Shenzhen Stock Exchange Main Board Listing Companies Self-regulatory Guidelines No. 1 - Main Board Listed Companies' Standard Operation,' and other relevant laws and regulations., the company refines its governance standards based on its situation, enhancing the performance of the 'shareholders meeting, board of directors, board of supervisors and senior management,' and promoting the modernization of governance systems and capabilities.

Governance Framework



Shareholders Meeting

Hengyi's shareholders meeting strictly follow "Company Law of the People's Republic of China", "Securities Law of the PRC", "Rules for Shareholders' Meetings of Listed Companies", "Company Articles of Association", "Shareholders' Meeting Rules", and other relevant laws, regulations, and rules. All shareholders are treated fairly.

In 2022, the company held **6** shareholder meetings



Board of Directors

The Hengyi Board of Directors has 9 directors, including 6 non-independent and 3 independent directors. The Board formulates company strategy and policies, sets performance and management goals, evaluates business performance and oversees management.

In 2022, the Board held **10** meetings.

Professional Committee

The Board has four committees: Strategy & Investment, Compensation, Risk Control and Audit. These committees are accountable to the Board, have clear responsibilities and powers, and provide advice and recommendations. Each committee operates within its own field to ensure the company's smooth operation.

Board of Supervisors

As of the reporting period end, the company's Board of Supervisors consisted of 3 members, 2 of whom are female. The Board oversees the company's major matters, finances, and the legality of the directors and senior management. It protects shareholder rights and company interests, and improves the company's standard operating level.

In 2022, the Board held **8** meetings.

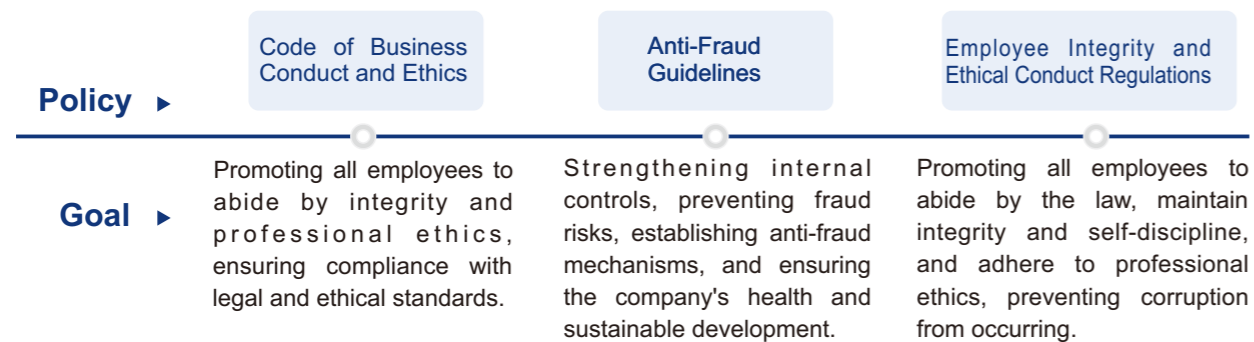
Senior Management

As of the reporting period end, the company's management consisted of 8 senior personnel. The management team consists of experts in petrochemical, materials science, finance, law, marketing, etc., and has professional judgment and rich management experience, allowing the company to quickly identify market opportunities and potential risks, and maintain its industry advantage.

Business Ethics

The company strictly adheres to laws and regulations such as the "Civil Code of the PRC", "Criminal Law of the PRC", "Supervision Law of the PRC", "Company Law of the PRC", "Anti-Monopoly Law of the PRC", "Anti-Money Laundering Law of the PRC", "Anti-Unfair Competition Law of the PRC", "Labor Contract Law of the PRC", and "Environmental Protection Law of the PRC".

With a "zero-tolerance" attitude towards fraud and corruption, it has established an anti-fraud working group led by the chairman. The company's audit and legal departments oversee internal audits, supervision, and disciplinary action, continuously improving integrity-related systems and regulations. This strengthens long-term warning mechanisms against fraud and bribery, safeguarding the rights and interests of the company and its shareholders.



Report and Complaint

The company establishes a robust complaint and reporting management mechanism, standardizing channels and processes for timely and effective handling. Diversified reporting channels are publicized through various means.

Hengyi encourages real-name reporting and strictly protects whistleblowers' information and identities. When accepting or verifying reports, personal safety and identity are safeguarded. Obstruction or suppression of reporting is not tolerated, and retaliation against whistleblowers is dealt with accordingly, involving judicial authorities if necessary.

Anti-Fraud Office reporting channels

Phone: 0571-83581890 (ext: 1890)

Fax: 0571-82797666

Email: fwb@hengyi.com

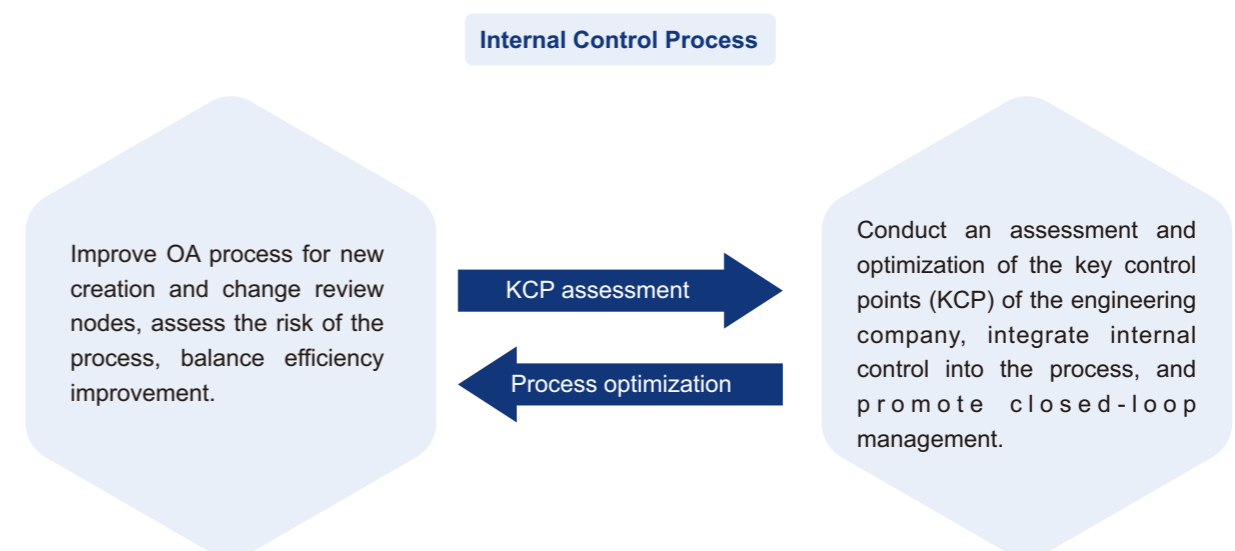
Compliance

Hengyi consistently adheres to the principle of "legally and compliantly pursuing high-quality", sticks to transparent and compliant operation guidelines, and establishes a comprehensive compliance management system that meets the needs of the company's business development and the best practices in the petrochemical industry. In 2022, the company further integrated and optimized its internal control, risk and compliance management systems, realizing a full alignment of the internal control system and standards, and improving the company's risk management ability, immunity and resilience, providing a solid guarantee for the realization of the company's development strategy and sustainable development.

Internal Control Construction

To effectively strengthen the internal control system, the company focuses on system development, top-level design, and system review.

In 2022, collaborating with all BUs, the company audited new unit systems from a risk control perspective, suggesting modifications and optimizing processes. This reinforced internal control management and ensured the achievement of business goals.



Key Business Audit

Focusing on the company's core, the audit work aims to "prevent risks, control costs, strengthen management, and promote standardization." Targeting key business areas, a diversified audit model of "routine + special + continuous supervision + spot checks" is implemented for audit oversight, fulfilling internal audit responsibilities and ensuring the effective improvement of the company's risk management level.



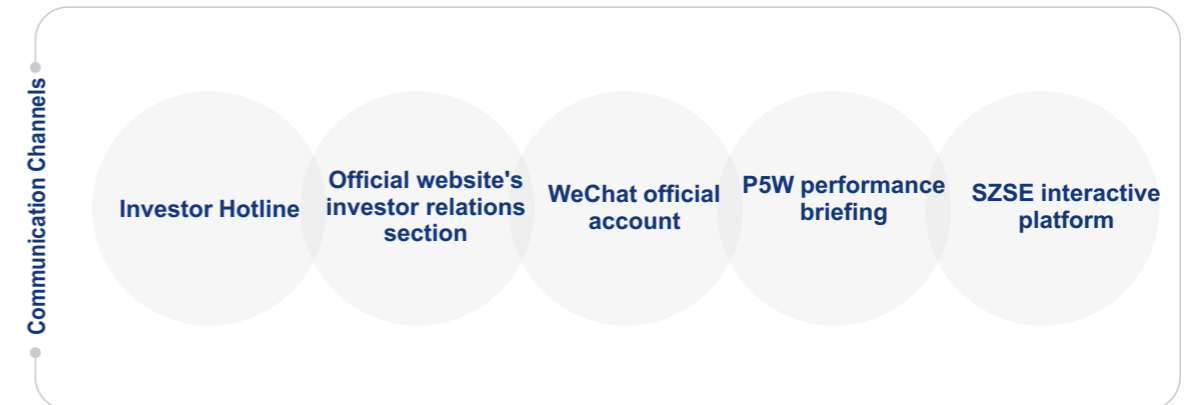
Project Audit

The company values project auditing, standardizes the auditing process, focuses on the foundation of project auditing, and continuously improves audit quality. In 2022, with 'full-process project tracking' as the core method, the company regularly tracks project bidding dynamics and conducts monthly routine inspections of engineering projects, ensuring all activities are within the scope permitted by laws and regulations.



Investor Relationship

Hengyi values information disclosure, following laws and regulations, establishing a rigorous process, striving for timely and accurate disclosure. The company engages in various investor relations activities, proactively communicating with investors, showcasing development highlights, conveying investment value, and safeguarding their rights.



The company strictly follows laws and regulations to ensure high-quality information disclosure. It continually improves governance and uses designated media to comply with regulations and strengthen communication with investors.

In 2022, the company disclosed **241** announcements, including **4** regular reports.

Stakeholder Communication

Hengyi's main stakeholders include government agencies, shareholders, customers, employees, and communities. The company engages with them through various channels to understand their concerns and expectations.

Stakeholders	Topics covered	Communication Channel
Government and regulators	<ul style="list-style-type: none"> Business ethics Compliant operations Clean energy Climate change Water resource Pollutant management Innovation 	<ul style="list-style-type: none"> Symposium and seminar Project approval Government regulation
Shareholders and investors	<ul style="list-style-type: none"> Innovation Climate change Clean energy Digitalization Risk control Performance Anti-corruption 	<ul style="list-style-type: none"> Corporate annual reports and announcements Roadshow Special meetings Hotline IR website Market conference
Clients	<ul style="list-style-type: none"> Product quality and service Green innovation Circular economy 	<ul style="list-style-type: none"> Services Client meeting Questionnaire Website and WeChat
Employees	<ul style="list-style-type: none"> Safety management Training and development Diversity Well-being 	<ul style="list-style-type: none"> Staff and workers' congress Manager's mailbox Training Culture activities Website and WeChat
Suppliers	<ul style="list-style-type: none"> Responsible procurement 	<ul style="list-style-type: none"> Supplier assistance Supplier training
Community	<ul style="list-style-type: none"> Climate change Pollutant management Clean energy Resource recycling Water resource 	<ul style="list-style-type: none"> Environment performance data collection and disclosure External survey Media communication

Materiality Analysis

Hengyi involves stakeholders in topics identification to understand their sustainable development expectations and concerns, and to focus on ESG practices and disclosures. The company has a process for analyzing sustainability topics, including identification, assessment, and selection.

01 Identification ↓

Considering national policies, industry trends, peer sustainability benchmarking, and the company's development strategy and social responsibility standards, the company established a sustainable development topic repository.

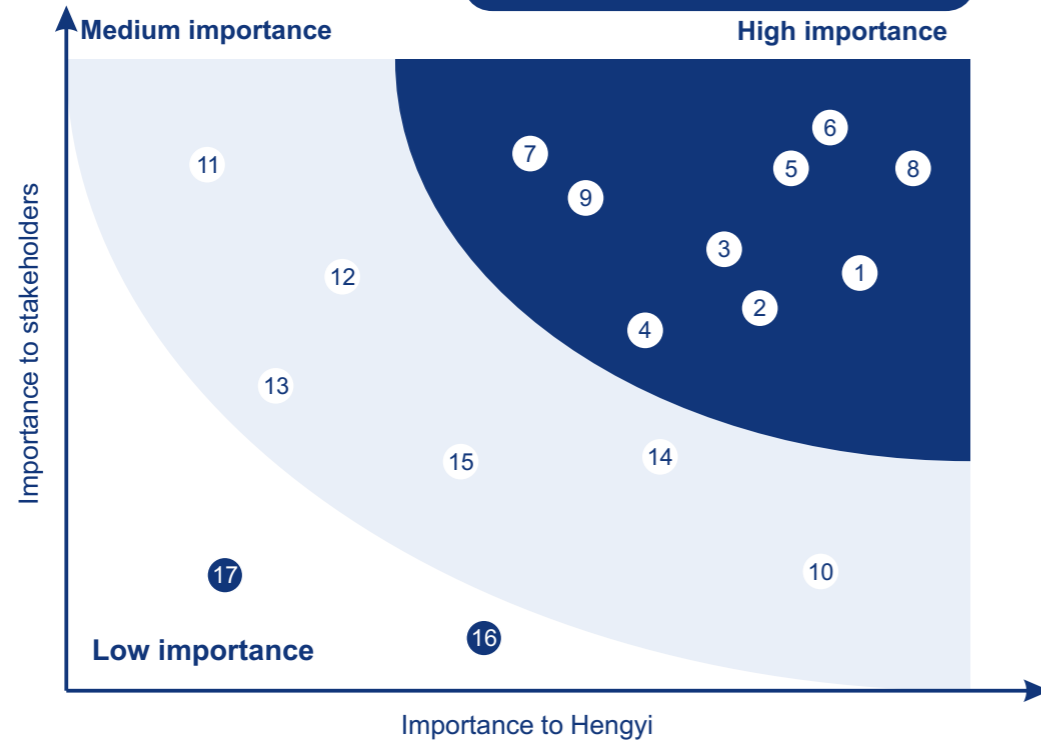
02 Assessment ↓

Conduct research on the importance of topics for stakeholders such as investors, customers, suppliers, and communities, while assessing the relevance to global sustainable development goals, stakeholders' concerns, and their importance to Hengyi.

03 Priorization ↓

Based on the assessment results, prioritize topics, have them reviewed by the company's governance level and experts, and select the substantial topics for key disclosure.

ESG Importance Matrix in 2022



Level	No	Topics
Core Issues	1	Climate change
	2	Water resource management
	3	Pollutant management
	4	Clean energy
	5	Safety management
	6	Product quality and service
	7	Green innovation
	8	Compliance
	9	Business ethics and anti-corruption
Important Issues	10	Innovation
	11	Resource recycling
	12	Employee well-being
	13	Employee training
	14	Responsible procurement
	15	Circular economy
General Issues	16	Digitalization
	17	Diversity and equality

Common Prosperity -Responsibility

Hengyi supports national policies of common prosperity and rural revitalization. We focus on employee development and welfare, and fulfill social responsibilities to contribute to achieving national goals.

- ◎ Employee well-being
- ◎ Rural Revitalization
- ◎ Charity

SDGs we focused
in this section:



Employee well-being

Hengyi has always valued the rights and welfare of employees and strictly abides by relevant domestic and international laws and regulations, while establishing and continuously improving internal employment regulations. We strive to build a diverse and inclusive team, provide a positive, equal and harmonious working environment for employees. To protect employee rights, we have established a scientific salary and benefits system, as well as an employee care system, to care for employees in all aspects and improve their sense of happiness, belonging, and job motivation. We believe that only when employees are satisfied, can the company develop and innovate better.

Incentives

Hengyi has a comprehensive salary and benefits system with external competitiveness and internal fairness. They implement a salary control policy to improve internal management and provide salary incentives to promote personnel efficiency. Salary standards are determined based on job responsibilities and employee competency. Different salary incentive policies are provided for different types of employees, and performance rewards are given based on performance appraisals.

Brunei Project

We place great emphasis on employee salary and benefits worldwide. For example, in our Brunei project, the salary standards are higher than the local industry average. Hengyi values the stability and recognition of the local employee team and offers competitive compensation to attract and retain outstanding local talents. This also contributes positively to promoting local employment and improving the community's standard of living.



Employee Shareholding Plans

Hengyi is committed to the "people-oriented" concept, fully mobilizing employee enthusiasm, and continuously attracting and retaining outstanding management talents and business backbones, while balancing the interests of the company, shareholders, and employees. The company has implemented four employee shareholding plans, three equity incentive plans, and three repurchase plans since 2015. In October 2022, Hengyi launched the third share repurchase plan, using its own funds to repurchase shares for implementing employee shareholding plans or equity incentives at a price not exceeding RMB 11.5 per share.

In April 2021, the company announced the fourth employee shareholding plan, benefiting nearly 5,000 employees with a total amount of RMB 1.6 billion. The lock-up period for the fourth plan's shares expired on September 23, 2022. Cash dividends of RMB 22,750,920 have been distributed to the employee shareholding plan.

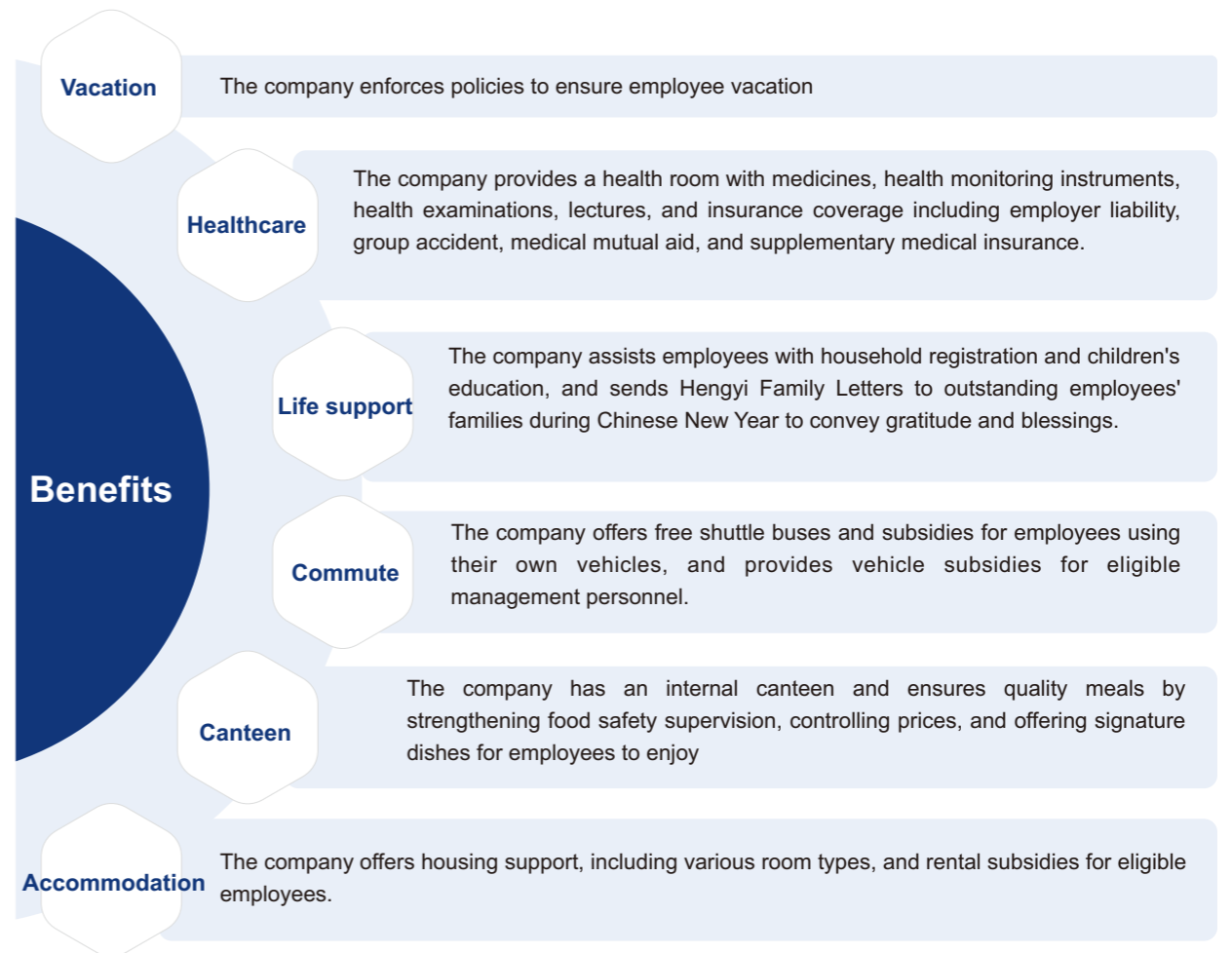
Well-being

Employee Benefits

Hengyi prioritizes employee benefit while strictly following national policies and laws. The company provides comprehensive employee benefits, including social insurance, housing and transportation allowances, statutory holidays, and employee training and education. In 2022, these benefits covered all employees, ensuring their welfare and rights.

Contract Signing Rate 100%	Social Security Coverage 100%	Health&Safety Training Coverage 100%
Physical Examination Coverage 100%	Labor Union Participation 100%	Training Coverage 100%

Highlights



Family Care

The company cares not only for its employees but also their families by organizing activities such as visiting families during holidays, distributing gifts, and organizing summer camps for employees' children in 2022.

Summer Camp

To address the challenge of child care for dual-working families during summer vacation, the company partners with universities to organize the Little Bird Summer Camp, a few-week summer art camp for employees' children. The camp provides tutoring and fun activities, enhancing employees' sense of belonging and happiness.



Overseas employee protection



The company provides overseas personal accident insurance for employees in Brunei and offers two paid home leave trips per year with travel expenses fully covered by the company to ensure employees can reunite with their families regularly and enhance their sense of belonging.

Diversity & Equality

The company follows all internationally recognized human rights policies outlined in the United Nations Universal Declaration of Human Rights, International Covenant on Civil and Political Rights, and core conventions of the International Labor Organization. It strives to create a diverse, inclusive, and fair employee team, and prohibits child labor and forced labor while respecting the legitimate rights and interests of all employees."

Gender Equality

The company values diversity and gender equality, with female employees comprising 26.37% of the workforce, including four executives and 162 middle-level managers. Women have played a crucial role in the company's development and contributed to the formation of an international, professional, and career-oriented management team.

Employees number: **15,637**

Female employees: **26.37%**

Female executive number: **4**

Female in middle management: **162**

College degree or above: **33%**

Ethnic minorities: **7.15%**

Outsourcing staff: **1,450**

Local staff in Brunei projects: **32%**

The company values the physical and mental health of female employees and has established a labor protection and safety production system for them. It organizes various activities to raise awareness of health care, and celebrates International Women's Day by carrying out activities to show care for female employees and enhance their sense of happiness in work and life.





Care for Disabilities

Hengyi upholds equal and non-discriminatory employment, and values the employment and social integration of vulnerable groups, including over 600 disabled employees who contribute to the company's development. May is designated as Disability Service Month, during which the company organizes activities to support disabled employees' work and life, and also regularly holds health and cultural events to enrich their spiritual life.

Culture Activities

To enrich employees' spiritual and cultural life, and to let them truly feel the care and warmth of the company while improving their happiness, Hengyi actively organizes various cultural and sports activities, entertainment events, and club activities. In addition to enhancing employees' physical fitness, these activities also further enhance the company's cohesion.

Spring Festival Policy and Benefit

To ensure stable workforce and normal production, Hengyi has launched the Spring Festival job stability policy for its employees, providing on-duty subsidies and implementing staggered leave policies for employees from other regions. The company encourages its subsidiaries to carry out various employee care activities before and after the Chinese New Year according to production conditions, showing appreciation for those who choose to stay on duty during the holiday and creating a good atmosphere of care and support for employees from other regions, fostering employee loyalty.

Human Right-Brunei Project

As a key project of China's "Belt and Road" initiative, the Hengyi Brunei petrochemical project strictly adheres to Brunei's labor laws and regulations, prohibits child labor and forced labor, and provides employees with a standard working and living environment. To ensure the legitimate rights and interests of each employee, the company provides 100% labor protection equipment and medical facilities to ensure that employees receive timely treatment in the event of an accident.

As of the end of 2022, there were a total of 665 local employees in Brunei, accounting for 32% of the total employees in the Brunei project.



Talent Development

Hengyi prioritizes diverse talent development and offers customized training programs to employees based on their job requirements and interests. We believe this promotes their long-term career growth by enhancing their professional skills and knowledge.

We cultivate employees' business development capabilities through activities such as product knowledge and sales case development, sales case competitions, and sales-related courses. We also cultivate sales experts into internal trainers to enhance our sales talent development system and business capabilities.

New-blue Program

Hengyi's talent reserve project is a core program for developing future talent through systematic training of new college graduates. The New Blue Program in 2022 trained nearly 180 college students through various courses.

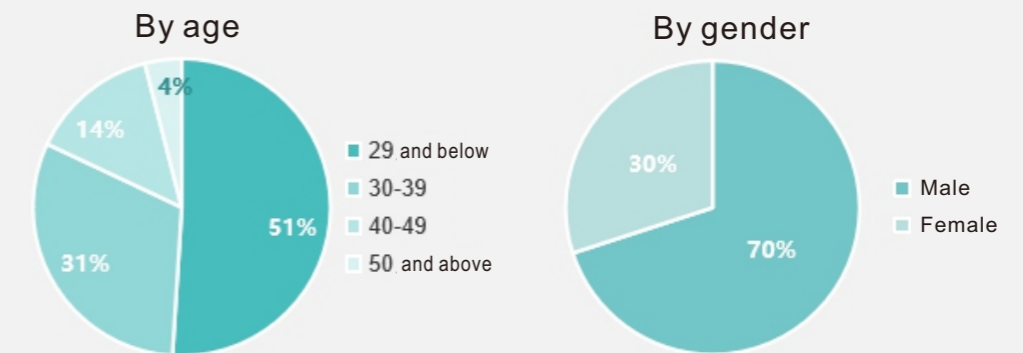
Front-line Manager Program

The company launched training programs for industrial managers, focusing on team building and improving personnel efficiency, covering 14 companies and nearly 800 individuals. Improvement actions were taken to enhance the management skills of front-line managers, creating a positive management atmosphere for industrial workers.

Hengyi University

Hengyi University's online platform has been operating for 5 years with over 5,000 learners and 200+ courses covering various dimensions. It plays a crucial role in motivating employee learning, improving their overall level, and creating enterprise knowledge assets, while enhancing the efficiency of training management.

Percentage of Employee Turnover



Continuing Education for Front-line Employees

Hengyi has partnered with various schools, supported by labor unions, to offer continuing education opportunities for front-line employees. Over the past decade, this has enabled numerous employees to further their education while working, resulting in an effective internal talent supply chain and the development of a group of enterprising "Hengyi craftsmen." Almost 1,200 industrial workers with a high school diploma or below have obtained diplomas of associate degree or higher while working in frontline positions, with an improvement rate of nearly 98%.

Skill Certification

As a pilot unit for occupational skill level certification in Xiaoshan District, Hengyi has actively improved its employee skill development system through the mechanism of "training through assessment." Employees are encouraged to innovate and provide rational suggestions, creating a positive competition atmosphere and cultivating skilled talents guided by the principles of "strong skills, dedication, and innovation."

During the two-year pilot period, over 1,500 employees participated in the company's skill certification program, with close to 1,300 employees obtaining certificates and a pass rate of 83%. The job stability rate among certified employees was as high as 95%, improving the stability of front-line employees.

Rural Revitalization



Education Support

Hengyi responded to the national call for rural revitalization by participating in targeted poverty alleviation activities and supporting education in the western region. The company donated RMB 27 million to support the construction of the Hongde Hope Primary School project in Hongshibao district, Wuzhong City, Ningxia.

The company fulfilled its corporate social responsibility by supporting education and improving local living standards, aiding the poverty alleviation efforts and rural revitalization.



Donations

Hengyi established two named funds with a total of RMB 100 million to support charitable public welfare activities, with the amount of the "Hengyi Charity Fund" in Xiaoshan District increased to RMB 125 million in 2022. The donated funds will be used for initiatives such as "Spring Breeze Action" and "Assistance for Education."



University Cooperation

Hengyi collaborates with major universities in industry-academia-research cooperation to promote STEM education and support its own product research and technological innovation. The company has formed strategic partnerships with well-known universities and research institutions based on the "integration of industry, academia, research, and application," and provides technical and financial support for the transformation of university scientific research achievements.



Brunei—Support Local Youth

As the largest overseas direct investment project in Brunei in recent years, the Hengyi Brunei Refinery and Petrochemical Project has long-term benefits for the local community, promoting local employment and economic development. The company's localization strategy involves partnering with local universities to cultivate local young talents in Brunei, promoting local employment and improving the quality of the youth. This helps to achieve Brunei's vision for 2035.

Joint Talent Cultivation

Hengyi-Politeknik Brunei

Hengyi collaborates with Politeknik Brunei to offer seven majors and participates in all aspects of the cooperative education program, including setting up courses, recruiting faculty, and organizing teaching. Students spend their third year at the Hengyi Brunei Refinery and Petrochemical Project for production internships.

Hengyi-ZJU-UBD

Hengyi collaborates with Zhejiang University and Universiti Brunei Darussalam to offer the "Hengyi Petrochemical Talent Class" at UBD in Brunei, training eight batches of outstanding UBD students who have all joined Hengyi after graduation. The Hengyi-UBD-Zhejiang University Scholarship Program has trained 167 Brunei students, and 91 of them have been employed by Hengyi in the Brunei PMB project, promoting the long-term development of cooperation between the two countries.



Hengyi-LZPCC-IBTE

Hengyi, in cooperation with Lanzhou Petrochemical University of Vocational Technology and the Institute of Brunei Technical Education, has launched a program to offer automation control major, aiming to cultivate 600 skilled petrochemical talents in Brunei through a three-year international education module.





Educational Donation

ZJU Hengyi Scholarship

Hengyi donated RMB 10 million to establish the "Zhejiang University Hengyi Fund" in 2007. Over the past 16 years, Hengyi has donated a total of RMB 200 million in five installments to support the Hengyi Scholarship, Hengyi International Exchange Scholarship, Research Fund, and Social Practice Assistance. In 2022, Hengyi donated RMB 50 million to support the construction of the "Double First-Class" university.



Special Needs School in Brunei

Hengyi donated 50,000 Brunei dollars to YSHHB charity foundation in 2022 to support the establishment of the first special needs school in Brunei.

Voluntary Blood Donation

In 2022, the company organized its 21st collective unpaid blood donation activity for employees. 302 employees successfully donated 97,080 ml of blood, setting a new record. The Brunei company's employees also responded to the local government's call and donated blood.



Green Production- Carbon Net-zero

Hengyi aims to be a respected global green petrochemical company and is actively working towards national carbon reduction goals. Through technological upgrades, clean energy usage, and energy management, Hengyi is improving its green production level and fulfilling its carbon control responsibilities.

- ◎ Climate Change
- ◎ Water Resource Management
- ◎ Pollutant Management
- ◎ Clean Energy

SDGs we focused
in this section :



Climate Change ▶▶▶

Hengyi is actively responding to the national strategic goals of "carbon peak" and "carbon neutrality" , and in 2022, the company continuously improved its green production level through measures such as technological upgrades and energy management, fulfilling its social responsibility of carbon control and emission reduction.

Energy Conservation and Emission Reduction

The company responds to the national call to eliminate outdated production capacity and upgrade the industry. It optimizes and upgrades equipment and processes, and takes measures such as boiler upgrades, waste heat recovery, and denitrification systems to reduce energy consumption, meet environmental standards, and lower carbon emissions. In 2022, the company upgraded, built, renovated, and eliminated about 39 boilers, resulting in a 4%-6% reduction in overall energy consumption and significant energy conservation and emission reduction.

Utilization of Polyester Exhaust Heat

The company uses its practical experience in long-term polyester equipment operation to improve the utilization of polyester exhaust heat and promote energy conservation and emission reduction.

Measures:

- Saves fuel by heating fresh ethylene glycol with exhaust heat through a heat exchanger;
- Utilizes waste heat to improve the temperature in the DTY workshop and maintain a reasonable temperature in case of low ambient temperatures or reduced machine operation, thus reducing electricity consumption in the hot box;
- Evaporates liquid working medium with esterification exhaust heat to generate electricity through continuous operation of the screw expander, achieving energy-saving goals..

In 2022, the company saved about **8,200** tonnes of coal and **18,000** tonnes of steam by recovering and utilizing polyester exhaust heat.

Conversion of Natural Gas Boiler

Hengyi utilizes the low corrosiveness of natural gas boiler flue gas, which is achieved through the conversion of natural gas boilers, to replace steam for heating the stripping tower.

In 2022, the company saved approximately **7,200** tonnes of steam through the transformation of hot weather boilers.

Utilization of Heat from Sulfuric Acid Plant

High-temperature flue gas from sulfur combustion in the sulfuric acid plant is utilized to heat the nylon polymerization heat transfer oil.

In 2022, the company saved approximately **4,000** tonnes of coal.

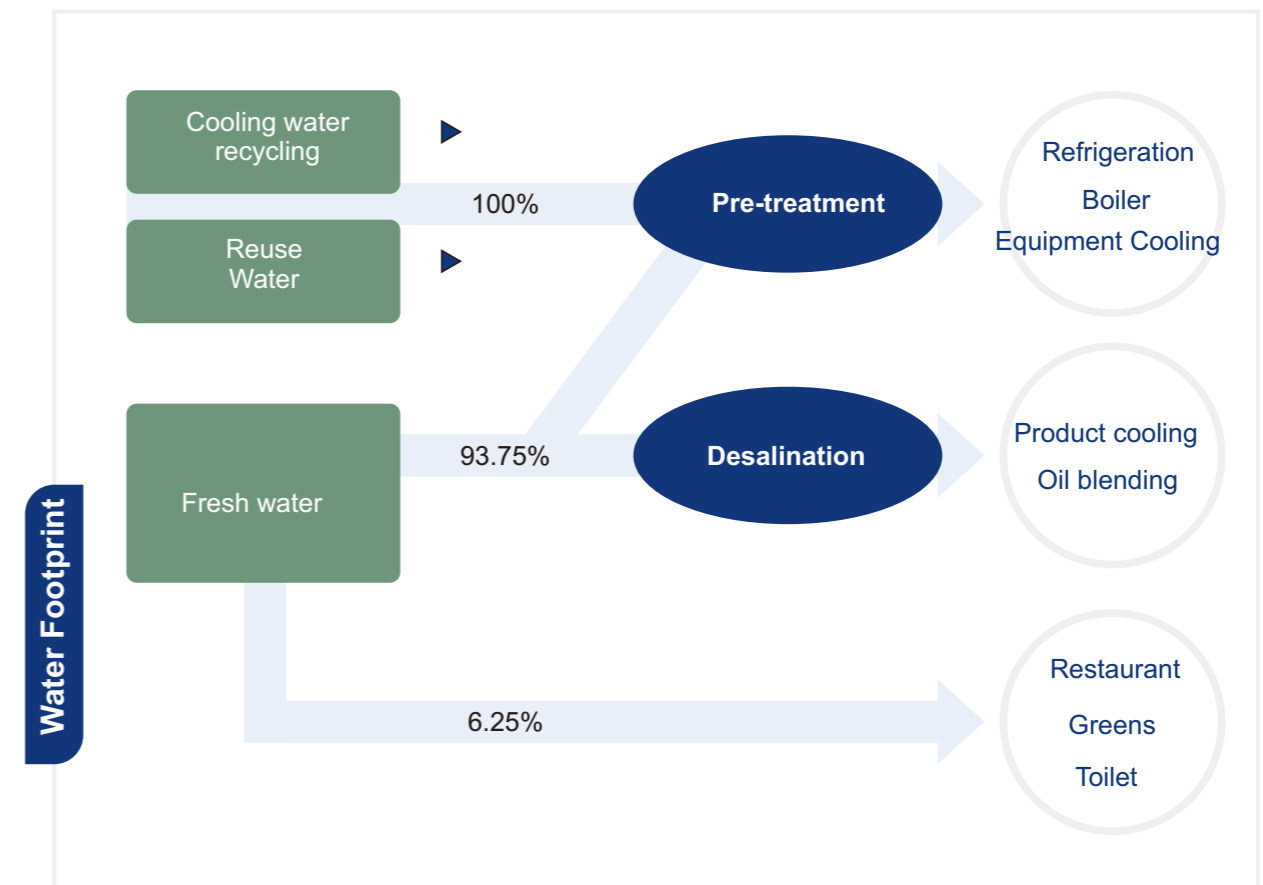
Integrated Utilization Exhaust Gas from Cyclohexanone Plant

The company uses advanced catalytic fuel purification technology to improve the utilization rate of oxidation exhaust gas from the cyclohexanone plant, which is then used for power generation through expansion and the recovered energy is discharged into the atmosphere.

In 2022, the company saved approximately **1,696.8** million kWh of electricity through this technology.

Water Resource Management

Hengyi focuses on water resource management and reduces water usage and pollution through water-saving measures, sewage and wastewater treatment, and reducing pressure on local water resources caused by production operations.



Water Saving

The company implements high-efficiency water production and reuse water, as well as water-saving measures in cooling towers.

In 2022, the company saved a total of about **5.1** million tonnes of fresh water.

High-Efficiency Water Production

The company used the EFDT process to transform the original desalination process, replacing inefficient technologies and solving problems such as high inlet water requirements, low product water yield, and high energy consumption.

In 2022, through the above process transformation, the company reduced its water consumption per ton by about **30%**, and each water production equipment set saved about **810,000** tonnes of water per year.



Reuse Water

The company achieves water reuse by treating wastewater with various methods, resulting in an overall water reuse rate of 87-93%.

In 2022, through water reuse technology, the polyester factory under Hengyi saved about **4.23** million tonnes of fresh water.



Cooling Towers

By retrofitting the existing cooling tower, the water loss caused by evaporation, wind, discharge, and leakage is reduced.

It helped the company save about **20,000** tonnes of water annually.



Pollutant Management ▶▶▶

In 2022, the company prioritized environmental protection and extended its environmental management to ensure compliance with standards for wastewater and exhaust gas.

The specific work done by the company in environmental pollution prevention and control in 2022 includes:



Pollution Prevention and Control



The company follows the "separate by pollution type, rainwater and sewage, and industrial/domestic wastewater" principle. They have a good wastewater collection system and use "pretreatment + anaerobic + aerobic" treatment process. Some treated water is reused, and the rest meets GB31752-2015 standards before entering the sewer network.



The company uses source control and treatment measures to reduce waste gas emissions. The organized emissions of dust, non-methane total hydrocarbons, and formaldehyde comply with the relevant standards in the "Emission Standards for Pollutants from Synthetic Resin Industry" (GB31752-2015). For the emissions from coal-water slurry boilers in Hangzhou, the "Emission Standards for Atmospheric Pollutants from Boilers in Hangzhou" are followed, and for other areas, the "Emission Standards for Atmospheric Pollutants from Boilers" (GB13271-2014) are followed. The emissions of odorous pollutants comply with the relevant standards in the "Emission Standards for Odorous Pollutants" (GB14554-93).



The company manages waste according to the principles of resource utilization, reduction, and harmlessness. The temporary storage of hazardous waste strictly follows the relevant regulations in the "Pollution Control Standard for the Storage of Hazardous Waste" (GB18597-2001), while general solid waste follows the "Pollution Control Standard for the Storage and Landfill of General Industrial Solid Waste" (GB18599-2020).



Clean Energy ▶▶▶

Photovoltaic Power

The company supports the "green production" strategy and promotes it by implementing projects such as 100% coverage of photovoltaic power generation and peak-valley electricity storage to reduce electricity consumption and carbon emissions.

▶ Since 2020, the company has been increasing its investment in photovoltaic power generation.

▶ End of 2022: **51** MW photovoltaic capacity, annual output **44.2** million kWh.

Plan for 2023: **86** MW installed capacity and **84** million kWh annual output.



Ecosystem-Accountability

Hengyi builds mutually beneficial and win-win relationships with suppliers, customers, and other partners, jointly fulfilling social and environmental responsibilities, and committed to promoting sustainable development in the entire industry ecosystem, achieving a harmonious and positive cycle of the value chain.

- ◎ Responsible Procurement
- ◎ Safety Management
- ◎ Product Quality & Service

SDGs we focused in this section:



Responsible Procurement

Hengyi improves its supplier management system and practices responsible procurement. We extend our sustainable development concept to upstream and downstream enterprises and advocate for suppliers to fulfill social responsibilities.

As of Dec 31, 2022, the company has 1,661 suppliers, including 278 active engineering suppliers with a total procurement amount of RMB 1.76179 billion, and 1,383 active material suppliers with a total procurement amount of RMB 4.3318 billion. We admitted 697 new suppliers in 2022, completed admission materials review, including legal and bidder qualification confirmation, and supplier performance evaluation.

Supplier Qualification

The company has established a strict supplier admission management mechanism, which includes reviewing the supplier's agent qualifications, ISO9001, ISO14001, ISO18001 system certification status, environmental impact assessment status, and wastewater discharge permit acquisition status. The company also conducts on-site inspections of suppliers and issues inspection reports. In 2022, a total of 161 suppliers were inspected on-site, and 49 inspection reports were issued, providing objective evaluations and independent suggestions for the collection of supplier information, introduction of new suppliers, resolution of quality problems, calibration, fly check of raw material addition, fly check of product production, fly check of production site, equipment inspection, production capacity investigation, and maintenance of relationships



Supplier ESG Promotion

Hengyi requires cooperation suppliers to follow their ethical and environmental standards. They promote ESG concepts with suppliers to reduce negative environmental impacts and enhance social responsibility. The company continuously monitors the supply chain's compliance with its values and standards.

Safety Management

Production Safety Management System

In 2022, the company achieved good safety results by focusing on safety production standardization and dual prevention mechanisms, with no fires, personal injury accidents, or environmental pollution incidents. The "three wastes" met emission standards.

Key measures for safety management

Sign responsibility letters	<ul style="list-style-type: none"> The company has implemented "three management and three must" requirements.
Increase investment in safety	<ul style="list-style-type: none"> Promote safety production standardization system: 1. Certify non-compliant subsidiaries; 2. Encourage qualified ones to reach second-level standardization; 3. Improve the system of certified subsidiaries. 11 subsidiaries meet the safety production standardization requirements: x at first level, x at second level, 1 striving for second-level, and 9 at third level. Investing in safety and environmental protection and improving production conditions: During the reporting period, the company invested RMB 31.1276 million in safety and RMB 80.1008 million in environmental protection, enhancing facilities to improve safety.
Review HSE regulatory Standards & Conduct HSE hazard investigation	<ul style="list-style-type: none"> HSE legal compliance assessment: Updated the "HSE Law and Regulation List" by adding 99 new standards and updating 16, resulting in a comprehensive list of 362 applicable HSE regulatory standards. The assessment ensures compliance with relevant laws and regulations. On-site HSE inspections are conducted using multiple methods to increase frequency and intensity, and detect and eliminate potential hazards. Inspection methods include leader-led inspections and strict control of key project nodes. Analogical investigations and safety transformations are conducted on accident-prone areas, including the short fiber post-spinning process and elevators.
Enhance safety training	<ul style="list-style-type: none"> Conduct safety education and training according to different needs. Carry out various safety activities to strengthen employees' safety awareness and skills.
Strengthen environmental protection process management	<ul style="list-style-type: none"> Establish environmental risk management accounts for subsidiaries, continuously track and rectify potential hazards, and strive to reduce environmental compliance risks. Manage environmental facilities for normal operation, conduct surprise inspections to enforce environmental protection measures, ensure compliance of waste gas and wastewater discharge standards, and properly dispose of solid waste.



Safety Training



The company prioritizes employee safety education and training for all levels of staff, covering major responsible persons, safety production management personnel, special operations and equipment operators, and other practitioners. In 2022, occupational health training was provided through various opportunities such as pre-shift and post-shift meetings and team safety activities.



The company conducted a total of **919** training sessions, training a total of **47,725** people.

Training achieved a **100%** completion and qualification rate, with emphasis on key points and full staff coverage.

Product Quality & Service

Quality

To produce high-quality products, Hengyi has established the "Hengyi Chemical Fiber Product Enterprise Internal Control Standard" system to manage all of its products, including PET, POY, FDY, DTY, PSF, and Pa6. The system covers product grading and production process control, and categorizes products into three levels of quality: excellent (AA), first-class (A), and qualified (B). Products below the qualified level are considered substandard (C). This ensures that the quality of the products meets customer requirements.

The company also implements a monitoring and control system for quality management, such as the "Product Center Value Management Measures," to stabilize product quality and control fluctuations in related quality indicators during the production process. The company continuously improves and revises its operating procedures to ensure that employee operations are standardized. Additionally, the company strengthens its equipment management and abnormal inspection management to ensure stable product quality.

Furthermore, the company integrates production digitization to strengthen its overall quality management. It tracks the quality of raw materials, machinery, and accessories, manages production process anomalies, and manages end-product quality, using big data to plan, implement, monitor, correct, and improve the entire quality management process. In 2022, the company's product quality inspection qualification rate reached 100%, and the product recall probability remained stable between 0.02% to 0.04%.



Key performance

In 2022, the company had a **100%** product quality inspection qualification rate and a stable product recall probability of **2-4‰**.

After Sales

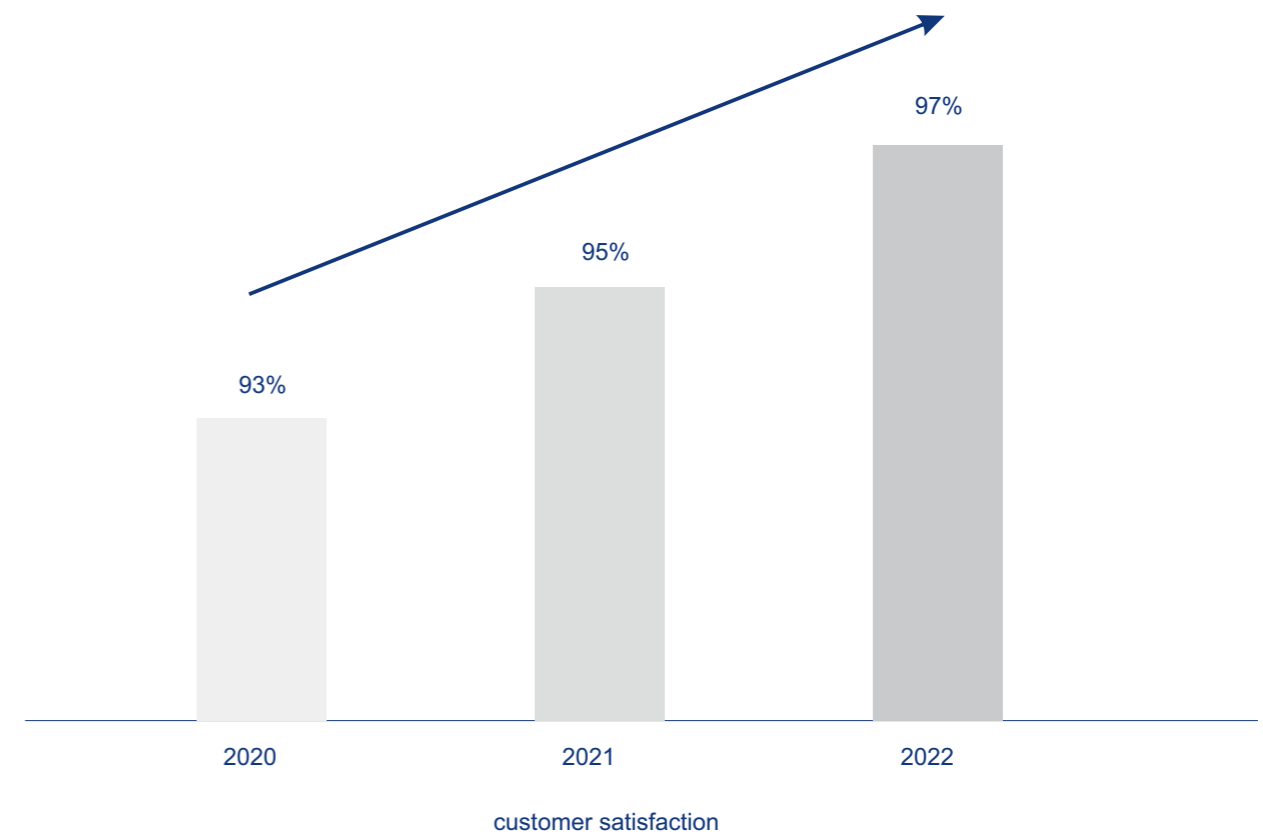
The company has established a diversified channel customer satisfaction survey mechanism to help improve Hengyi's product quality.

The company uses diverse channels such as a "WeChat mini-program mall," on-site visits by salespeople, and phone calls to collect customer satisfaction-related information, particularly on product quality. This aims to improve product and service quality and increase customer satisfaction.

The company has an after-sales service department with a complete management system and process to handle product quality issues and customer service.

The company improves after-sales service efficiency and effectiveness by providing technical support and addressing customer feedback through quality improvement, returns, and exchanges, resulting in improved customer satisfaction.

In 2022, customer satisfaction with after-sales events reached **97%**.



Innovation-Sustainability

Hengyi is committed to enhancing its independent innovation capabilities and developing high-end and environmentally-friendly polyester fiber products. Through academic collaborations, the company has achieved leading technology and unique product diversification, serialization, and quality improvement.

- ◎ Green Innovation
- ◎ Circular Economy
- ◎ Digitalization

本章所影响的SDGs:



Green Innovation

Hengyi prioritizes market demand and green environmental protection in its R&D efforts, committed to offering eco-friendly and healthy products to downstream customers and end consumers in the industry chain.

YiTaiKang

- Amidst the global trend of green development, titanium catalysts have become the best alternative to antimony catalysts. Hengyi's self-developed "Yitai Kang" uses a full titanium composite catalyst system to replace heavy metal antimony catalysts, providing healthier and more environmentally friendly products for end customers.
 - Hengyi Research Institute conducted related research on the bottleneck problems in the synthesis of antimony-free environmentally friendly polyester catalysts, including catalyst compounding, addition methods, polyester polymerization, melt stable transportation, and polyester spinnability. After multiple experiments and optimizations, they successfully developed a full titanium-based composite catalyst system for the production of antimony-free environmentally friendly polyester.
- Using a full titanium-based composite catalyst system, "YiTaiKang" not only ensures product quality but also reduces pollution emissions during production, effectively alleviating the pressure of wastewater treatment for downstream processing enterprises and improving the ecological environment of the industry chain. The product achieves green circulation throughout the textile product lifecycle, from production to use to recycling, making a positive contribution to environmental protection
- "YiTaikang" project has achieved large-scale production of high-capacity titanium polyester melt direct-spun polyester filament, with stable production operations and product quality indicators. The project has applied for 16 invention patents, of which 4 have been authorized, and established 4 enterprise standards, led the drafting of 4 industry standards, and participated in the development of 1 industry standard. In the future, Hengyi will continue to strengthen its technological research and development and innovation to make greater contributions to the development of green and environmentally friendly industries and social progress.



Antibacterial Polyester



Green consumption and a focus on healthy living are driving growth potential in the anti-bacterial textile market. Silver ions are harmful to health and restricted, copper ions lower product quality, while zinc ions provide a durable anti-bacterial effect without any health or quality issues.

We made anti-bacterial polyester slices and fibers by mixing nano-zinc oxide, PTA, and EG, then pulping, esterifying, condensing, and spinning. The slices showed good filtration performance and even distribution of nano-zinc oxide. The project has a pending invention patent and was approved for key research in Zhejiang Province in 2022.

The anti-bacterial polyester slices have slightly higher crystallization temperature and viscosity but are otherwise similar to conventional ones and are stable during spinning. The resulting fabrics have a 99% inhibition rate against three types of bacteria and are widely used in medical materials, high-performance home textiles, and sports clothing, offering a promising market and economic benefits.

Flame Retardant Polyester

Our HFRPET is a halogen-free, phosphorus-based flame-retardant polyester with a phosphorus content over 6500 ppm and a fabric limiting oxygen index over 30%. It meets national and American standards and covers products such as POY, FDY, DTY, and slices.

HFRPET is stable, durable, water-resistant, and environmentally friendly with no toxicity. It overcomes problems such as poor water resistance, poor hand feel, and fading found in other flame-retardant fabrics. The brightness of the slices and yarns is superior to market alternatives and can be used for all types of flame-retardant fabrics.

Circular Economy

Hengyi is dedicated to green low-carbon transformation, building a circular economy, and promoting the development of green industrial chains such as the recycling of waste polyester and bio-based polyester, in order to achieve product circularity. Through technical expertise, Hengyi transfers waste or discarded products from landfill sites and converts or reuses waste into higher value products. The future product portfolio will include many technologies specifically developed for reusable materials, seeking more waste and carbon reduction solutions for the industrial ecosystem.

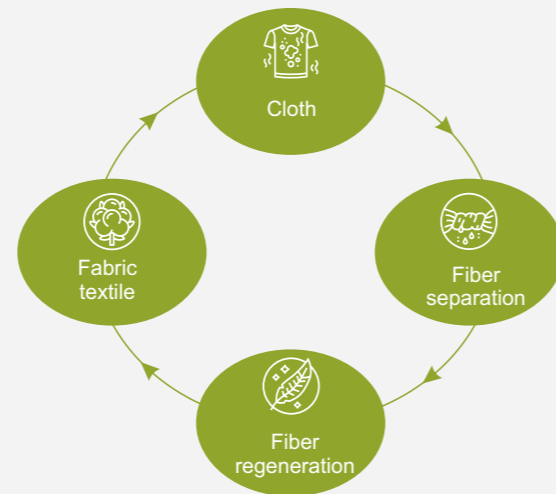
Recycling of Waste Polyester

Hengyi's polyester production has exceeded 10 million tonnes, but waste such as waste fibers are produced, causing waste and increased costs. Clothing waste is also increasing due to improving living standards. Traditional methods of handling waste polyester, such as landfill or incineration, have a significant impact on the environment, economy, and society. Therefore, recycling waste polyester is not only necessary for the company but also a social responsibility, as it is important for saving resources, reducing pollution, and reducing carbon.

The "14th Five-Year Plan" encourages a circular economy and green design in the polyester industry, improves the system for recycling waste textiles, regulates the development of the waste textile regeneration industry, and strengthens policy support. The goal is to establish a preliminary circular system by 2025 and improve it by 2030.

The recycling of waste polyester is divided into two ways. Chemical recycling can expand the scope of waste polyester to fibers and fabrics, while physical recycling is only applicable to waste bottle flakes. The industrial chain planning of waste polyester is mainly divided into three stages: chemical depolymerization into monomers or intermediates, preparation of various polyester materials, and preparation of high-value-added materials.

The five specific layouts for the recycling of waste polyester by the Hengyi Institute: disassembling waste polyester into monomers or intermediates using industrial alcohol methods; processing glycol monomers to produce various polyester materials; using glycol monomers in existing systems to produce high-value polyester; preparing polyester into para-aramid, used in industries such as automotive, communication and safety protection; gasifying waste, biomass, and urban garbage to produce high-purity hydrogen gas through high-temperature processing. The Hengyi Institute will fully implement these five industry layouts to support the green circular economy of the Hengyi industry.



► **rPET**

rPET (Recycled PET) is a new type of environmentally friendly recycled fabric made from discarded cola and plastic bottles, which is of great significance for environmental and resource protection. Hengyi uses physical and chemical recycling technologies to recycle and reuse waste plastic bottles. In 2022, Hengyi's rPET production capacity is about 50,000 tonnes.

Physical recycling

The technology mainly involves putting the waste bottle flakes into a vacuum reactor and carrying out surface dewatering, hot melting, internal dewatering, and wastewater discharge processes in sequence to achieve the recycling and reuse of polyester.

Chemical recycling

The technology breaks down the waste polyester into small-molecule polyester monomers, removes impurities and colors, and then repolymerizes the purified monomers into polyester, thus achieving the purpose of recycling and reusing waste polyester.

Biobased Polyester

Hengyi supports research on multiple bio-based materials, which use agricultural and forestry waste as raw materials to maximize resource utilization and reduce oil consumption and carbon emissions. These materials are safer and more recyclable. Through collaboration with Zhejiang University, Hengyi has developed high-quality PEF and a series of copolyesters using an efficient polymerization catalytic system. Hengyi plans to promote the development of the emerging bio-based materials industry, realize a closed-loop cycle of carbon dioxide, and contribute to global energy structure adjustments by reducing carbon emissions in the polyester industry.

Digitalization

Hengyi follows the industry's development trends, and is committed to promoting the digital transformation of the chemical fiber industry. From automation to cloud computing, they have been exploring and implementing various digital solutions. They continue to deepen the development of the industry's digital platform, and embrace new technologies to explore and visualize the digital value of the industry.

Digital Decision Support System-Hengyi Brain

"Hengyi Brain" is a management information center system for corporate management, which can break through data isolation and realize indicator analysis and decision-making scenario implementation. Through a detailed indicator system, Hengyi Brain can reflect the company's operating status in real time and visualize the collected data. This "one-stop" decision support system provides timely and effective decision-making information for senior management.

Digital Factory

The digitized factory presents integrated production, supply, and sales data from the perspective of the factory dimension, providing data reference services for the production and sales coordination of the factory's general manager based on the enterprise brain. With the data refined to the factory end through the Hengyi big screen, non-intrusive intelligent data acquisition tools are deployed at the digital production monitoring level to collect core process data from the factory's spinning upper computer every minute, thus achieving trend analysis of real-time production process data and providing on-site warnings and operation feedback. At the digital business management level, the system improves the factory general manager's decision-making and coordination abilities by presenting comprehensive and refined data on production, sales, quality, energy consumption, and inventory, thus achieving higher efficiency.



► Hengyi Brain

Real time Market	Production Index	Real time Sales	Order benefit	Core index	Gains & losses on inventory	Empirical dynamic trend
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► Digital Marketing

Real-time market	Sales team performance	Sales ranking
Polyester core index	Factory production and sales rate	Order benefit
Inventory structure analysis	Equity inventory	Overage physical inventory

By factory Screen

► Digital Factory

Production index	Real-time on-machine task	Production event
Production&Sales change and batch analysis	Premium quality inventory	Product quality indicators
Raw material inventory		

By SKU screen Sales/Marketing /Production

AI Inspection System

Sophisticated AI algorithms are used by Hengyi and Baidu to analyze complex product surfaces. This technology combines traditional optical imaging with intelligence to solve the limitations of traditional machine vision recognition. The AI inspection equipment has 100% detection rate for silk cakes, with a 2.5 second inspection time per product, increasing efficiency by 70% compared to manual inspection. This intelligent inspection equipment will become an important component of the production line, improving product quality and efficiency, and injecting new momentum into intelligent manufacturing.



Logistics system

In response to the company's "Chemical + Logistics" strategy, the subsidiary logistics company will build itself into a modern, large-scale professional logistics enterprise that matches Hengyi's capacity and provides transportation tasks for raw material supply and product sales, achieving the goal of self-owned vehicles. However, for many years, the dynamic management of logistics transportation business has mainly relied on manual offline contact or communication through WeChat and QQ. In terms of raw material transportation, maintenance management, distribution bill reconciliation, and salary calculation, it is mainly achieved through manual statistics using EXCEL spreadsheets. To comprehensively develop the logistics company, a complete logistics transportation information system is urgently needed, including an intelligent scheduling module, to improve the efficiency of various aspects of work. The system will realize real-time sharing of business data and data statistical analysis, truly enhancing the efficiency of logistics capacity, and comprehensively improving the overall efficiency of the logistics company.



Procurement System

The goal of this project is to develop a procurement management information system for engineering projects and daily procurement activities, including SRM (Supplier Relationship Management) and SCM (Supply Chain Management) systems, to help achieve comprehensive automated procurement management.

The SRM system helps users and suppliers establish an information exchange platform, facilitating supplier registration, admission assessment, sourcing identification, inquiry comparison, bidding and other business coordination, and also providing supplier performance assessment.

SCM system can automate procurement management from demand planning, requisition, purchasing strategy, supplier business collaboration, procurement contract, receiving and acceptance, quality inspection, funding planning, and payment request to the entire life cycle of procurement operations.

The system also links project purchase orders with project investment codes and general budgets, generating an analysis table of investment project purchase budget amounts and completion progress. After the system is implemented, procurement officers will save a lot of time and energy, reducing manual data entry and statistics work, and focusing more on procurement progress and cost analysis, actively realizing project cost optimization goals and effectively reducing the risk of human error.

Data Security

Recognizing the importance of corporate data security under the trend of national attention to information security, Hengyi has established relevant network security policies to protect confidential information and ensure safe operations.

We implement a graded management system for company information and set access permissions for confidential and sensitive information. Access permissions are recorded and adjusted/removed as necessary when employees transfer or leave the company. We monitor network traffic, hire third-party security organizations for regular security and privacy checks, reinforce security tools, conduct security penetration testing, and train employees on network security to raise their awareness.



Appendix

Key Performance

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■ Economic Performance

Indicator	Unit	2020	2021	2022
Operating revenue	100 million	864	1,290	1,521
Total assets	100 million	927	1,055	1,120
Production capacity	10,000 tonnes	3,150	3,847	3,877
- Chemicals	10,000 tonnes	265	265	265
- Refined oil	10,000 tonnes	565	565	565
- PTA	10,000 tonnes	1,300	1,900	1,900
- PIA	10,000 tonnes	30	30	30
- Polyester fiber	10,000 tonnes	750	777	807
- PET (including RPET)	10,000 tonnes	200	270	270
- Caprolactam	10,000 tonnes	40	40	40
Quality inspection pass rate	%	100	100	100
Customer satisfaction after sales	%	93	95	95

■ Social Performance

Indicator	Unit	2020	2021	2022
Total number of employees		18,154	16,820	15,637
Female employees ratio	%	25.77	26.17	26.37
Labor contract signing rate	%	100	100	100
Social insurance coverage	%	100	100	100
Ethnic minorities employees ratio	%	6.50	6.45	7.15
Training time per employee per year	hour	96	104	98
Health examination coverage	%	80	80	80
Reported accidents		0	0	0
Fatalities from safety accidents		0	0	0
Safety training time per capita	hour	12	12	12

■ Environmental Performance

Indicator	Unit	2020	2021	2022
Carbon dioxide emissions	10,000 tonnes	867	909	911
Carbon dioxide emissions intensity	100 tonnes/million	1.00	0.70	0.60
Consumption of crude oil	10,000 tonnes	783	828	864
Consumption of natural gas	10,000 cubic meters	4,497	4,601	4,443
Consumption of electricity	10,000 kWh	689,966	763,655	649,377
Consumption of coal	10,000 tonnes	179	205	210
Consumption of coal water slurry	10,000 tonnes	69	69	41
Photovoltaic power generation	10,000 kWh	1,334	2,580	4,420
Fresh water withdrawal	10,000 tonnes	4,081	4,144	3,214
Fresh water withdrawal intensity	tonne/100 million	47,234	32,124	21,131
So ₂ emissions	tonne	844	790	793
NO _x emissions	tonne	2,055	2,638	2,337
COD discharge	tonne	622	626	608
Ammonia and nitrogen	tonne	81	83	80
Soot emission	tonne	224	235	222
Solid waste	tonne	225,804	315,422	307,058
Solid waste intensity	tonne/100 million	261	245	268
Mercury emissions	mg/m ³	0.000004	0.0000076	0.000043
Weight of hazardous waste	tonne	114	234	202
Hazardous waste intensity	tonne/100 million	0.13	0.18	0.14

Notes:

Fresh water withdrawal intensity = Fresh water withdrawal / Operating revenue

Solid waste intensity = Solid waste / Operating revenue

Hazardous waste intensity = Weight of hazardous waste / Operating revenue

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