



CONTENTS

Message from the Chairman	01
About Estun	03
Responsibility 2024	07
Sustainable Development Management Strategy	09
Sustainable Development Management	09
Stakeholder Communication	11
Material Issues Analysis	12
Responsibility Topic Robotics + Education: Empowering	15

Educational Innovation and Transformation

Future Chapter Activating New Quality Productive Forces

Creating Industrial Value	19
nnovation-Driven Development	26
Professional Quality Service	32

Governance Chapter Promoting High-Quality Development

nhancing Corporate Governance	43
Risk and Compliance Management	48
Jpholding Business Ethics	51
oformation Security and Privacy Protection	55

Environmental Chapter 57 Building a Sustainable Future Together

Environmental Management	59
Addressing Climate Change	60
Resource Management	64
Pollution Prevention and Control	66
Noise Management	68
Biodiversity Protection	68

Social Chapter Advancing Together on a New Journey 69

Human Capital Development	71
Supply Chain Management	82
Community Engagement and Philanthropy	86



Key Performance Table	87
Index Table	89
About This Report	90



Message from the Chairman

The year 2024 marks the 20th anniversary of the United Nations Global Compact's introduction of the ESG (Environmental, Social, and Governance) concept. Embracing sustainable development is not only a corporate responsibility but also a mission entrusted to us by our times. We have adhered to our corporate mission of "Enjoy your life from automation: Smarter Manufacturing, Greater Quality, Better Life, Greener World" since our establishment, advancing the industrial chain toward highend autonomous manufacturing, green and low-carbon development, and intelligent efficiency-driven transformation, while striving to contribute Estun's strength to the sustainable upgrade of a wide range of industries.

Strengthening Leadership, Embracing Innovation. Over the past year, in the face of global economic complexity and fierce industry competition, we stayed firmly aligned with our core strategy: "ALL Made by ESTUN." Driven by our "Transformation 2025" initiative, we accelerated the development of new quality productive forces, leveraging cutting-edge technologies to build a complete intelligent manufacturing ecosystem. This has powerfully propelled the deep evolution of smart manufacturing and enabled us to lead the wave of intelligent transformation in the manufacturing industry. In 2024, we played a key role in powering global lighthouse factories, while the Company's Product Reliability Laboratory achieved CNAS accreditation. This milestone reflects Estun's continued

commitment to excellence in quality and strengthening its product competitiveness.

Laying a Solid Foundation, Advancing with Stability. We recognize that sound corporate governance is the cornerstone of high-quality development. We have continuously refined our governance framework, strengthened internal control, compliance management, as well as comprehensive risk management. while upholding business ethics and codes of conduct. In investor relations, we are committed to enhancing information disclosure, expanding communication channels, and safeguarding the legitimate rights and interests of investors. We have also built a robust information and data security system to ensure the protection of company assets and digital resources. To elevate our ESG governance capabilities, we have proactively advanced the construction of our ESG management system and issue-specific governance mechanisms, steadily progressing along the path of sustainable development. Our efforts have also been widely recognized. In 2024, Estun received the highest AAA rating in the ESG assessment by CSI Index, an AA rating by Sino-Securities Index, and an A rating by Wind. The Company was also honored with the 2024 Best ESG Practice Award for Listed Companies, further solidifying its commitment to sustainable development.

Pursuing Environmental Sustainability, Accelerating Low-Carbon Development. We have reinforced environmental management,

enhanced pollution control, and minimized the environmental impact of our operations, achieving a win-win outcome between economic growth and ecological protection. In response to the global challenge of climate change, we actively support China's "dual carbon" goals, strengthen our ability to identify climate-related risks and opportunities, and integrate climate risk management into our strategic planning. We actively seize the opportunities of green development by improving energy efficiency, increasing the adoption of renewable energy, and developing low-carbon products and solutions, in order to accelerate the realization of our dual carbon goals. We are also deeply engaged in advancing smart manufacturing in the new energy sector and driving innovation in lowcarbon technologies and products. By working closely with ecosystem partners across the value chain, we strive to co-create green value and promote sustainable growth.

Putting People First, Pursuing Mutual Growth.

We are committed to cultivating a positive, healthy, and inclusive work environment where employees feel a strong sense of belonging. By enhancing employee capabilities and unlocking innovation potential, we provide a broad platform for growth and support them in realizing their personal value. At the same time, we strive to build long-term, stable, and mutually beneficial relationships with suppliers and partners, working together to create a responsible supply chain. We actively fulfill Message from the Chairman 02

our responsibilities as a corporate citizen by carrying out a wide range of charitable initiatives. We are committed to exploring innovative approaches to integrating robotics with education. Through our "Robotics + Education" model, we aim to cultivate a new generation of highly skilled and innovative talent for the global intelligent manufacturing industry, fully embracing the responsibilities and mission entrusted to enterprises in this new era.

Looking ahead to a future filled with both opportunities and challenges, Estun will stay true to its core values of "Open, Innovation, Striving, Growing Together". We will continue to strengthen the core competitiveness of China's robotics industry through cutting-edge technologies and superior product quality, while striving to build a globally recognized brand in intelligent manufacturing. Together with all stakeholders, we will work to unlock new possibilities for sustainable development.

Chairman of Estun Automation Co., Ltd.

Wu Bo

About Estun

Established in 1993, Estun (Stock Code: 002747.SZ) has consistently upheld the business philosophy of "Open, Innovation, Striving, Growing Together". The Company focuses on building a comprehensive automation ecosystem and remains committed to the independent development of core technologies. This steadfast approach has laid a solid foundation for Estun's global expansion and its vision to become a respected international brand. Over the past three decades, Estun has successfully developed core business segments including automation components and motion control systems, industrial robots and intelligent manufacturing systems, as well as digital products and services, providing the industry with worldleading integrated solutions in automation, intelligence, and digitalization.

Corporate Culture



Core Business Segments

Automation Core Components and Motion Control Systems

As a pioneer in China's AC servo and motion control sector, Estun has developed comprehensive motion control solutions with full coverage from the information layer to the control, drive, and execution layers. Its extensive product portfolio includes high-precision multi-axis motion controllers, 50W-200kW AC servo systems, inverters, PLCs, HMIs, machine vision systems, sensors, and more.

Industrial Robots and Intelligent Manufacturing Systems

Estun offers a full range of industrial robots spanning payloads from 3 to 700 kg, with a total of 87 models. The Company builds benchmark intelligent production lines and smart factories in collaboration with leading brands across a wide range of industries, including automotive, photovoltaics, lithium batteries, metal processing, electronics manufacturing, building materials and home furnishing, logistics and packaging, food and beverage, rail transit, construction machinery, special vehicles, shipbuilding and offshore engineering, and aerospace.

Digital Products and Services

Focusing on the digital application needs of smart factories, the Company delivers full life-cycle digital solutions covering production line design, simulation and verification, system integration and delivery, as well as intelligent factory operations and maintenance. We have developed the E-Noesis cloud platform, which provides digital functions such as process quality monitoring and optimization, fault prediction and analysis, and remote operation and maintenance. The platform enables transparency of equipment parameters, process parameters, production capacity, and quality data, offering customers a solid foundation for digital competitiveness.







Business Regional Distribution

Global Manufacturing Bases(MANUFACTURING BASE)



Global Service Network(INTERNATIONALIZATION)

	1 China	
Eastern China	Southern China	Southeast China
Headquarters in Nanjing	Shunde Service Center	
Wuxi Office Changzhou Office Suzhou Office Shanghai Office	Dongguan Office Shenzhen Office Foshan Office	Hangzhou Office Ningbo Office Wenzhou Office Xiamen Office
Central China	Northern China	Western China
Changsha Service Center	Tianjin Service Center	Chengdu Service Center
Wuhan Office Zhengzhou Office	Jinan Office Qingdao Office	Chongqing Office
Northeast China		
Shenyang Office		

















Responsibility 2024

Future Chapter

Activating New Quality Productive Forces

RMB **503** million up **0.06**% **7 1,032** R&D investment

year-on-year

Total R&D personnel

94.08

year-on-year

1.015

and software copyrights

un 6 95% 7 Cumulative granted patents year-on-year

99.69

First-pass unpacking yield

up **0.11** percentage points 7 year-on-year

Process pass-through rate up **6.92** percentage points

Promoting High-Quality Development

Customer satisfaction score up **2.56** points 7

year-on-year

89.76

Governance Chapter

Operating revenue

RMB 4.01 hillion

RMB 216 million Total tax contribution

Specialized audits conducted on business ethics and anti-corruption

Environmental Chapter Building a Sustainable Future Together

RMB 1.72 million Environmental protection investment

2.46 tons of CO₂ equivalent/ RMB 1 million revenue Greenhouse gas emission intensity

0.34 tons/RMB 10.000 revenue Water withdrawal intensity

Social Chapter Advancing Together on a New Journey

113,080.26 Total online employee training hours RMR 5.60 million Production safety investment



Awards & Honors

Single-Product Manufacturing **Champion Enterprise**

Ministry of Industry and Information Technology

\$**\$**\$

National Advanced Collective in Industry and IT Systems

Ministry of Human Resources and Social Security, Ministry of Industry and Information Technology

\$****

Second Prize, Mechanical Industry Science and Technology Award, 2024 Mechanical Safety Conference

National Technical Committee 208 of Safety of Machinery of Standardization Administration of China

AAA Quality Credit Rating Enterprise of Jiangsu Province Administration for Market Regulation of Jiangsu Province

> **Annual Excellent Brand Award** for Industrial Robots 10th Capek Prize

starts

Top 50 Leading Enterprises in the Robot Industry, 2024 5th China Robot Industry Annual Conference Lide 5th China Robot Industry Annual Conference مريد and LeadeRobot Robot Industry Awards Ceremony

> いりが **Innovative Product Award** chuandong.com

Ten-Year Industry Contribution Enterprise, **GGII Golden Globe Award** 2024 11th GGII Robot Annual Conference

2024 Top 30 Intelligent Manufacturing in New Energy Industry 2024 (3rd) GGII New Energy Intelligent

sy.

Manufacturing Summit



Dual Awards for Outstanding Product and Advanced Technology, 2024 China Intelligen Welding Industry Chain Pioneer Category 2024 (3rd) GGII New Energy Intelligent

Manufacturing Summit

Sustainable Development Management Strategy

Sustainable Development Management

Estun has established and refined its ESG governance structure to constantly enhance the ESG governance standards. In 2024, the Company implemented a three-tier ESG management framework led by the Board of Directors, comprising the supervisory, management and executive bodies to effectively implement its ESG and sustainable development initiatives.

The Supervisory Bodies

Board of Directors

The Board of Directors serves as the highest decision-making body for the Company's ESG management. It is responsible for reviewing and approving the Company's ESG development strategy and objectives, ESG management systems, ESG reports, and other significant ESG matters.

Environmental, Social, and Governance (ESG) Committee

The ESG Committee is led by the Chairman. Its primary responsibilities include directing the formulation of the Company's ESG strategy and objectives, as well as monitoring and evaluating the progress and effectiveness of ESG practices. The committee reports ESG matters to the Board of Directors and assists in identifying and assessing ESG-related risks and opportunities.

The Management Body

ESG Leadership Group

The ESG Leadership Group is led by the General Manager and comprises heads of departments responsible for various aspects of the business, including corporate governance, environmental management, health and production safety, supply chain management, product innovation, quality and service, and human capital development. As the Company's ESG leadership and management body, it oversees all ESG work, identifies and manages ESG risks and opportunities, determines the materiality of ESG issues, and integrates them into operational considerations. The group is also responsible for developing ESG objectives and plans.

The Executive Body

ESG Working Group

The ESG Working Group consists of relevant personnel from various departments and subsidiaries, serving as the practical implementation body for ESG initiatives. Its main responsibilities include promoting the execution of ESG issues, managing ESG-related indicators, and monitoring the implementation of ESG projects. The group also collects and reports ESG information.



During the reporting period, the Board of Directors convened special meetings to review and confirm critical ESG matters, materiality assessments, and the achievement status of ESG objectives. The ESG Committee reviewed and approved the *Resolution on the Company's 2023 Environmental, Social, and Governance (ESG) Report*. Furthermore, the Company developed and released the *Environmental, Social, and Governance (ESG) Indicator Management Manual*, clarifying the scope of ESG work and promoting regular management, information collection, and reporting of ESG activities. The Company also implemented a series of management improvement initiatives to constantly enhance its ESG management system and ESG issue management.

In October 2024, Estun conducted specialized ESG training for middle and senior management, as well as members of the ESG Working Group. The training encompassed the latest ESG trends and compliance requirements, interpretation of ESG rating methodologies, and strategies for improving ESG management capabilities. This initiative helped both leadership and employees deepen their understanding of the Company's ESG management strategies and practices, facilitating the efficient implementation of ESG initiatives.

Honors & Awards in Sustainable Development Management

CNI Index ESG Rating AAA	Sino-Securities Index ESG Rating AA	China Reform Consulting ESG Rating AA
Wind ESG Rating A	CCXGF ESG Rating A+	2024 Best ESG Practice Award for Listed Companies by Value Online

10

Stakeholder Communication

Estun places great importance on communication with its stakeholders. Based on its daily operations, management practices, material issue categories, and various influencing factors, the Company identifies and prioritizes internal and external stakeholders with significant impact. Through diverse communication channels, it actively engages to understand stakeholder expectations and concerns, and responds in a timely and proactive manner to achieve mutual benefit and harmonious development with all parties.

Stakeholders	Issues of Concern	Communication Channels
Government and Regulatory Bodies	 Compliance and risk management R&D and innovation Green technologies and products Climate change and energy management Public welfare and charity Product quality management 	 Government meetings Special reports On-site visits Information delivery
Shareholders & Investors	 Corporate governance Protection of Investor Rights and Interests Customer service management R&D and innovation Product quality management Sustainable supply chain 	 Information disclosure General meeting of shareholders Results briefing Investor communication platform Investor research and communication
Customers	 Product quality management Sustainable supply chain Intellectual property protection Responsible marketing Customer service management Information and data security 	 Daily operational communication Official communication channels After-sales service and feedback Customer satisfaction survey
Suppliers & Partners	 Corporate governance Digital transformation Environmental management system Business ethics and anti-corruption Compliance and risk management Green technologies and products 	 Strategic cooperation Thematic Training Market research Special meetings Industry exchanges
Employees	 Employee training and development Employee rights and benefits Compliance and risk management Industrial cooperation and development Production safety and occupational health Product quality management 	 Official WeChat of the Company Workers' Congress Employee activities
Community and Public	 Pollution and waste management Business ethics and anti-corruption Green technologies and products Industrial cooperation and development Public welfare and charity 	 Community communication Media interaction Industry forum Information disclosure Public welfare volunteer activities

Material Issues Analysis

Effectively identifying and managing material issues is fundamental to advancing a company's sustainable development strategy, risk and opportunity management, and information disclosure. In 2024, Estun conducted a double materiality assessment to accurately identify and evaluate the Company's key sustainability issues. The assessment engaged stakeholders across various groups and was guided by multiple sustainability disclosure standards, including the GRI Standards, the Shenzhen Stock Exchange Guidelines No. 17 on Self-Regulation for Listed Companies – Sustainability Reporting (Trial), the Shenzhen Stock Exchange Guidelines No. 3 on the Preparation of Sustainability Reports, the IFRS S1 - General Requirements for Disclosure of Sustainability-related Financial Information, and the European Sustainability Reporting Standards (ESRS). The assessment considered two dimensions: Impact Materiality-the significance of an issue's impact on economic, environmental, and social sustainability; and Financial Materiality-the extent to which an issue may affect the Company's financial performance. Based on the results, Estun identified its material issues and has prioritized their disclosure and response within this report. The Company will continue to refine its sustainability management practices to better address stakeholder expectations and concerns.

Estun's Double Materiality Assessment Process



Based on an analysis of internal and external development trends, and with reference to macroeconomic policies in the Company's areas of operation as well as industry-specific policies and standards, Estun developed a list of sustainability issues and identified 24 material issues, including both general and industry-specific issues.

- 1) The identification process was guided by the following considerations:
- by industry peers.
- materiality.

④ Insights from experts and other relevant sources.

In line with the principle of dual materiality, the Company conducted both impact materiality and financial materiality assessments. This process resulted in the 2024 materiality matrix, which highlights our most significant ESG issues and their prioritization for the year. The relevant stakeholders engaged in the process include Board members, supervisors, senior executives, employees, customers, suppliers, investors, regulatory authorities, media, and the public.

Impact Materiality: The assessment began with the definition of evaluation factors and scoring intervals for impact materiality. Stakeholders assessed each ESG issue based on both its potential positive and negative impacts, considering dimensions such as the scale, scope, irremediability, and likelihood of those impacts. Based on the survey results, the impact materiality of each topic was determined. The findings were then reviewed and validated by the Company's ESG Committee and external sustainability experts to ensure objectivity and accuracy.

Financial Materiality: The assessment began with the definition of financial materiality evaluation factors and threshold values. Each issue was evaluated based on whether the risks or opportunities it presents are expected to have a significant impact on the Company's business model, operations, development strategy, financial condition, operating results, cash flow, or financing structure and cost over the short, medium, or long term. The findings were subsequently reviewed and validated by the Company's ESG Committee and external sustainability experts to ensure objectivity and accuracy.

Based on the assessment results, a materiality matrix was developed using two dimensions: impact materiality and financial materiality. The prioritization of sustainability issues was finalized following a comprehensive review and validation by the Company's ESG Committee and external sustainability experts. For each material issue, this report discloses key information regarding its governance, strategy and management approach, associated impacts, risks and opportunities, as well as relevant indicators and targets.

The reporting framework outlined in the Shenzhen Stock Exchange Guideline No.17 on Self-Regulation for Listed Companies – Sustainability Reporting (Trial) served as the primary reference, supplemented by other authoritative domestic and international sustainability reporting standards, including the IFRS S1 - General Requirements for Disclosure of Sustainability-related Financial Information and the GRI Standards.

2 Mainstream domestic and international ESG rating systems and sustainability issues prioritized

③ Issues of common concern to both internal and external stakeholders, identified with consideration of industry characteristics, stage of industry development, business model, and position within the value chain, as part of the assessment of financial materiality and impact

- 1 The potential positive impact of each issue was evaluated using two factors: the likelihood of positive impact and the degree of positive impact, taking into account both the scale and scope of the potential impact. The top five issues with the highest positive impact rankings are: R&D and Innovation, Product Quality Management, Customer Service Management, Employee Training and Development, and Corporate Governance.
- (2) The potential negative impact of each issue was assessed using two factors: the likelihood of negative impact and the degree of negative impact, considering the scale, scope, and irremediability of the impact. The top five issues with the highest negative impact rankings are: Corporate Governance, Employee Rights and Benefits, Product Quality Management, Customer Service Management, and Responsible Marketing.
- (3) The positive and negative impacts of each issue were consolidated into a single impact materiality dimension. Based on the survey results, the impact materiality of each issue was assessed and subsequently reviewed and validated by the Company's ESG Committee and external sustainability experts.





Risk and Opportunity Analysis of Material Issues

The Company has conducted a comprehensive analysis of its key sustainability topics, reviewing the duration of their impacts, as well as associated risks and opportunities. Based on the findings, the Company has developed targeted response strategies to effectively mitigate risks and seize opportunities, thereby advancing its long-term sustainable development.

Material Issue	Impact Duration	Risks/Opportunities	Response Strategy			
R&D and innovation	Long term	 R&D investment may lead to higher financial input with uncertain or delayed commercial returns. Technological innovation enables the Company to respond promptly to evolving customer needs and enhances its competitiveness and industry leadership. 	 Implement short-, medium-, and long-term R&D strategies, increase investment in research, and build technology innovation platforms to overcome critical core technology bottlenecks. Advance technology and product development under the IPD (Integrated Product Development) model based on analysis of macro industry trends, corporate strategic planning, customer needs, and technological directions. <i>For more information, please refer to the "Innovation-Driven Development" section.</i> 			
Product quality management	Long term	 Quality issues may lead to significant economic losses, including potential product recalls. High-quality products can enhance customer trust, strengthen the Company's reputation, and increase market share. 	 Establish a full-process quality management system covering all stages from product R&D and design to manufacturing, and build a corporate culture of quality at Estun. Build Estun's Product Reliability Testing Center with specialized instruments and a dedicated testing team, and implement reliability testing standards that exceed national and IEC benchmarks to enhance R&D quality and product reliability. <i>For more information, please refer to the "Professional Quality Service" section.</i> 			
Customer service management	Long term	 Deterioration in customer relationships may lead to customer attrition, thereby affecting the Company's market performance. Strong customer relationships support business growth and create new commercial opportunities. 	 Establish a comprehensive service assurance system and build a global service network to provide customers with timely and comprehensive after-sales support. Conduct regular customer satisfaction surveys, establish a complaint handling process, and respond promptly to customer feedback. For more information, please refer to the "Optimizing Customer Service" section. 			
Sustainable supply chain	Medium to long term	•ESG-related risks in the supply chain may lead to supply chain instability and disrupt the Company's production and operations.	 Improve supply chain management by incorporating ESG factors into supplier evaluation and selection. Implement a supply chain risk management plan to continuously identify and monitor risks in the procurement process. Promote sustainable development practices among suppliers. For more information, please refer to the "Supply Chain Management" section. 			
Information and data security	Medium to long term	 Information and data breaches may violate relevant laws and regulations, resulting in compliance risks, financial losses such as fines, and infringement of customer rights, thereby undermining customer trust in the Company. Ensuring information and data security helps strengthen the relationship between the Company and its customers. 	 Improve the information security management system, and strengthen data control and cybersecurity protection. Standardize information confidentiality practices and enhance employee awareness of information security. For more information, please refer to the "Information Security and Privacy Protection" section. 			
Corporate governance	Long term	•An inadequate corporate governance system may lead to poor decision- making and ineffective internal oversight, which could undermine the Company's long-term development, shareholder interests, and market reputation.	• Establish a sound and efficient corporate governance structure with clearly defined responsibilities and standardized operations. Ensure the independence and diversity of the Board of Directors to promote fairness and informed decision- making in corporate governance. For more information, please refer to the "Enhancing Corporate Governance" section.			
Compliance and risk management	Medium to long term	 Non-compliance and inadequate risk management may result in financial losses, legal disputes, and reputational risks for the Company. 	• Consistently improve the internal control and compliance management system with a focus on audit, internal control, and compliance integration. • Strengthen the tax management system and continuously enhance tax compliance capabilities. For more information, please refer to the "Risk and Compliance Management" section.			

Responsibility Topic

Robotics + Education: Empowering Educational Innovation and Transformation

In this era of rapidly growing new guality productive forces, Estun, a leader in intelligent manufacturing, shoulders the crucial mission of advancing educational innovation and industrial upgrading. We understand that the future of intelligent manufacturing hinges on talent development and technological breakthroughs. To this end, we are actively exploring the seamless integration of robotics and education, pioneering a novel "Robotics + Education" approach to nurture highcaliber, innovative professionals for the global intelligent manufacturing sector.

Industry-Education Integration

Fostering a Dynamic Ecosystem for Diverse Teaching Practices

Estun is committed to leveraging its technological expertise and industry insights to enrich educational resources, empowering innovation through multifaceted approaches and promoting deep synergies between industrial technology and educational pedagogy.

F

Developing **Comprehensive Textbooks**

The Company has participated in the development of university-level instructional materials and designated textbooks for the training of application-oriented industrial robotics professionals. Our publications, including the Industrial Robot Motion Control Technology and Introduction to Industrial Robot Usage, incorporate Estun's extensive experience and cutting-edge technology in the domain, providing systematic and practical resources for the "Robotics + Education" initiative.

Enhancing Vocational Training Capabilities

The Company supports universities in accelerating the development of academic disciplines and specialty programs, and in strengthening dual-capable faculty teamsthose equipped with both teaching expertise and practical industry experience. By jointly organizing training programs with partner institutions, the Company enhances the teaching proficiency and engineering practice capabilities of instructors, providing strong support for the cultivation of application-oriented talent in the industrial robotics sector

Establishing Educational Platforms

The Company has partnered with Southeast University to establish the Estun-Southeast University Industrial Robot Motion Control Laboratory. In addition, the Company has developed integrated training platforms and practical training bases that combine industry and education, offering students internship and employment opportunities and providing solid support for nurturing talent in intelligent manufacturing.

Diverse Talent The Company actively collaborates with universities, research institutes, and vocational colleges to promote indepth academic-industry

Fostering

cooperation. Through initiatives such as the "Elite Craftsmen" talent development program technical application skills competitions and international talent exchange efforts, Estun is committed to cultivating high-quality professionals for the intelligent manufacturing industry.

Robotics + Education

Unlocking Infinite Possibilities

Estun's long-standing commitment to the education sector is reflected in our comprehensive, multi-tiered strategy of collaboration with higher education institutions, research institutes, and vocational colleges. Our aim is to create a holistic talent development pipeline that drives the rapid advancement of the intelligent manufacturing industry. Looking ahead, Estun will continue to forge partnerships to nurture more high-caliber professionals in intelligent manufacturing, supporting China's manufacturing sector in its digital transformation and pursuit of high-quality development.

° °Case Joint Launch of the Estun University Plan

In May 2024, Estun joined forces with Beijing Huatec Information Technology Co., Ltd., Loongson Technology Corporation Limited, Hengli Jiachuang Precision Industrial Equipment (Shanghai) Co., Ltd. under Hengli Group, and other enterprises to implement the Estun University Plan. This initiative addresses the needs for new quality productive forces of the manufacturing sector by creating an innovative platform that bridges industry demands with academic resources. The plan aims to foster the integrated development of the industrial chain, innovation chain, education chain, and talent chain, promoting deep industry-education synergies and driving innovation in both university talent cultivation models and manufacturing practices.



CASE

In November 2024, the Company successfully launched the first University Robotics Competition of "Estun Cup", drawing 41 teams from 26 institutions nationwide. Centered on the theme "Intelligent Manufacturing + Create the Future," the competition employed a "learning through competition" approach. By replicating real-world industrial scenarios in a competitive setting, the event seamlessly blended theoretical knowledge with practical application, igniting students' innovative potential. The



competition aims to catalyze the structural optimization of relevant majors and the reform of their curricula in higher education, fostering the development of well-rounded individuals with both innovative mindsets and practical skills. The ultimate goal is to infuse the intelligent manufacturing industry with fresh talent and vitality.

CASE Estun Robots Showcase Elite Skills at Workers' Competition

In 2024, Estun played a pivotal role in the successful organization of the Nanjing Workers' Skills Competition. As a co-organizer, Estun's robots took center stage in the finals, examining contestants' practical ability and innovative thinking with real-world tasks such as system debugging, troubleshooting, and optimization. This not only provided robust technical support for the event but also injected momentum into the high-guality development of intelligent manufacturing in Nanjing and beyond, underscoring Estun's commitment as an industry leader.

CASE Inspiring Future Innovators: Estun Hosts Students from Nanjing New Academy Yougu School

In November 2024, the fourth and fifth-grade students from Nanjing New Academy Yougu School embarked on an enlightening journey to "explore the world of robotics" at Estun. The young visitors toured Estun's exhibition hall, robot assembly workshop, and intelligent manufacturing experience center, gaining firsthand exposure to the efficiency and precision of industrial robots. This immersive experience not only broadened the students' knowledge horizons but also kindled their enthusiasm for scientific and technological innovation. The visit opened a window to the future of technology and planted the seeds of technological aspirations in the minds of these young learners.



University Robotics Competition of "Estun Cup"









Future Chapter Activating New Quality Productive Forces

Contributing to UN SDGs



Creating Industrial Value

The global manufacturing sector is currently experiencing a period of continuous development and transformation. Industrial automation, serving as the cornerstone of this transformation, is propelling the advancement of intelligent manufacturing and Industry 4.0. Estun consistently adheres to its "All Made By Estun" comprehensive industrial chain strategy, focusing on three core areas: autonomy in high-end manufacturing, green energy-saving and low-carbon practices, and quality and efficiency enhancement through intelligent solutions. Through its efficient, intelligent, safe, and accessible products and solutions, Estun actively empowers the transformation and upgrading of diverse industries.

Autonomy end Manu	in High- 🧼 Gre facturing 🕨 Low	en Energy-Saving a /-Carbon Practices	and Quality an through In	d Efficiency Enhancen telligent Solutions	nent Co	ompreh	ensive Industry	Solutions ———
Automotive						iles	Printing	Personal care products
Industry	Vehicle body spot welding	Body-in-white arc welding	Glass sunroof sealing	Door assembly	Educ	cation	Home	Apparel
	I ANK					a hè	turnishings	
Photovoltaic					Home a	ppliances	Light food	Beverages and spirits
industry	Battery section: ALD insertion	Module section: String arrangement application	Module section: Curing line	Digital production line monitoring				
					Pharma	iceuticals	Electronics	Display panels
Lithium	AND AND		Dige and		Building and steel	materials structures	Glass	Refractory materials
Battery	Automated cell loading	Cell electrode inspection	Module compression forming	Module stacking	Rail	transit	Low-speed transportation	Engineering
×4					Fitness e	quipment	Entertainment equipment	Shipbuilding and marine engineering
High-End			THE PARTY		Meta	allurgy	Chemical industry	Others
Equipment	Construction machinery	High-voltage special transformers	Specialized vehicles	Rail transit				

Driving the Low-Carbon Transition of Society

In the context of "dual carbon" goals, Estun recognizes green, efficient, and energy-saving products and solutions as significant business development opportunities. In 2024, the Company increased its R&D investments in clean technology, developing innovative energy-saving products and solutions, while providing highly efficient and reliable energy-saving integration schemes and services. Estun has comprehensively engaged in the intelligent manufacturing upgrade of the new energy industry, empowering upstream and downstream ecosystem partners in the industrial chain to achieve green and low-carbon transformation, collaboratively building a greener and more sustainable future.

Creating Green Products

Committed to the corporate mission of "making the world greener," Estun adheres to the principles of green design and circular design, comprehensively reducing carbon emissions and resource consumption throughout the product lifecycle, thereby further enhancing the environmental sustainability of its products.



Green Design

Stage	Key Initiatives
Product Design	The Company actively pursues green product design principles. • In terms of lightweight design, the Company expiproduct designs. While maintaining essential promechanical volume and component quantities. achieved an 11% weight reduction compared to it ended to a straight of the Company combines improving maintainability, disassembly, scalability in terms of intelligent features, the Company has robot dynamics model algorithms. These are integrite intelligent manufacturing solutions and sophistic
Raw Material Selection	 A rigorous green material selection standard selection standard selection genuironmental friendliness, the conteregulated. In compliance with standards such a cadmium, hexavalent chromium, polybromina prohibited. Priority is given to low-toxicity, non Company has increased the proportion of rener of selected materials after product end-of-life. implemented for anti-stick gripping, replacing a reducing hazardous waste generation. Close attention is paid to material composition relevant compliance documentation and trace. signed to clearly define both parties' environment.
Production and Manufacturing	Optimizing production processes and implement strategies for energy conservation and consur- equipment precision control and energy efficie production process. For detailed information, please refer to the "Resource"
Storage/ Transportation	 High-efficiency insulation materials, such as poroofs, constructing storage facilities with superiare installed, significantly reducing energy const. Green transportation options are prioritized for snew energy trucks, effectively reducing fuel commissions. Environmentally friendly packaging is constantly
Usage	 Green, energy-efficient, and high-performance locustomers improve manufacturing efficiency. Taemployed to comprehensively simulate the entire each stage, and identifying wasteful and high-energy process sequences, optimization of equipment larefficiency is improved by 20%, average materia efficiency is increased by 18%, resulting in greater For more detailed information, please
Disposal	 Standard products and standardized modules are en- recycling and disassembly, improving the reuse rate used to replace three-axis non-standard motion m- subsequent production line iterations, robots and sta- achieving a production line reuse rate of up to 500 reducing dependence on primary resources and dec During the production line disposal phase, equipme the disassembly process are meticulously collected production line. This provides valuable reference for R&D design cycles by 15%, avoid repetitive issues, and

Product Energy-Saving Benefits

We consistently improve product energy efficiency and integrate the development of green energy products, energy-saving products, and solutions to help customers conserve more energy and achieve superior cost-saving performance. For instance, in the CTP100s module flexible line assembly project, when end-users replace traditional high-speed chain production lines with flexible line assembly, the total power consumption of the production line is reduced by approximately 20 kilowatts. With the implementation of energy data management, energy consumption is effectively reduced by over 5%. Based on an annual shipment of 150,000 battery packs, the total electricity saved amounts to 79,050 kWh, equivalent to a reduction of approximately 45.05 tons of carbon dioxide emissions.

ign, adopting concepts such as lightweight, modular, and intelligent

lores innovative materials and technologies, as well as miniaturized oduct performance, it streamlines product structures and reduces In 2024, the newly launched magnesium alloy robot ER4-550-MI as aluminum alloy counterpart.

s different functional modules to meet varied application needs, y, and reusability.

as introduced more precise and high-speed autonomous industrial agrated with robot+AI vision, robot+sensors/actuators, robot+digital atforms, and robot+mobile robots to deliver comprehensive "robot+" cated industry-specific scenario solutions.

ystem has been established, encompassing multiple dimensions. ent of toxic and hazardous substances in raw materials is strictly as RoHS, the use of harmful substances including lead, mercury, ated biphenyls, and polybrominated diphenyl ethers is strictly i-toxic, and biodegradable materials. In terms of recyclability, the wable raw materials used to ensure efficient recycling and reuse During the reporting period, mechanical structural changes were inti-stick materials applied through spraying processes, effectively

during the procurement phase. Suppliers are required to provide ability reports for materials. Green cooperation agreements are ntal responsibilities and obligations, ensuring minimal impact of raw .

nting intelligent transformations of production equipment are core mption reduction. Unnecessary processing steps are eliminated, ency are improved, reducing energy consumption throughout the

ce Management" and "Pollution Prevention and Control" chapter modules.

olyurethane sandwich panels, are utilized for warehouse walls and ior thermal insulation properties. Energy-efficient lighting systems umption and carbon emissions.

short-distance transport. For instance, the Liyang project employs nsumption by 18% and decreasing harmful substances in exhaust

promoted to facilitate the recycling of packaging materials.

ow-carbon products and solutions are innovatively developed to help aking automotive manufacturing as an example, digital models are production process, precisely analyzing material and energy flows at ergy-consuming process nodes. Through adjustments in production yout, and refined energy allocation, overall factory energy utilization al transportation distances are shortened by 20%, and production r energy savings and reduced environmental impact from waste.

e consult the "Improving Manufacturing Efficiency" module in this chapter.

mployed to build production lines, with product designs focused on easy e of various modules in the production line. For example, 20 robots are echanisms in building a super mold-pulling module production line. In andardized equipment are successfully applied to new production lines, % (compared to traditional production lines' reuse rate of about 20%), creasing landfill waste.

ent operation data, maintenance records, and technical parameters from and organized to establish a comprehensive lifecycle database for the subsequent green product R&D, helping to shorten new production line d improve the success rate and efficiency of green product development.

Supporting New Energy Green Manufacturing

In light of the carbon peak and carbon neutrality objectives, global demand for clean energy continues to surge. Estun fully leverages its core technological advantages in motion control and industrial robotics, strategically positioning itself in new energy market segments. The Company has assembled teams of industry experts to conduct in-depth research on industry processes and explore sector-specific needs and challenges, thereby injecting momentum into the green development of the new energy industry.

Listed in the PVBL 2024 Global Top 100 Photovoltaic Brands

ESTUN

Rated as a Single–Product Manufacturing Champion Enterprise by the Ministry of Industry and Information Technology for the Photovoltaic Layout Industrial Robot

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Photovoltaic Industry

Our focus encompasses applications across the entire photovoltaic industry chain, addressing intelligent manufacturing needs in silicon crystal, solar cell, and photovoltaic module production stages. We have developed comprehensive intelligent solutions for the photovoltaic industry, forging close partnerships with over 100 enterprises in this sector. Our global market share exceeds 90%, with more than 15,000 Estun photovoltaic-specific robots operating reliably around the clock. Our cuttingedge Chinese technology is spearheading the robust development of the photovoltaic industry worldwide.

In solar cell production, as cells become increasingly thin and larger, greater demands are placed on the speed, precision, and stability of cell handling and insertion. Our latest high-speed, high-precision UNO-15-1430-HP robot can transport 34 solar cells in a single cycle. Equipped with an advanced dynamics model, it achieves optimal acceleration and deceleration planning and precision assurance throughout its operational range, effectively mitigating the risk of cell damage during handling.



Lithium Battery Industry

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Recognizing the complexity of lithium battery manufacturing processes, we have integrated the strengths of our Trio motion controllers, Estun servo systems, industrial robots, machine vision, and digital products to create intelligent solutions spanning from cell to module/PACK production for the lithium battery industry. Through collaboration, we have enabled customers to iterate their technology four times, resulting in a cumulative efficiency improvement of over 300%.

In lithium battery manufacturing, electrolyte wiping is a critical process. Traditional wiping methods often face challenges such as low efficiency and insufficient precision. To address this, we have developed an innovative flexible wiping solution featuring a force-controlled robot with a multifunctional end-of-arm tool that combines liquid spraying and wiping functions. An advanced wiping force control algorithm ensures effective cleaning while preventing damage to battery end caps, paving the way for automation of complex manual operations in the lithium battery industry.



New Energy Vehicle Industry

To cater to the diverse applications in the new energy vehicle industry, including arc welding, spot welding, gluing, stamping, handling, loading/unloading, riveting, and casting, we have introduced a range of medium and heavy-duty robot models. These robots are equipped with mature automotive industryspecific process software packages, driving intelligent manufacturing advancements in the new energy vehicle sector.

To meet the challenge of joining dissimilar materials in new energy vehicle production, we have engineered an SPR/FDS robot automatic switching riveting production line. Centered around the ER350-3300 heavy-duty robot, this system effectively counters the reaction force on the robot body during riveting operations, meeting high load, high rigidity, and high reliability requirements while ensuring process precision and quality.



Ranked among the **2024 Top 30** Intelligent Manufacturing in New Energy Industry at the 2024 (3rd) GGII New Energy Intelligent Manufacturing Summit

Hydrogen Energy Storage

In the intricate process of water electrolysis for hydrogen production, every nuanced operation directly impacts hydrogen purity and production efficiency. The Estun ER350-3300 robot, with its optimized structural topology, significantly enhances wrist inertia and torque performance. It precisely executes electrolyzer assembly, maintenance, and fine adjustments during the electrolysis process. Leveraging its robust load capacity and flexible operating range, it ensures efficient and stable hydrogen production, providing solid technical support for high-quality green hydrogen production.

We have supported a leading domestic hydrogen energy equipment enterprise in its global expansion, promoting water electrolysis hydrogen production projects and hydrogen storage equipment development and application in Egypt. In India, we have facilitated the construction of an advanced manufacturing plant for electrolyzers with a 300MW annual production capacity, contributing significantly to the green energy transition in Asia and Africa.



Improving Manufacturing Efficiency

As a key driver of intelligent upgrading in the manufacturing sector, Estun consistently integrates cutting-edge technology with industrial ecosystems. This approach promotes digital and intelligent transformation of enterprises, enabling clients to establish high-precision, highly flexible intelligent production systems. The result is an efficiency revolution and quality leap driven by intelligent manufacturing.

Boosting Production Efficiency

We enhance product production efficiency through advanced technologies such as automated production lines and intelligent manufacturing. A prime example is the CTP bottom water-cooled magnetic levitation module line project. By implementing new magnetic levitation transport technology, combined with servo quick-change tooling and highly compatible fixtures, we increased efficiency from 38 PPM to 72 PPM and reduced changeover time from 2 hours to 1 hour.



Enhancing Product Quality

We ensure consistent product quality through standardized production methods. For instance, in a TMC module assembly line, our innovative use of linear motor stacking increased throughput by 25% and improved product yield from 98.5% to 99%.

CASE

Empowering Lighthouse Factories to Lead Efficient Manufacturing Globally

Lighthouse Factories, renowned as the world's most advanced factories, exemplify the pinnacle of digitalization in the industrial sector. These facilities not only achieve seamless integration of digital and physical realms but also significantly improve production efficiency and quality while reducing manufacturing costs. This results in highly flexible and personalized production capabilities. Estun robots, leveraging high-quality products, comprehensive services, rapid delivery systems, and digital products and platforms,



have contributed to the establishment of four lighthouse network factories. Our industrial robots have enhanced quality and efficiency in the Zhengzhou Coal Mining Machinery Group's smart park, the first lighthouse factory in the global coal machinery industry. We collaborated with a global leader in the new energy sector to develop an intelligent lithium battery manufacturing facility. In automotive final assembly lines, our heavy-duty, high-rigidity, and highprecision robots are deployed for welding, handling, and gluing processes, ensuring top-guality commercial vehicle production. Our UNO series spot welding robots support automotive parts manufacturing, helping numerous new energy, automotive, and industrial equipment enterprises boost their production efficiency.

CASE

Launching China's First Fully Localized Stamping Line for Automotive Body Panels Using Large-Load Robots

In automotive manufacturing, stamping is crucial for producing body panels such as doors, side panels, and hoods. To address the challenges of traditional, manual stamping lines - including low efficiency, safety risks, and a shortage of skilled young workers - Estun has developed China's first fully domestic large-load robot automotive body panel stamping line. This innovative line achieves integrated control throughout the entire process, from destacking and cleaning to stamping and handling, filling a significant gap in domestic high-end stamping equipment.

For new energy vehicle body manufacturing, we have implemented an integrated control architecture that coordinates the real-time operation of robots, presses, and auxiliary equipment. Edge computing modules, working in tandem with our E-Noesis industrial digitalization platform, process and display production orders, equipment status, and production efficiency data in real-time. This system provides lean and intelligent production process management alongside swift, convenient after-sales service, propelling the automotive manufacturing industry towards intelligent and environmentally friendly transformation through high efficiency, stability, and flexibility.

Accelerating Industrial Digital Transformation

Under the guidance of Made in China 2025, industrial enterprises are rapidly advancing their digital transformation. Focusing on the digital application needs of intelligent factories, Estun has expanded its capabilities to create comprehensive digital solutions for the entire product lifecycle. We offer digital products and services across production line design, simulation and verification, integrated delivery, and intelligent factory operation and maintenance, providing robust technical support for intelligent manufacturing in the Industry 4.0 era.

E-Noesis Industrial Internet Platform

This platform delivers a range of digital functions, including process quality inspection and optimization, fault warning analysis, and remote operation and maintenance.

Digital Twin

We provide advanced digital twin technology for various workstations, enabling real-time simulation of production processes and states.

Digital Factory

Our digital factory solution offers real-time feedback on the production and operational status of robots throughout the entire manufacturing facility.

CASE

Digital Sheet Metal Bending Workstation: Breaking Down Data Silos in Production Lines

In factory production environments, despite the widespread deployment of MES (Manufacturing Execution System), the integration of all equipment directly into MES is often hampered by the diversity of production line equipment, nonuniform interface protocols, and the multiplicity of equipment manufacturers. This significantly impedes the automation and intelligence of sheet metal bending processes. To address this challenge, Estun has introduced an innovative digital sheet metal bending workstation based on its E-Noesis industrial digitalization platform. This solution enables seamless interconnection between robot operational data and the factory's MES system, facilitating real-time work order management, production execution, equipment management, and program management. This achievement truly realizes end-to-end digital production across the entire production line. Through bidirectional data communication and intelligent statistical analysis, the digital sheet metal bending workstation offers businesses precise and intuitive equipment management, lean and intelligent production process management, and swift, convenient after-sales service. This innovation propels the sheet metal manufacturing industry towards enhanced digitalization, integration, and intelligent informatization.





CASE

Collaborating with Huawei to Develop Next-Generation High-Speed, Stable Industrial Network Solutions

With the rapid advancement of digital applications, intelligent factories are experiencing an unprecedented surge in connected devices, leading to increasingly stringent requirements for real-time data collection and analysis capabilities aimed at mining the potential value of production data. In September 2024, Estun partnered with Huawei to launch a cutting-edge, high-speed, and stable industrial network solution. This solution deeply integrates PLC (Programmable Logic Controller), servo systems, vision technology, and robotics. By utilizing TSN (Time-Sensitive Networking) switches, it constructs a next-generation industrial network architecture that combines high precision, stability, and intelligence. The solution offers significant advantages in wide coverage, high mobility, large bandwidth, and low latency, driving robots from mere automation to true intelligence.

Boosting Intrinsic Enterprise Safety

Industrial production often involves harsh working conditions such as high temperatures, loud noise, and dense smoke, which can lead to occupational diseases and safety incidents that threaten employee health. Estun's high-protection robots, boasting an IP67 protection rating, meet stringent industry requirements for resistance to high temperatures, moisture, dust, corrosion, and acid-base environments. These advanced robots significantly reduce manual labor intensity and associated hazards, helping clients enhance their intrinsic safety measures.



Estun was honored with dual awards for Outstanding Product and Advanced Technology under the 2024 China Intelligent Welding Industry Chain Pioneer Awards at the GGII Annual Gala.

CASE

Launch of New Heavy–Duty Palletizing Robot to Reduce Manual Labor Intensity

Palletizing robots can effectively replace human labor in goods classification, handling, and loading/ unloading tasks, particularly in the handling of hazardous materials such as radioactive or toxic substances. This significantly reduces workers' physical strain and ensures their personal safety. To address the growing demand for efficient fulllayer palletizing solutions in industries such as beverages and chemicals, Estun has continued to develop sophisticated four-axis palletizing robots with high load capacity, long reach, and high precision. Building upon its existing range of 15KG, 60KG, 120KG, and 180KG payload products, the Company has newly introduced a 500KG heavyduty palletizing robot. This innovation not only injects strong momentum into industrial automation upgrades but also greatly reduces safety risks associated with manual heavy lifting, achieving comprehensive improvement in intrinsic safety.



Innovation-Driven Development

As a pioneer in China's AC servo and motion control field, Estun consistently increases its R&D investment, adhering to short-, medium-, and long-term R&D strategies. The Company is committed to achieving breakthroughs in key core technologies, driving industrial robots and automation products towards higher precision, enhanced intelligence, and broader application domains. This unwavering focus ensures product and technological leadership, aligning with the highest international standards.

Governance

• With Nanjing as the central R&D hub, integrate global R&D resources from Germany, the UK, and the USA to form three specialized R&D teams focusing on robotics and intelligent manufacturing systems, intelligent control core components, and a dedicated European R&D center. Formulate the *R&D Management Standards* to constantly standardize R&D management practices.

Impact, Risk, and Opportunity Management

 Introduce standardized processes and templates for phased management and rigorous monitoring of product development processes, scientifically allocating resources to avoid waste and idleness, thereby improving product R&D efficiency, quality, and resource utilization.

Enhancing R&D System

Estun consistently drives innovation through substantial R&D investments, allocating approximately 10% of its revenue to this crucial area. The Company constantly refines its scientific research and innovation system by focusing on institutional mechanisms, platform construction, and talent cultivation. This approach strengthens the foundation for scientific research and innovation, activating new engines and momentum for high-quality development.

During the reporting period, the Company's R&D investment reached RMB 503 million, marking a 0.06% increase year-on-year. To further align business development with innovative talent and bolster in-house R&D capabilities, the Company has aggressively recruited outstanding domestic and international professionals. With Nanjing as its R&D hub, Estun has integrated global R&D resources from Germany, the UK, and the USA. The Company has assembled a high-caliber R&D team led by international industry experts, Jiangsu Province's leading talents for entrepreneurship and innovation, and highly qualified overseas-educated professionals. This initiative has resulted in the formation of three distinct talent echelons: an automation innovation team, a high-tech engineering team, and an expert academic team. By the end of the reporting period, the Company boasted a professional R&D team of 1,032 individuals, including 320 with master's degrees or higher.



Strategy and Management Approach

- Implement a system-level, forward-looking R&D strategy guided by the goal of "from following to surpassing" that translates customer needs into product requirements, with continued expansion into high-precision, heavy-duty, and full-range product systems.
- Initiate an IPD (Integrated Product Development) transformation to enhance cross-departmental collaboration, achieving efficient integration of the entire process from customer needs identification to market promotion.

Indicators and Targets

• Establish a comprehensive assessment system aligned with IPD principles, incorporating key indicators such as product development cycle, product quality, and market feedback into the evaluation scope, enabling thorough assessment of team and individual performance.

R&D Personnel Structure in 2024



Forward-Looking R&D System

The Company maintains a system-level forward-looking R&D strategy guided by the strategic goal of "from following to surpassing." Following a customer-centric approach, we employ a tightly coupled product development model to accurately understand and meet customers' explicit needs through technological means while guiding their implicit needs to provide an enhanced user experience. Based on Estun's system-level forward-looking R&D platform, the Company has achieved comprehensive development in robot controllers, servo systems, and body design, with over 90% self-sufficiency in core robot components.

Forward-looking R&D necessitates multi-disciplinary collaboration to maximize the performance of each component. To this end, we have initiated an IPD transformation to enhance cross-departmental cooperation, break down organizational silos, and achieve efficient integration of the entire process from customer needs collection and product planning to design, development, and market promotion. Based on the Company's business realities in 2024, we focused on building product competitiveness, reinforcing strengths, and addressing weaknesses. Moving forward, we plan to further deepen the IPD transformation, embedding its outcomes into our daily operations.

	2024 Key Initiatives	2025 Work Plan
Optimizing R&D Management Process	Introduce standardized processes and templates for phased management and rigorous monitoring of product development processes, ensuring timely and high-quality completion at each stage, thereby enhancing the overall product R&D management system.	Conduct a comprehensive review of existing IPD processes, with a focus on key cross- departmental collaboration nodes, streamline complex procedures, and boost process efficiency.
Enhancing Product R&D Efficiency	Achieve strategic allocation of resources based on project priorities and requirements, minimizing waste and idle capacity, resulting in significant improvements in product R&D efficiency, quality, and resource utilization.	Integrate digital tools to further enhance product R&D efficiency, providing robust support for product development initiatives.
Improving Product R&D Quality	Ensure product stability and reliability through multi-dimensional approaches from design review to rigorous testing and verification, effectively reducing post-launch quality issues.	Establish a comprehensive assessment system aligned with IPD principles, incorporating key indicators such as product development cycle, product quality, and market feedback into the evaluation scope, enabling thorough assessment of team and individual performance.

Innovation Incentive Mechanism

To constantly invigorate R&D momentum and inspire employees to better leverage their innovative capabilities, the Company has established and refined mechanisms for cultivating and retaining scientific research talent. These efforts are underpinned by innovation incentive systems such as the *R&D Management Standards* and *Intellectual Property Reward Management Measures*. We place paramount importance on retaining core talent, offering competitive equity incentives to technical leaders and other high-potential personnel. We employ a diverse array of incentive methods, including the R&D Star and Technical Innovation awards, as well as targeted rewards for inventors and designers. These initiatives encourage employees to exercise their creativity and innovative thinking in their respective roles, thereby enhancing the Company's independent innovation capabilities.

Open Innovation Ecosystem

The Company consistently enhances its global R&D capabilities, expanding its R&D innovation network. We actively forge and deepen collaborations with prestigious domestic and international higher education institutions and research organizations. These strategic partnerships enable joint efforts to address key industry challenges and core technical problems, fostering an ecosystem of resource sharing and mutual benefit, thus providing robust technical support for the Company's sustainable development. During the reporting period, Nanjing Estun Software Technology Co., Ltd. and Nanjing Estun Intelligent Systems Engineering Co., Ltd. successfully renewed their high-tech enterprise status in the 2024 re-evaluation.



As a technological pioneer in China's AC servo, motion control, and industrial robotics sectors, Estun rigorously adheres to the *Industrial Robot Industry Regulatory Conditions (2024 Edition)*, the *Implementation Measures for the Administration of Industrial Robot Industry Regulatory Conditions (2024 Edition)*, and relevant domestic and international laws, regulations, and technical standards. With scientific ethics at its core, the Company integrates principles of safety, transparency, and traceability into product design, ensuring product reliability, data privacy control, and respect for intellectual property protection and industry-academia-research collaboration. We strictly prohibit any infringement and reject unfair competition practices. Focusing on intelligent manufacturing and industrial automation upgrades, we contribute to "dual carbon" goals through transparent, traceable R&D processes and green, energy-efficient designs. We optimize human-machine interfaces in accordance with collaborative robotics standards, addressing workers' skill transformation needs and promoting career development in human-machine collaborative scenarios. This approach ensures that our technology and products consistently serve sustainable development and societal well-being.

Leading R&D Achievements

Leveraging its comprehensive and advanced R&D system, Estun consistently deepens product design and process technology research and innovation to meet customers' evolving demands for higher quality and more reliable products. In 2024, the Company further advanced technological innovation and product upgrades, constantly expanding application areas, providing cutting-edge solutions and services, and enhancing market competitiveness and global presence.

Estun CODROID Humanoid Robot

The CODROID 01 humanoid robot features an integrated joint module with fully in-house developed core components. This module offers rapid response, high torque density, strong load-bearing capacity, extended service life, stable operation, and low-noise performance with enhanced shock resistance



New Ultra-Light Magnesium Alloy Robot

The ER4-550-MI magnesium alloy robot is meticulously crafted, achieving approximately 33% weight reduction in components compared to aluminum alloy counterparts. This innovation results in an 11% decrease in overall machine weight, a 5% improvement in high-speed performance, and a 10% reduction in power consumption. It is well-suited for various industries, including 3C, new energy, food processing, and semiconductor manufacturing.

700KG Class Industrial Robot

Leveraging proprietary dynamics algorithms and lightweight structural design, this robot finds wide application in heavy industrial equipment, automotive, and building materials sectors. This breakthrough has led to Estun's heavy-duty robots being included in the Ministry of Industry and Information Technology's First (Set) Major Technical Equipment Technology Promotion and Application Guidance Catalog (2024 Edition), establishing them as a national benchmark for high-end equipment.





69 New patents granted in 2024

156 Patents pending approval

590 Cumulative total of

granted patents 252

Cumulative total of granted invention patents

425

Cumulative total of software copyrights

95 New software copyrights acquired in 2024

UNO Series High-Speed, High-Precision Spot Welding Robot

Addressing challenges in automotive welding processes, the purpose-built UNO220-2700 spot welding robot incorporates a proprietary welding gun servo motor. It boasts a 40% improvement in response speed and features online load identification, self-learning vibration suppression, and scenario-adaptive debugging. These capabilities meet the demands for efficient, stable, and intelligent white body spot welding scenarios.

Five-in-One Servo Drive

Employing a minimalist and common bus design, this drive achieves a 40% reduction in installation space and over 20% comprehensive energy savings. When paired with the TRIO motion controller, it meets diverse requirements for injection molding machine manipulators, parallel robots, electronic assembly equipment, and 3/5-axis dispensing machines.

FLEX-7 Medium and Large-Scale Controller

Featuring robust load-bearing capacity and powerful performance, this controller supports simplified programming. It caters to the varied needs of multistation rotary die-cutting machines, lithium battery punching and cutting integrated machines, lithium battery winding machines, rotary printing presses, semiconductor encapsulation machines, and photovoltaic sorting machines.

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The project Key Technologies and Applications of Robotic Operations for New Energy Vehicle Power Battery Modules won the **second prize in the 2023** Guangdong Provincial Science and Technology Progress Award

Selected for the China Machinery Industry Federation's 2023 Robot Industry **Top Enterprises Cultivation List**









Ranked first in the *Internet Deep*'s Top 50 Innovative Robot **Enterprises list**

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Deepening Industry Cooperation

Estun consistently expands its collaborative reach by hosting and participating in national and industry standard formulations, attending industry conferences and exhibitions, and establishing extensive strategic alliances and close partnerships. These efforts drive the reinvention of innovation and productivity, working alongside partners to promote high-quality industry development.

Partner Collaboration

• Estun hosted the 2024 "Empowering Through Renewal, Winning the Future Together" Channel Partner Conference, fostering "trust + development power" with channel partners. By collaborating across multiple dimensions, including products, technology, services, training, and system construction. we jointly build the motion control and robotics industry ecosystem.



Standard Co-construction

• As a primary drafting unit for the national standard Safety of Machinery-Technical Requirements for Safety Relays, Estun actively participated in formulating mechanical safety standards. Our efforts aim to promote the improvement and upgrading of these standards, contributing to a safer and more reliable mechanical operating environment. In October 2024, we were honored with the second prize of the Mechanical Industry Science and Technology Award by the National Technical Committee 208 of Safety of Machinery of Standardization Administration of China.



Industry Exchange

- •On March 27, Estun received a delegation of diplomatic envoys as part of the "Diplomatic Envoys' Visit to Jiangsu" organized by the Ministry of Foreign Affairs, showcasing its technological advancements and industrial layout in intelligent and digital manufacturing. The Company held indepth discussions with diplomatic representatives from 28 countries and international organizations, including Japan, South Africa, Spain, and Argentina.
- •On July 2, Estun took part in Premier Li Qiang's research symposium in Jiangsu. Our Chairman, Wu Bo, delivered a keynote address as an enterprise representative. He emphasized the Company's commitment to its role as an industry leader in industrial robotics, pledging to work closely with upstream and downstream partners to overcome challenges and drive intelligent manufacturing through innovative technologies.
- On November 15, Hao Mingjin, Vice Chairman of the Standing Committee of the National People's Congress, conducted research in Jiangsu on "Promoting Innovative Development of Intelligent Robot Industry to Accelerate New Industrialization Process." His visit to Estun provided an opportunity to inspect our facilities and gain insights into the development, application, effectiveness, and enterprise perspectives of the intelligent robotics sector.
- On December 20, at the 2024 World Intelligent Manufacturing Conference, Estun showcased its latest innovations, including motion control series products, new magnesium alloy robots, spot welding robot workstations, humanoid robots, and collaborative robots, to inject momentum and innovative vitality into global industrial manufacturing.









Professional Quality Service

Estun upholds its corporate mission of enhancing quality, constantly reinforcing full lifecycle product quality management. We ensure guality at every stage of R&D and production, while delivering superior service that swiftly addresses customer needs and resolves issues. This approach guarantees that our products and services not only meet but exceed customer expectations.

Quality Revolution

In today's increasingly competitive market environment, quality has become pivotal for corporate survival and growth. To realize our vision of "zero quality defects," we launched a comprehensive quality revolution in 2024. Through a systematic, phased quality transformation plan, we focus on enhancing both product excellence and business process optimization, thereby achieving a holistic improvement in quality management standards.

Rated as a AAA Quality Credit Rating Enterprise of Jiangsu Province for 2024

Governance

• The Quality and Technology Department spearheads the construction of quality management system and drives continuous quality enhancement. During the reporting period, the Company issued 42 institutional documents, comprising 28 revisions and 14 new additions. Moreover, it successfully passed the ISO 9001:2015 Quality Management System recertification audit, effectively advancing product safety management quality.

Impact, Risk, and Opportunity Management

• Implement robust quality risk identification, assessment, and improvement management mechanisms for each stage of product development. Constantly enhance quality inspection processes and monitoring capabilities, implementing reliability test standards that significantly surpass both national and international benchmarks to ensure superior product reliability.

Quality Strategy

The overarching aim of quality revolution is to construct a forward-measurable and reverse-closed-loop quality management mechanism. By enhancing its quality objective management process and target system, Estun attempts to establish a comprehensive product quality issue management mechanism. The Company has built an all-encompassing quality assurance system that covers the entire process chain, ensuring stringent quality control from customer requirements to product design, production, and delivery, guaranteeing that every detail meets its exacting quality standards.



Recognized as an Industrial Robot Industry Compliant Enterprise

Strategy and Management Approach

• Initiate a quality revolution by refining the quality objective management system and product quality issue management mechanism. Establish a forward-measurable and reverseclosed-loop quality management mechanism, ensuring guality control throughout the entire process from customer requirements to product design, production, and delivery, ultimately achieving the "zero quality defects" goal.

Indicators and Targets

• Introduce innovative product failure rate and TOP issue model analyses, constantly refining the quality objective management process and target system. Conduct quality objective tracking, analytical discussions, and current objective reviews.





In 2024, we utilized robot products as a pilot for multiple quality improvement projects. For instance, our robot noise improvement team, through targeted QCC (Quality Control Circle) activities, identified key influencing factors and successfully reduced the noise defect rate from 4% at the year's start to below 0.5% by year-end. Our robot torque alarm improvement team, through cross-departmental collaboration, in-depth problem cause analysis, and multifaceted countermeasures, reduced torque-related alarms from 2% to 0.6% over the year. achieving an impressive yield rate improvement of over 50%.

Quality Improvement Planning

implement effective measures

for resolution.

Quality improvement is a long-term, continuous process that necessitates phased and strategic implementation. Estun employs a three-step approach as the guiding principle for designing quality improvement solutions. We have developed a three-year quality improvement plan, which is executed through phased implementation, annual reviews, and projectbased operations. This approach aims to achieve enhancements in product quality, process efficiency, and overall quality standards.



Comprehensive Quality Control

To effectively implement quality strategic objectives and mitigate product quality and safety risks, the Quality and Technology Department oversees the construction of the guality management system and drives continuous guality improvement. This aligns with relevant quality laws and regulations, including the Product Quality Law of the People's Republic of China and the Supervision and Management Regulations for Industrial Product Manufacturing Units to Implement Quality and Safety Responsibilities. The department supervises various sub-units, including the Process Technology Unit, the Process Quality Unit, the Supplier Quality Unit, the Customer Quality Unit, and the Product Reliability Laboratory, ensuring quality control throughout the entire product lifecycle. Additionally, a Quality Expert Group has been established to provide regular guidance on guality strategic objectives and improvement initiatives.

The Company has instituted a comprehensive product quality management system. Based on product quality management system requirements and internal business and management structures, this system undergoes annual updates. In 2024, the Company optimized and updated quality system-related policies and processes across various domains, including product R&D, manufacturing, procurement and supplier management, quality management, and after-sales service. A total of 42 policy documents were issued, comprising 28 revisions and 14 new additions. Following the release of these policies, relevant personnel underwent training through the Estun Academy Online, recording over 3,500 attendances, effectively promoting continuous improvement in product safety management quality.

To ensure the effective operation of the quality system, we regularly conduct internal quality reviews, management assessments, and external certification audits. In 2024, the Company successfully passed the ISO 9001:2015 Quality Management System recertification audit. This certification covers Estun Automation Co., Ltd., Estun Robotics Co., Ltd., and Estun Intelligent Technology (Jiangsu) Co., Ltd., while maintaining the effective operation of the quality system.

Product failure rate: 1.18 %, a decrease of 0.2
Process pass-through rate: 94.08 %, an incre
First-time right rate: 99.69 %, an increase of

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Stage	Quality Management Measures
Development Quality	Follow the IPD process for new product developm planning stage onward. At each technical milestor to comprehensively assess risks related to qualit 2024, more than 30 projects were reviewed, with o corrective actions.
	For detailed information, please refer to the "Innova
	Update key supplier quality management proces Supplier Audit Management Measures, Material Evaluation Management for Production Materials. S monthly supplier performance evaluations to drive
Supplier Quality	Conduct 15 specialized quality improvement pr appearance quality enhancement, CSOT quality reducer quality improvement, and G1 nitrogen cyli
	Implement new versions of quality agreements w as dimensions and performance of critical mater Implement new versions of quality agreements wit dimensions and performance of critical materials b
Manufacturing Quality	Comprehensively identify critical processes an people, machine, material, method, environment, improvement mechanisms and launch over 20 of implementation of small and medium-load compo pressing fixtures, and test trajectory enhancemen effects throughout the process.
	Conduct regular product process audits post-ma workshop process inspection audits were organiz have been successfully rectified.



nent, meticulously identifying and verifying quality risks from the ne, experts from various fields are invited to participate in reviews y and technology, thereby improving R&D and design guality. In over 50 risk points identified, all of which were addressed through

ation-Driven Development/Enhancing R&D System" chapter modules.

ss documents, including the Incoming Quality Control Process, Certification Management Process, and Supplier Performance Specify detailed PPM targets for different categories and intensify e continuous quality improvement.

rojects for key suppliers, addressing issues such as cast iron improvement, Hauto teaching pendant quality enhancement, H1 inder noise reductior

ith suppliers, mandating guarantees on key quality aspects such rials before shipment, supplemented by regular on-site reports. th suppliers, mandating guarantees on key quality aspects such as before shipment, supplemented by regular on-site reports.

nd elements of process management, considering aspects of and measurement. Focus on TOP issues to establish specialized quality improvement projects, covering first-time right issues, onent run-in tests, optimization of material control methods and t. Meticulously track the implementation and actual improvement

ass production to identify potential risk points. In 2024, over 30 zed, identifying more than 300 improvement points, all of which

Stage	Quality Management Measures
Delivery	Expand product inspection criteria to enhance problem detection rates, ensuring issues are fully exposed on the production line for thorough and effective improvements.
Quality	For detailed information, please refer to the "Reliability Management" module in this chapter.
Sales and Service Quality	Establish an efficient customer response mechanism that includes immediate investigation and analysis of quality incidents upon receiving customer complaints about product quality. Provide feedback report to customers and facilitate multi-departmental collaboration to develop corrective, preventive and response measures based on final investigation results, aiming to prevent recurrence of similar quality issues.
	For detailed information, please refer to the "Optimizing Customer Service" module in this chapter.
Non-conforming Product Management	Revise the <i>Non-conforming Product Management Process</i> , clarifying procedures and requirements for handling non-conforming products in the manufacturing process. Introduce <i>Quality Alert</i> requirements, specifying responsible departments for each process to prevent the use and transfer of non-conforming and suspect products. During the reporting period, the Company incurred no penalties from regulatory authorities for violations of product and service quality and safety-related laws and regulations, nor did it experience any product recall incidents.

Digital Quality Management

The Company harnesses digital technology to enhance its full lifecycle quality management, conducting comprehensive statistical analyses to inform quality control decisions and improve both the efficiency and accuracy of product quality management.



CASE Digital Real-time Traceability Reduces Quality Risks

The Company has further optimized its MES system to achieve digital real-time traceability and quality alert functions for key materials and critical processes, substantially enhancing its quality risk prevention and control capabilities. In our automated assembly line for main components, our proprietary MES system enables real-time data upload for processes such as casting grabbing and reducer installation, establishing a robust guality alert and full-process traceability mechanism. We have innovatively introduced visual inspection technology, implementing process parameter monitoring nodes at the automatic gluing stage to achieve dynamic quality control. Our flexible production system enables intelligent cross-work order scheduling, improving assembly efficiency by over 80% and achieving a process capability index exceeding 1.67, ensuring a 100% compliance rate for core processes such as screw tightening. Additionally, our self-developed encoder circuit board automatic burning and coating line achieves full-process digital management from board separation to burning and coating. Robotic arms automatically complete burning parameter verification and functional testing, with data synchronizing in real-time to the MES system, forming traceable electronic records. This approach reduces human factor variables and further mitigates quality risks.

Building of Zero Defect Culture

Estun consistently fosters a guality culture atmosphere that emphasizes full employee responsibility and participation, instilling the "zero defect" quality management concept in every team member. This approach aims to internalize quality consciousness and externalize it through actions, constantly enhancing individual skills and guality awareness.

Theme	Activity Description	Quality Culture Building Performance
"Golden Ideas" for Quality Improvement	Solicit and collect innovative suggestions from all employees to improve quality management, promoting the implementation of "golden ideas."	A total of 154 proposals were submitted, 129 were approved, and 120 were implemented, achieving an implementation rate of 93% . Recognition was awarded to 52 individuals for their contributions.
Operational Skills Competition	Organize employee operational skills competitions to assess participants' proficiency, accuracy, and speed in specific skills or operations.	7 employee skills competitions were conducted; 52 individuals received awards.
Quality Knowledge Competition	Conduct assessments and competitions on quality management principles, methods, and tools to promote learning and mastery of quality knowledge across the organization.	Offline and online quality knowledge competitions were held for various departments; 40 individuals received awards.
Lessons Learned Summary	Facilitate experience sharing and summary sessions, disseminating insights from typical issues and successful experiences in business operations to similar production and operational processes.	3 company-wide lessons learned summary sharing meetings were held; 18 cases were added to the knowledge repository.
Quality Improvement Project Evaluation	Summarize, evaluate, and incentivize quality improvement projects conducted in 2024.	43 improvement projects were executed throughout the year; 6 outstanding cases were selected for recognition in the annual review.
Specialized Quality Training	Enhance employees' quality awareness and skill levels through targeted quality training programs.	Internal and external training sessions were conducted on 4 key tools: RPS, Six Sigma, FMEA, and CP.
Quality Culture Promotion	Share diverse perspectives, experiences, and insights on quality from personnel at all levels to enhance company-wide quality awareness and promote quality management principles.	18 quality culture promotion articles were published in Estun Style online and the internal publication <i>Estuners</i> .
E1	11675	//07
Total quality sessions con	training Total quality ducted training hours	497 Total attendance in quality training





Product Safety Management

In the rapidly evolving landscape of intelligent manufacturing, safety has become an indispensable core element. Estun rigorously adheres to product safety standards throughout the design, production, and usage processes. We develop safety-focused product series and prioritize product safety management. Our approach includes implementing measures such as affixing warning labels to equipment and providing comprehensive usage and maintenance instructions in end-user manuals to prevent improper operation and safeguard customer health and safety.

The Company obtained the first cETLus certificate for industrial six-axis articulated robots, signifying that our robot products fully comply with global mainstream industrial robot safety standards such as ANSI/UL 1740 and CAN/CSA Z434 in terms of functional safety.



Our safety function series products, ESS (ESTUN Safety Solution), received China's first CE Machinery Directive and Functional Safety Compliance Certificate. A total of 12 safety functions passed ISO 13849 PL d, Cat.3 certification, achieving spatial protection functions that meet stringent functional safety requirements.



CASE Robot Functional Safety Solutions Empower Global Industrial Manufacturing

In scenarios involving human-machine interaction, various machine tool operations, stacker protection system for stereoscopic warehouses, and logistics production lines, every detail is crucial for production efficiency and personnel safety. Estun has developed and launched the innovative ESS (ESTUN Safety Solution) series of products. Key functions such as safety emergency stop, safety protective stop, and static monitoring have comprehensively passed rigorous safety standard certifications. These products not only support the PROFIsafe safety communication protocol but also adapt to integration requirements of high-density production lines in industries such as automotive manufacturing. They can be widely applied in handling, palletizing, welding, assembly, and other fields, significantly enhancing the reliability and safety of production processes.

The ESS series products offer flexible configuration of functional safety zones. They can be customized with various functional safety sector areas according to specific needs, meeting the human-machine collaboration requirements of different types of workstations. Within the safety zone, robots operate at normal speed, ensuring optimal production efficiency. When entering the alert zone, robots automatically decelerate to ensure equipment and personal safety. Once the danger zone is breached, robots immediately cease operation, effectively guaranteeing production safety.

Reliability Management

To proactively prevent potential product safety and quality issues, Estun consistently refines its quality inspection processes and enhances its monitoring technical capabilities. In accordance with product quality planning requirements, we conduct comprehensive inspections and various performance and functional tests on materials, semi-finished products, and finished products. Robust management procedures and inspection standards are established at each stage to comprehensively intercept product issues, ensuring that products constantly meet customer requirements.

The Company has established a reliability testing center comprising 9 specialized laboratories, 4 expert testing teams, 30 professional testing directions, hundreds of advanced testing equipment and instruments, and thousands of meticulously developed testing methods and use cases. It covers critical testing areas including electronic components, electrical components, core mechanical components, complete robot units, and system reliability. The internal reliability testing standards implemented by the Company significantly exceed national and international enterprise standard requirements. Tests are conducted at the limits of standards, with high-acceleration extreme testing for key components and multi-sample long-cycle high-temperature accelerated life testing for all new products, thereby ensuring product reliability. Our products have undergone rigorous testing by renowned international third-party certification bodies such as TÜV Rheinland, SGS, UL, and ETL, successfully passing certifications including functional safety, European CE and UKCA, North American safety (UL), and motor energy efficiency.

EXAMPLE Estun's Product Reliability Laboratory Receives CNAS Accreditation

Estun's Product Reliability Laboratory is constructed and operated in strict accordance with the ISO 17025 management system. We consistently enhance our extreme testing methods and equipment, establishing HALT (Highly Accelerated Life Test) testing capabilities and formulating comprehensive product extreme reliability testing requirements. We proactively conduct extreme destructive testing on our products to uncover potential design issues and constantly elevate product performance limits. Additionally, we have introduced a 64-cubic-meter ultra-large environmental test chamber to conduct environmental simulation and accelerated life testing on heavy-duty robot bodies under load, ensuring exceptional reliability of products even in the most challenging environments. In December 2024, following a rigorous audit by the China National Accreditation Service for Conformity Assessment, our Product Reliability Laboratory obtained the CNAS accredited laboratory gualification. This accreditation encompasses three major areas: industrial robots, electromagnetic compatibility, and electrical safety reliability. It covers six product types including motors, industrial robots, variable-speed electrical drive systems, products for industrial environments, general electronic and electrical products, and industrial, scientific, and medical equipment, aligning with 37 standards including GB, IEC, and CISPR. This remarkable achievement underscores that Estun's product reliability laboratory management and testing capabilities have attained a level of excellence recognized both domestically and internationally.

Optimizing Customer Service

Guided by a customer-centric service philosophy, Estun leverages its comprehensive nationwide and global service network to optimize and upgrade service processes and experiences. We consistently explore innovative service offerings to forge deeper, long-term partnerships with customers.

Governance

• The Global Delivery and Service Department oversees customer relationship management and has established an "Iron Triangle" customer support team, delivering high-caliber customized services, expert advice, and tailored solutions.

Impact, Risk, and Opportunity Management

• Establish diverse channels for complaints and feedback, actively engaging with and responding to customer suggestions and opinions. Conduct comprehensive annual customer satisfaction surveys, with targeted improvements made in areas identified as having lower satisfaction rates.



Strategy and Management Approach

• Upholding the customer-centric service philosophy, the Company offers professional technical support through dedicated teams, provides industry-wide solution coverage, maintains an extensive service network across China and abroad, and delivers 24/7 after-sales support to ensure rapid response to customer needs and timely issue resolution.

Indicators and Targets

• Implement a robust monitoring and assessment mechanism, establishing annual targets for key metrics such as customer satisfaction, complaint rates, and issue resolution timeliness. Integrate them into the evaluation system and directly link to employee compensation and career advancement opportunities.

Enhancing Service Capabilities

Estun consistently refines its organizational structure to meet diverse customer needs, with a focus on enhancing customer experience. The Global Delivery and Service Department spearheads the establishment and improvement of customer relationship management systems, conducts regular customer visits, manages customer satisfaction, and oversees on-site delivery and commissioning. The "Iron Triangle" customer support team provides high-level customized services, expert advice, and tailored solutions, ensuring rapid response to customer needs, swift problem resolution, and efficient project completion. Through relentless improvement and innovation. we deliver exceptional products and services, earning customer trust and striking an optimal balance between maximizing customer value and company performance, achieving a win-win outcome for both the customer and the Company.



 \Box Standardizing Service Management Processes

The Company has established a comprehensive management mechanism providing 24/7 technical support throughout the product lifecycle, encompassing pre-sales, sales. and after-sales stages. This mechanism clearly delineates the service content, quality requirements, and response times for each stage of the process, thereby ensuring consistency and standardization of service delivery. In 2024, the Company further revised the After-sales Service Management Manual, adding new process guidelines and establishing standardized service protocols. Approximately 200 SOP documents for fault handling were also updated, covering key areas such as vision systems, servo systems, arc welding, spot welding, and general applications.

Optimizing and Upgrading Service Content

The Company has implemented a digital and intelligent customer management model approach. Our CRM system provides detailed categorization and data analysis of various metrics, including in-transit work hours and repair waiting times. This enhancement has led to improved service efficiency and faster response times to customer needs. In addition, the Company has fully upgraded the WeChat-based repair request process, enabling customers to easily submit repair requests and track repair progress in real time, better meeting customer needs.

0 Strengthening Professional Service Support The Company actively expanded its after-sales service network, establishing 75 service locations worldwide. All technical service teams at these locations have undergone systematic training. In 2024, over 70 training sessions were conducted for technical service personnel, totaling more than 500 hours and recording over 12,000 attendances. These initiatives have significantly bolstered our overall service capabilities in the after-sales market.

To help customers and partners better and more efficiently learn to use Estun robots, the Company provided over 200 specialized training sessions in 2024. These sessions encompassed more than 1,800 hours of instruction, covering essential topics such as robot operation, programming, and common fault troubleshooting.

CASE Al Intelligent After-Sales Assistant Enhances Service Efficiency

Leveraging years of technological expertise and advanced intelligent digital integration techniques, Estun has developed an innovative AI-powered after-sales solution. This cutting-edge solution seamlessly integrates natural language processing, advanced knowledge graphs, machine learning, and deep learning technologies with an efficient dialogue management system. It offers intelligent Q&A capabilities, real-time responses, a smart database, problem analysis, and solution assistance, providing a comprehensive one-stop intelligent after-sales service experience for industrial robots.

Customer Complaint Resolution

The Company has implemented a robust and efficient customer complaint handling mechanism, underpinned by comprehensive internal policies such as the Guidelines for Customer Complaint Submission Process and Customer Complaint Handling Procedure. We have designated specialized personnel to manage customer complaint incidents, facilitating the development of tailored solutions and ensuring effective communication with customers. Customers can lodge complaints or provide feedback through multiple channels, including a 24-hour toll-free service hotline (400-025-3336), WeChat, and our official website. We meticulously categorize all complaint information and establish specific response and processing timelines. A robust monitoring and assessment mechanism has been implemented, integrating key metrics such as customer satisfaction, complaint rates, and issue resolution timeliness into our evaluation system. These metrics are directly linked to employee compensation and career advancement opportunities, ensuring that every complaint is addressed and resolved within the stipulated timeframe.

A	Indicator	2024 Target	2024 Performance	Target Achievement Rate
Æ	Average problem resolution time (days)	21	17.6	116.2%

Customer Complaint Handling Process



Customer Satisfaction Management

To gain comprehensive insights into customer satisfaction with Estun's products and services, we conduct thorough annual customer satisfaction surveys. The survey results serve as a crucial foundation for enhancing our customer relationships. In accordance with our Customer Satisfaction Survey Management Process, we design detailed satisfaction questionnaires covering critical aspects such as product quality, delivery time, after-sales service, pre-sales assessment solutions, and pricing. We distribute electronic questionnaires to our entire customer base, implementing incentive mechanisms to optimize response rates and quality. Upon completion of each customer satisfaction survey, we generate a comprehensive report that meticulously analyzes the measurement methods and survey results. This in-depth analysis drives continuous improvement in our service quality and standards, bolstering our market competitiveness. In 2024, we achieved an overall customer satisfaction score of 89.76 points, marking an increase of 2.56 points year-on-year and surpassing our annual target of 85 points.

1,797

Inquiries collected and responded to by 400 call center

33

Customer complaints processed

Customer complaint resolution rate

We attentively listen to customer complaints, comprehend associated losses, and assess the urgency of each situation to fully grasp the issues and sources of dissatisfaction.

We meticulously document and categorize key issues and core pain points from customer complaints, including relevant data and consequences of anomalies, to facilitate thorough

We classify complaints into pre-sales marketing issues and after-sales global delivery issues. Pre-sales concerns are promptly forwarded to relevant pre-sales personnel, while after-sales issues are directed to the appropriate after-sales manager based on customer attributes, ensuring swift response and demonstrating our commitment to addressing

We form dedicated investigation teams to gather necessary information and data, gaining comprehensive insights into specific customer issues. The responsible department collaborates closely with relevant departments to conduct root cause analysis.

We conduct immediate emergency handling of issues as per customer requirements. Based on in-depth problem analysis, we provide tailored solutions and communicate thoroughly with the customer for confirmation. Solutions are promptly implemented for products in use at customer sites, inventory, and our work-in-progress and stock. The

We analyze common themes and trends in complaints to drive continuous improvement in our products, processes, and service quality. For product quality issues, we track feedback on the subsequent three shipments following the implementation of permanent



Governance Chapter Promoting High-Quality Development





Enhancing Corporate Governance

Estun firmly believes that a robust governance structure is the cornerstone of sustainable corporate development. The Company has thoroughly refined its corporate governance system, establishing a modern enterprise organizational structure and operational mechanism, thus laying a solid foundation for high-guality development.

Governance

• The Company has established a comprehensive and efficient corporate governance structure comprising the General Meeting of Shareholders, the Board of Directors, the Board of Supervisors, and the management team. It has also put in place a governance mechanism with clearly defined responsibilities and standardized operations, effectively ensuring fairness and rationality in corporate decision-making.

Impact, Risk, and Opportunity Management

- Implement reasonable remuneration policies and plans for directors and senior management, linking their compensation to company performance and individual achievements to ensure alignment of interests.
- Establish a comprehensive information disclosure system to ensure investors can obtain timely and accurate company information, strengthen communication with investors, enhance company transparency and credibility, and build strong relationships with the investor base.

Strategy and Management Approach

• The Company fully considers board diversity to enhance the professional competence and decision-making capabilities of its board members. It also strengthens the role of independent directors in corporate governance to improve the rationality and quality of board decisions.

Indicators and Targets

 Constantly improve the corporate governance structure, enhance information disclosure transparency, and strictly comply with regulatory requirements to effectively protect shareholders' legal rights and interests and promote the Company's long-term stability and sustainable development.

Corporate Governance System

Estun strictly adheres to the requirements of laws, regulations, and normative documents such as the Company Law of the People's Republic of China, the Securities Law of the People's Republic of China, the Measures for the Administration of Stock Exchanges, the Code of Corporate Governance for Listed Companies, the Rules Governing the Listing of Stocks on the Shenzhen Stock Exchange, and the Shenzhen Stock Exchange Self-Regulatory Guidelines No. 1 - Standardized Operations for Companies Listed on the Main Board. The Company has established a corporate governance structure centered on the General Meeting of Shareholders, the Board of Directors, and the Board of Supervisors. Each body has developed and refined its working systems and rules of procedure, forming an effective mechanism with clear rights and responsibilities, mutual communication, and checks and balances among the power organ, the decision-making body, the supervisory body, and the executive body, ensuring the standardization and effectiveness of the corporate governance structure.

In accordance with relevant laws and regulations, the Company has formulated a series of systems including the Articles of Association, Rules of Procedure for General Meeting of Shareholders, Rules of Procedure for Board of Directors, Rules of Procedure for Board of Supervisors, and Working System for Independent Directors, clarifying the operational norms for the three main governance bodies. During the reporting period, the Company newly established the Accounting Firm Selection System and Public Opinion Management System, and completed the revision of the Management System for Directors, Supervisors, and Senior Management Holding and Trading Company Shares, further enhancing its corporate governance system.

Meeting of Shareholders

The General Meeting of Shareholders is the Company's highest authority. Estun convenes and holds general meetings of shareholders in strict accordance with the Articles of Association, Rules of Procedure for General Meeting of Shareholders, and other relevant regulations. The Company fully general meetings of respects all shareholders, ensuring their right to know, participate in, and shareholders were convened vote on significant company matters. It guarantees equal treatment and throughout the year, full exercise of legal rights for all shareholders, with particular attention to minority shareholders. As required by regulatory authorities, the Company publishes resolutions and legal opinions of general meetings of shareholders.

Board of Directors

Reporting to the General Meeting of Shareholders, the Board of Directors serves as the decision-making body for company operations and management and the highest decision-making authority for ESG management. The Company regulates the Board's deliberation process and meetings of the Board of decision-making procedures in accordance with the Rules of Procedure Directors were convened for Board of Directors, promoting effective performance of duties by throughout the year directors and the Board as a whole. The Board has established five specialized committees: the Audit Committee, the Nomination Committee, the Remuneration and Appraisal Committee, the Strategy Committee, and the Environmental, Social, and Governance (ESG) Committee. Each with committee performs its duties according to the Articles of Association and its implementation rules, providing informed recommendations to the Board and enhancing its standardized operation and scientific decision-making capabilities.

Board of Supervisors

As the supervisory body, the Board of Supervisors is accountable to the General Meeting of Shareholders. It effectively oversees the Company's finances and ensures legal compliance of the Board of Directors and management in performing their duties. This oversight promotes the meetings of the Board of Company's healthy, stable, and sustainable development while safeguarding Supervisors were convened the legal rights and interests of both the Company and its shareholders. As of the end of 2024, the Board of Supervisors consisted of 3 members, including 1 employee supervisor and 2 female supervisors.

Board Independence and Effectiveness

Estun fully recognizes that the independent director system is a crucial safeguard for promoting the standardized operation of listed companies, maintaining their overall interests, and protecting the legal rights of minority investors. The Company strictly adheres to the requirements outlined in the Measures for the Administration of Independent Directors of Listed Companies by formulating and actively implementing the Independent Director System and the Working System for Independent Director Special Meetings. It rigorously follows the qualification requirements and appointment/dismissal procedures specified in the Independent Director System to select and appoint qualified experts and authoritative figures as independent directors, fully leveraging their role in corporate governance.

The Board of Directors comprises 9 members, with independent directors accounting for 33.33% of the total. None of the independent directors hold any form of company shares. These directors do not directly participate in company management, thereby reducing the risk of conflicts of interest and effectively serving as a check and balance. Independent directors constitute the majority and chair the Audit Committee, Nomination Committee, and Remuneration and Appraisal Committee under the Board, ensuring the objectivity and fairness of Board decisions. The Company has established a Board performance evaluation mechanism, with the Remuneration and Appraisal Committee responsible for formulating and regularly conducting assessments of company directors. During the reporting period, the Company conducted performance evaluations covering all Board members.

The Company provides independent directors with adequate working conditions and personnel support to fulfill their responsibilities. It also ensures their right to information by regularly briefing them on company operations and providing relevant materials, ensuring they have access to sufficient resources and necessary professional opinions when performing their duties. In 2024, the Company organized 4 special meetings for independent directors, where they reviewed matters such as related party transactions. In addition to arranging for independent directors to attend onsite general meetings of shareholders, Board of Directors meetings, and Board of Supervisors meetings, the Company also organized and facilitated on-site inspections of key subsidiaries, allowing independent directors to gain a deeper understanding of subsidiary operations and providing robust support for their comprehensive fulfillment of duties.

with proposals reviewed and approved

proposals reviewed and approved

throughout the year

proposals reviewed and approved

Independent Directors' Con	nposition and Meeting Reco	ords of Board Specialized (Committees
Board Specialized Committee	Number of Independent Directors	Number of Meetings Held	Independent Directors' Attendance Rate
Strategy Committee	1	2	100%
Audit Committee*	2	5	100%
Remuneration and Appraisal Committee*	2	2	100%
Nomination Committee*	2	2	100%
Environmental, Social, and Governance (ESG) Committee	1	1	100%

Note: * indicates that an independent director serves as the committee chair.

Board Skills and Diversity

To enhance the scientific nature and rationality of Board decision-making, Estun implements a Board member diversity policy. This approach carefully considers a wide range of factors including cultural and educational backgrounds, work experience, gender, and age in the composition of the Board. By embracing this diversity, the Company benefits from a more holistic perspective and a broader range of viewpoints, thereby facilitating the professionalization and efficient operation of the Board. The directors possess a balanced combination of knowledge and skills, with theoretical knowledge and practical experience in engineering, mechanical engineering, electrical automation, accounting, economics, business administration, and other fields. As the convener of the Audit Committee, independent director Mr. Chen Heng is a certified public accountant and senior accountant. Serving as the CFO of other listed companies, he brings extensive financial background and experience to implement effective internal financial management and risk control.

The Company continues to promote the standardized operation of the Board of Directors and Board of Supervisors, providing ample internal and external training resources to help directors, supervisors, and senior management enhance their performance capabilities. During the reporting period, the Company organized 11 training sessions for these key personnel, covering topics such as interpretations of 2024 capital market policies and new regulations, as well as news communication strategies and public opinion management for Jiangsu listed companies, helping directors more effectively fulfill their responsibilities.

			Professional Knowledge and Skills					
Position	Name		Strategic Planning	Industry Experience	Risk Management	Finance & Accounting	Legal	Operations Management
Chairman	Wu Bo	Male	\checkmark	\checkmark	\checkmark			\checkmark
Vice Chairman, General Manager	Wu Kan	Male	\checkmark	\checkmark	\checkmark	\checkmark		\checkmark
Director, Deputy General Manager	Zhu Chunhua	Male	\checkmark	\checkmark				\checkmark
Director, Deputy General Manager	Zhou Ailin	Male	\checkmark	\checkmark				\checkmark
Director, CFO, Deputy General Manager	He Lingjun	Male	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
Director	Chen Yinlan	Female	\checkmark	\checkmark				\checkmark
Independent Director	Chen Heng	Male			\checkmark	\checkmark		
Independent Director	Feng Hutian	Male		\checkmark				
Independent Director	Tang Wencheng	Male	\checkmark	\checkmark				

Number of directors by educational level



Number of directors by gender

Male

directors





Director and Senior Management Compensation Policy

Estun has established a fair and effective compensation management and incentive mechanism for directors and senior management. The Remuneration and Appraisal Committee is responsible for formulating and reviewing the compensation policies and plans for directors and senior management. These policies and plans are submitted to the Board for approval, and then to the general meetings of shareholders for final ratification before implementation, alongside comprehensive information disclosure.

The Company conducts thorough evaluations based on annual business performance, senior management' job responsibilities, and the achievement of annual work objectives. Compensation and performance bonuses for senior management are determined based on these evaluation results, encouraging effective fulfillment of their duties. The Nomination Committee and the Remuneration and Appraisal Committee are tasked with nominating senior management and assessing their work capabilities, performance, and goal achievement to determine annual compensation packages and year-end bonuses. Additionally, the Company has implemented a multi-tiered evaluation and incentive mechanism to further enhance the motivation and creativity of managers and drive continuous growth in corporate performance.

Director and Senior Management Compensation Structure

In 2024, the Chairman did not receive compensation from the Company. Other non-independent directors holding positions in the Company receive salaries based on their respective roles without additional director allowances. Their compensation is primarily determined by the Company's operating conditions, the scope and responsibilities of management positions, their strategic importance, and performance evaluations.



Ownership of Directors and Senior Management

Name	Position	Direct Shareholding (Shares)	Multiple of Annual Compensation ¹
Wu Bo	Actual Controller, Chairman	110,996,700	Not applicable ²
Wu Kan	Vice Chairman, General Manager	1,263,033	21.63
Zhu Chunhua	Director, Deputy General Manager	68,600	1.55
Zhou Ailin	Director, Deputy General Manager	164,500	3.45
He Lingjun	Director, CFO, Deputy General Manager	180,000	2.41
Chen Yinlan	Director	58,000	2.06
Yin Chenggang	Deputy General Manager	24,900	0.81 ³
ZHANGXING·ZHU	Deputy General Manager	62,000	0.50 ³

Notes: 1. The multiple of annual compensation of director/executive is calculated as: (Year-end stock price × Number of shares held by director/executive) / Annual compensation of director/executive.

2. Mr. Wu Bo does not receive compensation from the Company; therefore, the multiple is not applicable. 3. Mr. Yin Chenggang and Mr. ZHANGXING ZHU have been serving as Deputy General Managers since April 30, 2024. Their reported compensation is calculated from April 30, 2024. The multiple of annual compensation is estimated based on an annualized salary.

Ratio of General Manager's compensation to average employee compensation



Protection of Investor Rights and Interests

Estun places high importance on investor relations management. The Company strictly adheres to relevant provisions of the Company Law of the People's Republic of China, the Securities Law of the People's Republic of China, the Guideline for Investor Relations Management of Listed Companies, and other pertinent laws and regulations, as well as the Company's Articles of Association. It has formulated the Investor Relations Management System based on the principles of fairness, justice, openness, and objectivity, ensuring equal treatment of all investors and safeguarding their right to information and other legal rights. The Company effectively protects the rights of minority shareholders, ensuring they can attend general meetings of shareholders in person or exercise their voting rights through online channels. For significant matters that may affect the interests of minority investors, the Company adopts separate vote counting and disclosure methods for minority shareholders to safeguard their rights to exercise shareholder privileges.

Information Disclosure

The Company has formulated and strictly implemented the Information Disclosure Management System and Confidentiality Management System, which standardize the transmission process, review management, disclosure procedures, confidentiality measures, file management, and accountability for information disclosure. We fulfill our information disclosure obligations in accordance with the law, meticulously preparing, approving, and disclosing ad hoc announcements and periodic reports. Our information disclosure work is carried out in a true, accurate, complete, and timely manner, constantly improving the quality of information dissemination. During the reporting period, there were no instances of false records, misleading statements, major omissions, or other improper disclosures in the Company's information disclosure.

Investor Communication

The Company adheres to an investor relations philosophy grounded in sincerity, compliance, and professionalism. We maintain robust, comprehensive, and effective communication with investors interested in the Company's development through various channels. These include telephone and email correspondence, the cninfo.com platform, on-site investor visits, performance briefings, brokerage strategy meetings, and large-scale exhibitions such as the China International Industry Fair (CIIF). This multi-faceted approach ensures that shareholders and the broader investor community are promptly informed of significant company events and operational conditions, fostering a positive and interactive relationship between the enterprise and its investors.



Implement a coordinated mechanism across business units. Promptly facilitate cross-departmental communication by the Board Secretary when addressing investor concerns, particularly hot topics, with each business unit providing swift feedback. Ensure timely and effective information transfer between the Company and the market.

- Optimize the Company's showroom, constantly updating exhibits to showcase the latest products. Open factory tour routes, allowing investors participating in on-site research activities to directly observe facilities, products, production processes, and employee working environments, thereby enhancing their understanding and appreciation of the Company.
- Recognize the diverse investor base, and flexibly adjust the timing of visits and exchanges with overseas investors to ensure equal participation opportunities for all investor types.
- Engage professional agencies to produce promotional videos that elucidate the Company's fundamentals and address key investor concerns. Utilize these materials in China A-share overseas investor exchange meetings.
- Actively manage public opinion and conduct strategic news dissemination. Maintain regular communication channels with major financial media to convey the Company's value proposition. Proactively address potential public opinion events that could significantly impact stock price fluctuations, providing reasonable guidance to manage expectations and mitigate the spread of misinformation that could mislead investors
- Produce and release user-friendly H5 infographics for semi-annual and annual reports, employing graphical representations to clearly and effectively communicate the Company's highlights and conduct capital brand marketing.

Periodic reports disclosed

125 Ad hoc reports disclosed

Responses on irm.cninfo.com.cn

b Performance briefings and other investor communication events held

Investors received

157 Investor research

sessions hosted

100+

Calls from individual investors answered

Received the 15th Pegasus Award for Investor **Relations Management of** Chinese Listed Companies by Securities Times

Honored with the **Best Investor Relations Team Award** in the 5th Elite Board Secretary Selection by Cailian Press

Investor Returns

While focusing on its own development, the Company maintains an unwavering investor-centric approach. Since our listing, we have consistently implemented a cash dividend policy that balances continuity and stability, in strict accordance with our Articles of Association. This approach ensures that we constantly share the Company's success with investors. During the reporting period, the Company formulated an annual profit distribution plan based on actual operating conditions and development strategy, while safeguarding normal operations and long-term growth prospects. The independent directors diligently fulfilled their responsibilities by expressing clear, unbiased opinions on the formulation and decision-making process of the profit distribution plan. Relevant resolutions underwent thorough review and approval by the Board of Directors and Board of Supervisors before submission to the general meetings of shareholders, effectively protecting shareholders' legal rights. In 2024, the Company implemented the 2023 profit distribution plan, distributing a cash dividend of RMB 0.60 (pre-tax) for every 10 shares, with a total cash dividend of RMB 52.02 million (pre-tax).

Standardizing Related Party Transactions

To standardize related party transactions, reduce unnecessary dealings, protect shareholders' legal rights, and maintain fairness and justice in transactions between the Company and related parties, Estun has established comprehensive systems. These include the Articles of Association, Rules of Procedure for General Meeting of Shareholders, and Related Party Transaction Management Measures. These frameworks provide detailed guidelines on the scope, review processes, disclosure requirements, and recusal procedures for related party transactions. This ensures fairness and impartiality in decision-making for all shareholders and promotes orderly and standardized management of such transactions.

During the reporting period, all related party transactions conducted by Estun were rooted in normal production, operational, and business development needs. These transactions adhered to fair market principles, with pricing deemed equitable and reasonable. All necessary decision-making procedures and information disclosure obligations were meticulously fulfilled. The Company's independent directors conducted thorough pre-reviews of significant related party transactions and expressed unbiased opinions, ensuring that these dealings aligned with the overall interests of shareholders.

Risk and Compliance Management

Estun consistently enhances its risk management and internal control systems, fostering a conducive internal environment for enterprise risk control and operational efficiency, thereby ensuring healthy and sustainable development.

Governance

- The Board of Directors oversees the establishment, maintenance, and effective implementation of risk management and internal control compliance. The Board's Audit Committee scrutinizes and reviews the effectiveness of operational risk management and internal control systems.
- The internal audit body (Audit Department) orchestrates and executes daily audit work, inspecting and supervising the establishment and implementation of internal control systems.
- An ESG Leadership Group has been instituted to identify and manage ESG risks and opportunities.

Impact, Risk, and Opportunity Management

- Regularly review risk points across various business modules, conduct comprehensive risk assessments, delineate control measures, and improve supervisory mechanisms to enhance the Company's risk prevention and control capabilities.
- Periodically evaluate the efficacy of risk management and internal control systems, and conduct targeted audits to ensure the robust operation of the Company's internal control compliance system and mitigate operational risks.

Strategy and Management Approach

- Focus on the triad of "audit + internal control + compliance" to persistently refine the internal control compliance management system.
- Bolster the tax management system to ensure full compliance with corporate tax obligations. Conduct regular tax selfinspections to constantly enhance tax management compliance capabilities.

Indicators and Targets

• Formulate annual audit work plans encompassing the Company's headquarters, wholly-owned and controlled subsidiaries. The audit scope covers core business operations, critical issues, and high-risk areas. Problem rectification is integrated into performance evaluations to ensure effective resolution of issues identified during audits.

Strengthening Risk Prevention and Control

Estun has instituted a comprehensive risk management system by constantly refining its Risk Management System, establishing and enhancing risk prevention mechanisms, and improving risk identification and assessment protocols, risk control and response strategies, and risk culture development. The Company consistently optimizes risk management processes to ensure the healthy and stable development of its diverse business operations.

Enhancing Organizational Structure

Fortifying Risk Management

The Company has developed a robust risk management organizational structure. The Audit Committee under the Board meticulously monitors and reviews operational risk management performance, maintaining overall risk control at an acceptable level. The internal audit body (Audit Department) organizes and implements daily audit work. The authenticity and completeness of financial information and the establishment and implementation of internal control systems are scrutinized and supervised by this department. Furthermore, the Company refined its ESG management system in 2024 by instituting an ESG Leadership Group. This group is responsible for identifying and managing ESG risks and opportunities, effectively addressing ESG risks that significantly impact the Company's business.

The Company has established appropriate risk acceptance thresholds and designed corresponding internal control procedures. It regularly reviews and updates risk management policies and related internal control systems to adapt to evolving market conditions and operational changes. Periodic or random checks are conducted to ensure the implementation of internal control systems aligns with risk management policies. A comprehensive series of Internal Control Manuals covering eight key areas has been developed, and the Internal Control Checklist is constantly refined. ESG risk management (human resources, information security, R&D management, guality management, business ethics, etc.) has been integrated into the holistic risk management framework.

Internal Control and Compliance Management

To bolster the Company's internal control and compliance management, Estun has formulated and rigorously implements the Estun Special Business Internal Management System, Internal Control System, and Internal Audit System. Focusing on the triad of "audit + internal control + compliance," the Company concentrates on generating value through comprehensive business and process audits related to supply, production, sales, human resources, finance, and materials, consistently refining its internal control and compliance management framework. During the reporting period, the Company exhibited no significant deficiencies in internal control related to financial or non-financial reporting.

Enhancing Internal Control Management

The Company drafted and issued 5 internal control-related policies in 2024, establishing internal control checklists for system management methods, R&D projects, procurement management, asset management, and consignment management, thereby constantly standardizing internal control management processes. The Employee Handbook underwent a thorough update, clarifying the internal management mechanism for conflicts of interest. The Employee Conflict of Interest Declaration was disseminated to all employees via the Company's WeChat account. A comprehensive review and update of sales, channel, procurement, and administrative contracts was completed, resulting in 16 new or updated contract templates, further streamlining business process operations.

The Company expanded its audit scope in 2024, culminating in 12 completed audit projects, identifying 57 issues, successfully tracking and resolving 45 of them, and recovering losses totaling RMB 670,900. Prompt corrective actions were implemented for issues identified during audits, fostering a positive cycle of improvement-driven management and ensuring compliant business operations across all company sectors.

Reinforcing Employee Training

The Company conducted four legal training sessions in 2024, producing 12 legal education articles with a cumulative readership of 3,019. The Estun Academy Online introduced a mandatory course for new employees titled Strictly Prevent Conflicts of Interest, Prohibit Crossing Red Lines, engaging 133 attendances in 2024, thereby comprehensively elevating legal compliance awareness among all employees.

Legal risk control training sessions

in legal risk control training

Total training hours of legal risk control training

For key risk areas intrinsically linked to enterprise operations, the Company regularly reviews risk points in corresponding business modules. Control measures and monitoring mechanisms are delineated, and closed-loop management is established to ensure risks are effectively managed and controlled. Regular risk assessments are conducted, and targeted improvement measures are developed based on assessment outcomes to further enhance the Company's risk prevention and control capabilities. In 2024, the Company implemented multiple risk management projects. Unnecessary expenditures and inventory accumulation were avoided through rigorous risk control procedures, thereby further reducing operational costs and risks. A total of 106 risk points were identified and addressed across 4 key areas.

Tax Management

Estun rigorously adheres to domestic laws and regulations, including the Law of the People's Republic of China on the Administration of Tax Collection and the Enterprise Income Tax Law of the People's Republic of China, as well as international tax regulations, diligently fulfilling its corporate tax obligations. During the reporting period, the Company was free from any significant tax violations or involvement in major tax-related litigation or arbitration.

The Company has established a comprehensive tax management system, with the Financial Management Center assuming full responsibility for corporate tax management. This includes standardizing tax practices and updating tax operation norms in accordance with evolving domestic and international tax policies to ensure timely and complete tax payments.

The Company conducts regular tax self-inspections, with 1-2 companies within the consolidated group selected annually for comprehensive checks and risk assessments across all tax categories. This allows for prompt identification and correction of issues, enhancing the Company's tax risk response capabilities. Estun actively cooperates with tax authority inspections and engages third-party audit firms to conduct specialized audits of its tax management, ensuring a more objective and fair evaluation of the Company's tax management practices.

Raising Compliance Awareness

The Company constantly strengthens its tax management compliance capabilities through targeted initiatives. These include organizing tax-specific topics for learning, sharing, and discussion, and inviting external experts to conduct tax knowledge training sessions. In 2024, a dedicated tax learning group was formed, comprising general ledger and tax management personnel from the Company and its subsidiaries. This group conducted 4 comprehensive tax knowledge training sessions to enhance the relevant personnel's awareness of tax compliance.

4 conducted

Total attendance

Cultivating Risk Culture

The Company has fostered a positive, responsible, and integrity-based risk management culture. In 2024, Estun enhanced employees' risk identification abilities and awareness through the dissemination of the Risk Management Manual and regular legal training sessions. These initiatives promoted active employee participation in enterprise risk management and ensured the effective implementation of risk prevention and control measures.

Total tax contribution

Upholding Business Ethics

Estun steadfastly adheres to the principle of honest business practices, rigorously abides by established business conduct codes, and maintains an unwavering "zero tolerance" stance towards corruption and other unethical business behaviors. The Company participates in market competition in strict compliance with laws and regulations, working collaboratively with partners to construct a robust defense line for business ethics.

Business Ethics and Anti-Corruption

Upholding the Defense Line of Business Ethics

Estun rigorously adheres to the Civil Code of the People's Republic of China, the Interim Provisions on Prohibition of Commercial Bribery, and relevant laws and regulations in its operating jurisdictions. The Company constantly refines its business ethics and anti-corruption management system while fostering a culture of integrity through internal communications and ethics training. During the reporting period, the Company recorded no incidents of corruption, bribery, conflicts of interest, fraud, money laundering, or unfair competition.

Enhancing the Management System

• The Company persistently evolves its business ethics and anti-corruption management framework. The Board of Directors serves as the highest decision-making body for business ethics and anti-corruption management. The Audit Committee, established under the Board, coordinates and oversees the Company's audit and monitoring activities, ensuring compliance and transparency in decision-making and execution. Under the Audit Committee's guidance, the Audit Department conducts comprehensive audits and inspections, reinforcing the Company's business ethics monitoring.

Cultivating a Culture of Integrity

- The Company implements diverse promotional and educational initiatives on business ethics and anticorruption. Through internal resources such as the Estun Academy and targeted anti-fraud training, the Company disseminates crucial knowledge on business ethics and anti-corruption to all employees. In 2024, offline training on professional ethics red lines was conducted for newly recruited employees, elevating their ethical standards.
- The Company disseminates business ethics and anti-corruption policies and regulations through internal websites and corporate WeChat channels, ensuring employees remain informed about the organization's ethical requirements and fostering an atmosphere of collective responsibility.



Whistleblowing and Whistleblower Protection Whistleblowing Hotline (Landline): (025) 52785932 \square Whistleblowing Email: sjjb@estun.com Whistleblowing Scheduled in-person Whistleblowing Channels Supply Chain Integrity Management Signing rate of the Supplier Commitment Letter and ethical business environment. **Anti-Unfair Competition**

Estun rigorously adheres to the Anti-Monopoly Law of the People's Republic of China, the Anti-Unfair Competition Law of the People's Republic of China, the Several Provisions on Prohibiting Infringements upon Trade Secrets, and relevant anti-monopoly and fair competition regulations in all its operational jurisdictions. The Company is committed to conducting all business activities on the foundation of fair and free competition principles. It pledges to refrain from making false or misleading statements about competitors, abstain from malicious defamation, avoid illegally acquiring competitors' trade secrets or confidential information, and eschew engaging in illegal activities such as price collusion that could disrupt market order. The Company collaborates with industry peers to maintain a fair competitive market environment.

Within the Partner Code of Conduct, Estun establishes clear anti-unfair competition agreements with its partners, mandating strict compliance from suppliers. Partners commit to abstaining from providing false information or employing methods that contravene good faith principles in business cooperation. This collaborative approach aims to uphold proper business competition standards. During the reporting period, the Company received no reports or legal actions concerning unfair competition practices.

The Company has implemented the Estun Whistleblowing Management System, which delineates the whistleblowing process, whistleblower protection measures, and management protocols. This system standardizes whistleblowing procedures and ensures fair, effective, and timely handling of potential corruption reports. The Company has established multiple reporting channels, including a dedicated hotline and email address, encouraging employees, customers, suppliers, and other stakeholders to report behaviors that may contravene business ethics, laws, regulations, or other relevant policies. Estun guarantees strict confidentiality for all whistleblower information, with specialized investigators from the Audit Department handling and investigating reported incidents to ensure impartial outcomes. Any form of retaliation against whistleblowers or related personnel is strictly prohibited.

Whistleblowing Mailing Address: Estun Audit Department, No. 1888 Jiyin Avenue, Jiangning District, Nanjing

The Company reinforces business ethics and compliance management for suppliers through a comprehensive Supplier Commitment Letter, which explicitly outlines integrity and ethical requirements. Suppliers must commit to strictly adhering to relevant national and local laws, regulations, and industry standards concerning fair trade, transparency, integrity, and compliance. They must categorically reject any form of commercial bribery, refuse to engage in solicitation of bribes in business dealings, and promptly report any improper behavior through the Company's official reporting channels. Estun maintains a zero-tolerance stance towards fraudulent practices, breaches of integrity, bid rigging, malicious bid withdrawals, or contract violations. Upon verification of non-compliance, the Company terminates cooperation with offending suppliers and blacklists them. Additionally, Estun emphasizes integrity promotion across its supplier network, disseminating communications through internal systems and emails during major holidays to advocate for transparent cooperation and foster a fair, transparent,

Intellectual Property Protection

Estun meticulously complies with the *Trademark Law of the People's Republic of China*, the *Patent Law of the People's Republic of China*, and the *Copyright Law of the People's Republic of China*, along with other pertinent laws and regulations. The Company has instituted and refined internal policies, including the *Intellectual Property Management Measures* and *Measures for Managing the Termination of Patent Maintenance*, to standardize intellectual property management and enhance the identification and control of infringement risks. While vigorously protecting its proprietary intellectual property, Estun ensures it does not infringe upon the trademarks, patents, copyrights, or other intellectual property rights of external enterprises, institutions and individuals.

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Protection of Proprietary Intellectual Property

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- Records Management. The Company assigns dedicated personnel to oversee intellectual property records, regularly organizing relevant documents, contracts, and materials. A tiered management approach is implemented, considering the value creation potential, strategic importance, and maintenance costs of each intellectual property asset.
- Application and Confirmation. The Company has intensified investment in patent applications and copyright registrations, particularly in core technology and brand domains, while bolstering the maintenance and monitoring of existing intellectual property to preempt infringement.
- Core Secrets + Patent Protection. The Company adopts a dual-protection strategy to safeguard R&D outcomes and product designs as appropriate.
- Intellectual Property Training. The Company conducts quarterly specialized training sessions, featuring guidance from external experts. These comprehensive sessions cover intellectual property strategy, case analysis, and professional skill enhancement, aimed at elevating IP protection awareness among R&D personnel.
- Incentive System. The Company has established the *Intellectual Property Reward Management Measures* to incentivize inventors and designers based on the scope and economic impact of their innovations, encouraging employees to protect Estun's new technologies, processes and inventions through patent applications.

Prevention and Control of Intellectual Property Infringement Risks

- Industry Peer Intellectual Property Monitoring. The Company conducts timely analysis of the competitive IP landscape and industry patent technology developments. It closely monitors industry IP cases and high-risk areas to avoid inadvertent infringement, mitigating potential patent risks in R&D projects.
- Compliance Risk Review and Early Warning. The Company comprehensively assesses legal risks related to patents, trademarks, copyrights, and trade secrets across its business activities. This process involves evaluating the likelihood, impact, and consequences of potential infringements to determine risk levels. Timely warnings are issued for risks deemed typical, widespread, or potentially severe, with strategies implemented for avoidance, mitigation, transfer, or invalidation.
- Compliance Risk Response and Rectification. For identified compliance risks, the Company formulates tailored intellectual property risk response plans, ensuring active implementation of rectification measures across all departments.

Responsible Marketing

Estun rigorously adheres to the *Civil Code of the People's Republic of China*, the *Advertising Law of the People's Republic of China*, the *Trademark Law of the People's Republic of China*, and other pertinent laws and regulations. The Company upholds a responsible marketing ethos, implementing a stringent review and supervision mechanism for marketing materials. This approach governs the Company's product labeling, marketing strategies, and customer engagement processes, ensuring the dissemination of comprehensive and accurate product and service information. Sales personnel undergo extensive responsible marketing training to effectively safeguard customers' legal rights and interests.

Establishing Marketing Compliance Mechanisms

The Company has implemented a robust compliance framework, delineating marketing compliance responsibilities throughout the entire marketing lifecycle. This enhances oversight and management of marketing activities, strictly prohibiting exaggerated or false advertising. Any non-compliant marketing behaviors are swiftly addressed and publicly disclosed as a deterrent.

□×Rigorously Reviewing □✓Marketing Content

The "Iron Triangle" leadership and sales supervisors conduct a hierarchical review and validation of marketing materials and promotional content prior to external release. This process ensures that all marketing collateral accurately and meticulously reflects the features and value propositions of the Company's products and services, mitigating the risk of false advertising.



100%

Coverage rate of responsible marketing training for sales personnel Total attendance in responsible marketing training

181

Formulating Clear Ethical Guidelines

The Company has articulated explicit ethical standards for communication with customers and the public. It also mandates adherence to industry norms in all marketing activities to prevent inappropriate promotion.

Conducting Marketing Compliance Training

The Company provides regular training to marketing personnel, underscoring the importance of compliance. These sessions enhance understanding of relevant laws and regulations, fostering a culture of compliance to ensure all marketing activities meet legal requirements.

13,437

Total hours of responsible marketing training

74

Average training hours per sales personnel on responsible marketing

Information Security and Privacy Protection

Estun prioritizes information security and privacy protection, rigorously adhering to the Cybersecurity Law of the People's Republic of China, the Data Security Law of the People's Republic of China, the Personal Information Protection Law of the People's Republic of China, and other relevant laws and regulations. The Company has established and refined a comprehensive information and data security system, implementing a suite of internal management policies including the Information Security and Confidentiality System, Data Center Management System, Information Security Management Measures for R&D and Technology, Estun Data Security Solutions, and Information Security Risk Assessment Management Measures. These measures collectively safeguard the Company's information and data integrity. During the reporting period, no information protection breaches, data security incidents, or customer information leakage events occurred.

Governance

• Institute a top-down information security governance structure with clearly delineated responsibilities. Engage the Board of Directors in formulating information security strategies and the Digitalization Department in orchestrating the Company's information security management initiatives. Ensure relevant departments implement specific information security protocols within their respective domains.

Impact, Risk, and Opportunity Management

- Establish comprehensive risk assessment processes and mechanisms, conducting regular information security risk identification and analysis, and formulating targeted control measures.
- Develop the Data Security Incident Emergency Plan and Data Center Emergency Plan, regularly conducting information security emergency drills to ensure the robustness of information security risk management protocols.

Constantly enhance the information security management

Strategy and Management Approach

system, fortifying data control and network security protection measures. Conduct regular information security audits, bolster employee information security awareness, and systematically elevate information security management standards.

Indicators and Targets

• Ensure all sensitive data (e.g., customer information and financial data) is subject to proper encryption and protection measures to prevent data breaches or unauthorized access, effectively safeguarding customer privacy and employee personal data.

Information Security Governance Structure

Estun has implemented a robust organizational structure for information security and privacy protection, spearheaded by the Board of Directors. The Company aligns information security-related performance with the compensation of management and relevant personnel, ensuring the effectiveness and continuous improvement of information security initiatives.

Estun's Information Security Governance Structure

Board of Directors

Participate in formulating information security strategies, ensuring alignment with the Company's overarching business objectives. Oversee the implementation of information security initiatives, ensuring rigorous execution of all policies and systems.



Develop and implement comprehensive information security strategies, standards, and processes. Orchestrate information security training, coordinate incident response, and swiftly respond to and address emerging security threats. Conduct regular risk assessments to identify potential vulnerabilities and risks, proposing targeted improvement measures.



Oversee information security management within their respective domains, ensuring thorough implementation of security policies and systems. Collaborate with the Information Security Management Department in conducting audits and assessments, promptly addressing identified issues.

Information Technology Protection

At the technical level, Estun implements cutting-edge information security protection technologies. By bolstering data control and network security protection, a comprehensive, multi-layered information security defense network has been established, ensuring the thorough safeguarding of information and data integrity.

- data protection during storage, transmission, and utilization processes.
- Ping32 Data Loss Prevention system and NETSOS, to mitigate data leakage risks.

Enhanced Data Control

- varying sensitivity levels.
- permissions.
- identifying and preventing potential leakage risks.
- Institute a robust data backup protocol, clearly delineating the data backup mechanism. Implement hot standby systems to facilitate rapid data recovery in the event of loss or damage, safeguarding against accidental deletion or modification of data.

Network Security Protection

- the Company's internal network.
- unauthorized access and data theft.
- remediation periodically to minimize network security risks.

Information Security Management

At the management level, Estun enhances its information security management through regular risk identification and assessment, security audits, reinforced emergency management protocols, and the implementation of comprehensive security training and awareness programs for both employees and suppliers.

Information Security Risk Assessment	 Develop the Information Security Risk Assessment establishing robust risk assessment processes and evaluate security risks in information security risks in information security risks in information security risks and evaluate security risks in information security risks and evaluate security risks in information security risks in information security risks and evaluate security risks and evaluate security risks in information security risks and evaluate security risks in information security risks in information security risks in information security risks and evaluate security risks and evaluate security risks in information security risks in information security risks and respectively.
Information Security Audits	 Conduct regular information security audi transmission records of all sensitive data to security.
Information Security	• Formulate the <i>Data Security Incident Emerg</i> <i>Emergency Plan</i> , clearly outlining the emerge data and information breaches.
Emergency Management	 Organize bi-annual information security rea feasibility and effectiveness of emergency pla emergency response and handling capabilities
Enhancement	 Mandate suppliers and company employe agreements as specified, reinforcing the prevention
of Information Security Awareness	 Conduct regular, specialized information encompassing crucial aspects such as secure protection strategies, and email security mana awareness of information security and data pr

Employ advanced encryption technologies, including AES-256 and GM256 encryption algorithms, to secure sensitive data, guaranteeing

Deploy professional data security protection tools with comprehensive monitoring, management, and encryption capabilities, such as the

• Define information data, segregate duties, classify, and manage hierarchically. Develop bespoke data protection strategies for data of

• Regulate employee data access strictly, adhering to the "principle of least privilege." Ensure employees can only access data pertinent to their work responsibilities, maintaining a hierarchical and categorized management system for personnel accounts and

• Utilize DLP (Data Leakage Prevention) technology to monitor the use and transmission of sensitive data in real-time, swiftly

Maintain effective isolation of internal and external network data to thwart malicious attacks and virus propagation, fortifying the security of

• Deploy advanced security measures, including firewalls, IDS (Intrusion Detection Systems), and VPN (Virtual Private Networks), to prevent

• Establish a reasonable anti-virus mechanism. Update server-side virus databases regularly, and conduct network vulnerability detection and

ment Management Measures, s and mechanisms to identify systems, ensuring risks are

its, scrutinizing access and ensure data compliance and

gency Plan and Data Center ency management process for

covery tests to validate the ins, enhancing the Company's

ees to sign confidentiality ention of information leakage.

security training sessions, password practices, phishing agement, to elevate employee rotection principles.

Information security training sessions conducted

60

Total hours of information security training

298

Total attendance in information security training

10**0**9

Coverage rate of information security training for IT personnel

Information leak incidents



Environmental Chapter Building a Sustainable Future Together



Contributing to UN SDGs

58

Environmental Management

Estun rigorously adheres to national environmental protection laws and regulations, including the Environmental Protection Law of the People's Republic of China. The Company has established and consistently refines its green environmental protection system, enhancing its environmental management framework. It implements enduring mechanisms for environmental protection, focusing intensively on addressing climate change, promoting efficient resource utilization, and conducting effective pollution prevention and control. Through these concrete actions, the Company demonstrates its unwavering commitment to safeguarding the natural environment.

Incidents of environmental protection law violations

RMB million Environmental protection

investment



Enhancing the Management System

The Company has established a Production Safety Management Committee, chaired by the General Manager. An EHS Management Department operates under this committee, overseeing the approval of environmental protection systems and managing environmental initiatives. The Company has formulated and implemented comprehensive environmental management systems, including the Environmental Management System, Energy Management System, and Energy Management Manual. It has updated the Environmental Factor Identification and Evaluation Control Procedure, revised environmental factor evaluation criteria, clarified the timing of environmental factor identification, and strengthened the identification, management, and control of significant environmental factors, thereby enhancing the effectiveness and execution of the environmental management system.

Implementing System Certification

The Company has successfully obtained ISO 14001 Environmental Management System certification. This certification encompasses the design, development, and production of AC servo drive systems, permanent magnet AC servo motors, and electro-hydraulic servo systems; the design, development, and production of industrial robot bodies and electrical control cabinets for mechanical equipment; the machining of industrial robot components; and the design, development, production, and related management activities of intelligent manufacturing systems for industrial applications, including industrial robot integration.



Implementing Environmental Objectives

Estun's Environmental Management System Certificate

Based on operational realities, the Company scientifically establishes environmental goals. Through the cascading of target indicators, it signs environmental protection responsibility agreements with various departments at all levels, incorporating them into departmental performance evaluations to enforce supervision and management responsibilities. Environmental protection agreements are signed with management, allocating a portion of compensation as an environmental protection incentive fund, distributed based on the achievement of performance goals. Multiple strategies are employed to drive the realization of these objectives.

Environmental Target	Indicator	Achievement Status
	Compliance rate for exhaust gas emissions: 100%	
Zero Environmental	Compliance rate for wastewater discharge: 100%	All achieved
Pollution Incidents	Compliance rate for boundary noise emissions: 100%	All achieved
	Compliance rate for hazardous waste disposal as required: 100%	

Mitigating **Environmental Risks**

The Company carries out annual identification, review, and update of environmental factors. Estun Automation Co., Ltd. identified 127 environmental factors, with 9 deemed significant; Estun Robotics Co., Ltd. identified 144 environmental factors, with 5 considered significant. For these identified significant environmental factors, comprehensive management plans, emergency response protocols, and control measures are formulated. The Company implements thorough hidden danger investigations and supervises the implementation of corrective measures to effectively mitigate environmental risks.

Enhancing Environmental Awareness



and environmental awareness.

Addressing Climate Change

In the face of the complex and formidable challenge of global climate change, every action is critical. Estun fully acknowledges the importance and urgency of addressing climate change. Adhering to the requirements of the Shenzhen Stock Exchange Self-Regulatory Guidelines No. 3 - Preparation of Sustainability Reports, and drawing upon the International Sustainability Standards Board's IFRS S2 Climate-related Disclosures, the Company has instituted a robust climate change governance mechanism. It conducts comprehensive climate risk and opportunity assessments and identification, formulates scientific and effective response strategies, bolsters its own operational resilience as well as that of its upstream and downstream industry partners, and collaborates with various stakeholders to pursue a green, low-carbon future.

Governance

Estun has established a climate change governance structure led by the Board of Directors and the Environmental, Social, and Governance (ESG) Committee, with management at its core, and various departments, branches, and subsidiaries serving as primary executing units.



The Company facilitates the participation of personnel involved in standardized management of hazardous waste in specialized training organized by the Nanjing Municipal Bureau of Ecology and Environment. All 18 participating employees successfully passed the rigorous examination and assessment, significantly improving their technical skill levels

Conducted **3** environmental protection-related training sessions,

Strategy and Management Approach

Informed by climate-related risk and opportunity assessments, Estun implements comprehensive mitigation and adaptation strategies, integrating climate-related risks into its long-term strategic planning. The Company accelerates the implementation of "dual carbon" goals across energy efficiency improvement, renewable energy adoption, and low-carbon product and solution development. It maintains a sharp focus on low-carbon technology and product R&D, positioning businesses that support new energy industries, industrial automation, and energy efficiency enhancement as key strategic priorities. The Company also closely monitors emerging fields and demands arising from the transition to a low-carbon economy, aiming to meet evolving market needs and capitalize on clean technology opportunities. In 2024, we made significant strides in energy management, product upgrades, and customer empowerment. Detailed information can be found in the "Driving the Low-Carbon Transition of Society" and "Energy Management" chapter modules.

	Target	Strategy
山	Company	Implement rigorous monitoring and analysis of carbon emissions across different processes and facilities, cascading reduction targets to various business units. Deploy photovoltaic systems in industrial parks, leveraging green electricity for production to minimize operational carbon footprint.
Ø	Customers	Develop innovative energy-efficient products aligned with customer needs, creating intelligent, automated, and environmentally-friendly comprehensive solutions for diverse carbon emission reduction scenarios, enabling customers to consistently enhance their carbon emission reduction capabilities.
@	Industry Chain	Strategically engage in new energy sub-sectors including photovoltaics, lithium batteries, new energy vehicles, hydrogen energy storage, and flow batteries. Identify industry requirements and pain points, collaborating with partners to achieve technological breakthroughs that promote carbon emission reduction and resource optimization across the new energy industry value chain.

Impact, Risk, and Opportunity Management

Estun proactively addresses climate change-related risks and impacts by establishing a robust climate change risk management framework. Through a combination of internal research, industry analysis, and external consultation, the Company identifies, analyzes, evaluates, and manages significant climate change risks and opportunities. Based on risk identification outcomes, tailored mitigation measures are developed and integrated into the company-wide, multi-departmental risk management process. In 2024, the Company conducted a comprehensive analysis and evaluation of climate change risks (encompassing both physical and transition risks) and opportunities relevant to its operations, demonstrating its commitment to actively addressing climate change challenges.

Risk/Opportunity Type	Risk/Opportunity Description	Potential Financial Impact	Response Strategy
	Physical Risks		
Acute Risks	 Rising average temperatures will significantly increase electricity consumption for air conditioning systems in Estun's offices and manufacturing facilities, leading to higher electricity costs and increased carbon emissions. Extreme weather events such as heatwaves, severe precipitation, river flooding, and coastal flooding may pose risks to production stability, safety of plant equipment and assets, and employee commuting safety. 	Operating costs ↑ Operating revenue ↓ Asset value ↓	 Enhance precision management of energy consumption statistics and monitoring. Proactively adopt advanced production technologies and equipment while phasing out outdated, energy- intensive equipment. Aggressively promote energy-efficient technologies. Develop and regularly update comprehensive emergency response plans for extreme weather and natural disasters. Conduct periodic drills to constantly refine emergency response mechanisms.

Risk/Opportunity Type	Risk/Opportunity I Description	Potential Financ Impact	ial Response Strategy
	Physical Risk	S	
Chronic Risks	 Persistent high temperatures and potential droughts caused by climate change, resulting in reduced rainfall, will pose significant challenges, including water scarcity, power shortages, rising electricity prices, and operational disruptions. Rising sea levels will impact the normal operations of coastal headquarters and subsidiaries, potentially incurring substantial relocation costs. 	Operating costs ↑ Asset value ↓	 Incorporate regional climate risk assessments into project selection and planning processes. Progressively increase the utilization of renewable energy sources, particularly solar power, in production and operational activities.
	Transition Risk	S	
Policy and Legal Risks	 The Shenzhen Stock Exchange and EU regions will progressively strengthen climate-related disclosure requirements for sustainability reporting, imposing new demands on the Company's climate change management and information disclosure practices. As carbon trading markets mature at various levels and carbon assets become more prevalent, carbon pricing will emerge as a crucial tool for government entities to regulate corporate carbon emissions, necessitating shared energy transition costs between the Company and governmental bodies. 	Operating costs ↑ Asset value ↓	 Vigilantly monitor evolving international and domestic environmental and carbon-related laws, regulations, and policies. Proactively assess policy adaptability and enhance internal management and compliance disclosure processes. Bolster energy and carbon emission management through energy-saving technical improvements, optimizing energy structure, and promoting carbon emission reduction technology applications to minimize operational carbon footprint.
Market Risks	 As a tier-one supplier to numerous renowned enterprises, Estun faces stringent requirements related to low-carbon initiatives from an increasing number of customers. Failure to meet these evolving standards could result in significant loss of business opportunities. 	Operating revenue ↓	 Intensify communication with customers to comprehend their ESG requirements for suppliers and product specifications. Integrate sustainability criteria into product R&D processes, emphasizing green, energy-efficient, and low-carbon product attributes.
Technology Risks	 Insufficient investment in energy-saving and carbon emission reduction technologies relative to industry peers may result in falling behind market demands. New technology R&D investments carry inherent risks of failure. 	Operating costs ↑ Operating revenue ↓	 Conduct rigorous feasibility studies on low-carbon technology R&D and application to mitigate trial-and-error costs. Maintain robust R&D investment, actively pursue industry collaborations, and partner with value chain stakeholders to jointly advance low-carbon technology R&D and application, narrowing the technology gap with industry peers.
Reputational Risks	 Increasingly stringent environmental performance disclosure requirements elevate compliance costs associated with maintaining or enhancing corporate reputation. Failure to meet publicly announced carbon emission reduction commitments may result in accusations of greenwashing from investors and the public, potentially damaging brand reputation and corporate image. 	Operating costs ↑ Operating revenue ↓	 Promptly disclose comprehensive measures taken by the Company to address climate change, including strategic planning, objectives, actions, and performance metrics. Implement rigorous review processes for company disclosures to eliminate inaccuracies and ensure alignment between disclosed information and actual performance, fostering a more credible and responsible corporate image based on verifiable implementation of climate initiatives.

Risk/Opportunity Type	Risk/Opportunity Description	Potential Finance Impact	cial Response Strategy				
Climate Opportunities							
Products and Services	 In the context of low-carbon economic transition societal demand for green, low-carbon products and services is likely to increase. Further developmen and provision of low-carbon products, services, and solutions could enable the Company to better adap to evolving market demands and achieve additional growth. 	n, Operating d revenue↑ tt d tt	• Capitalize on market opportunities by leveraging the Company's robust R&D foundation and technological advantages in industrial automation. Constantly enhance the green product portfolio to provide innovative solutions for low-carbon transformation across various industries, thereby reducing downstream carbon emissions throughout the value chain.				
Resource Efficiency	 Implement energy-efficient technologies and equipment to reduce energy consumption in production processes, lowering operational cost while improving production efficiency and supply capacity. Enhance resource recycling and utilization to minimize waste and decrease production costs. 	d Operating n revenue↑ s Operating Y costs↓	 Widely implement energy-saving technologies and equipment in production processes. Establish comprehensive energy consumption management procedures to optimize energy costs. Develop a robust resource recycling and processing system to maximize resource utilization and minimize waste generation 				
Energy Structure	 As green technology R&D and innovation progress and supportive policies are introduced, the accessibility of renewable energy is graduall improving, with potential price reductions. Utilizing renewable energy in production and operations can significantly reduce direct energy costs. 	s, Operating e costs↓ y g	• Expand photovoltaic power generation capabilities, increase the use of clean energy, and progressively elevate the proportion of electricity derived from renewable sources.				
Market	 Proactively responding to climate change policie can facilitate entry into new national markets enhance the Company's competitiveness globally and gain recognition from a broader range o international clients and partners. 	s Operating s, revenue↑ /, f	 Actively engage in international certification processes and standard-setting initiatives to bolster the competitiveness of company products in global markets. 				

Indicators and Targets

Estun has established an ambitious goal to achieve operational carbon neutrality by 2050. This target serves as the foundation for scientifically planning its carbon emission reduction roadmap, with continuous monitoring of progress towards this objective.

Carbon Emission Reduction Targets



Attain operational carbon neutrality by **2050**

Indicator	Unit	2022	2023	2024
Direct greenhouse gas emissions (Scope 1)	tons of CO ₂ equivalent	875.33	842.00	882.05
Indirect greenhouse gas emissions (Scope 2)	tons of CO ₂ equivalent	7,712.43	8,721.85	8,994.82
Total greenhouse gas emissions	tons of CO ₂ equivalent	8,587.76	9,563.85	9,876.87
Greenhouse gas emission intensity	tons of CO ₂ equivalent/RMB 1 million revenue	2.21	2.06	2.46

Resource Management

Estun actively aligns with national initiatives for building a resource-economical and environment-friendly society. The Company rigorously adheres to the requirements of laws and regulations, including the *Energy Conservation Law of the People's Republic of China*. It integrates green and low-carbon operational concepts throughout all production processes and stages, systematically promoting energy conservation and consumption reduction to minimize the Company's dependence on natural resources and mitigate its environmental impact.

Energy Management

Estun adheres to an energy policy centered on "energy conservation, consumption reduction, clean production, continuous improvement, and green development." The Company has implemented an *Energy Management System* and *Energy Management Manual*, recently supplemented by an *Energy Management Implementation Plan*. These initiatives focus on optimizing energy usage, enhancing equipment efficiency, upgrading technological processes, and promoting clean energy adoption, all aimed at improving energy efficiency and management standards in support of the "dual carbon" goals.

Improving Energy Management

The Company has developed a comprehensive energy management system and obtained ISO 50001 Energy Management System certification. This certification encompasses energy management activities related to the design, development, and production of AC servo drive systems, permanent magnet AC servo motors, and electro-hydraulic servo systems. It also covers the machining of industrial robot components, industrial robot bodies, and the production of electrical control cabinets for mechanical equipment.

Smart meters are deployed to monitor and analyze electricity consumption across various production stages. Additionally, the Company has implemented an intelligent energy monitoring and management platform, employing advanced information technology for centralized energy usage management. This approach enhances energy medium balance allocation and optimizes scheduling, thereby improving overall energy management and reducing consumption.

Strengthening Energy Conservation Control





Estun's Energy Management System Certificate

A strategic phase-out and replacement plan has been formulated, prohibiting the use of obsolete electromechanical products in favor of energy-efficient alternatives. During the reporting period, 15 outdated Y2-type motors were replaced with energy-efficient models.

A comprehensive analysis and modification of all components have been conducted to determine optimal production methods. Production management has been streamlined with strict adherence to processing sequences. During the reporting period, the SD electric drive production line established a specialized process team, optimizing the management of identical components and effectively reducing production energy consumption by over 15%.

Production capacity and efficiency have been increased by leveraging the Company's patented technologies and processes, driving energy conservation and consumption reduction.

Energy-efficient lighting fixtures and smart lighting systems have been utilized in production plants, saving approximately 120 kWh per month. Air conditioning energy management is enhanced through the use of energy management cards for each unit, with temperature settings maintained at 26°C in summer and 22°C in winter, projected to save 1,500 kWh during

Utilizing Clean Energy

The Company is actively expanding its renewable electricity sources, with a particular focus on accelerating photovoltaic power generation. Rooftop distributed photovoltaic power generation projects have been implemented across three plant areas. In 2024, these projects became fully operational with installed capacities of 299.75kW, 843.7kW, and 507.65kW respectively, generating an impressive total of 3.45 million kWh of self-built photovoltaic power generation annually.

Energy Usage Performance						
Indicator	Unit	2022	2023	2024		
Natural gas	cubic meters	416,610.84	392,466.02	396,673.24		
Gasoline	tons	25.45	18.69	24.27		
Diesel	tons	30.97	26.90	63.18		
Purchased electricity	million kWh	12.24	16.17	17.30		
Self-built photovoltaic power generation	million kWh	1.39	1.48	3.45		
Total comprehensive energy consumption	tons of standard coal equivalent	2,141.05	2,575.80	2,781.12		
Comprehensive energy consumption intensity	tons of standard coal equivalent/RMB 1 million revenue	0.55	0.55	0.69		

Water Resource Management

Estun's operations have a relatively low dependence on water resources, primarily using water for industrial cooling, washing, and cleaning in R&D and production processes, and domestic purposes. The majority of water used in production and operations is sourced from municipal supplies, minimizing environmental impact in terms of water source selection. As a responsible corporate citizen, however, the Company places high importance on water resource management and efficient utilization. It strictly adheres to the Water Law of the People's Republic of China and related regulations, constantly improving internal water usage policies. Water conservation and strengthened resource management are prioritized throughout all production and operation processes to promote efficient water utilization.

136,176 tons Total water withdrawal

MB 10.000 revenue Water withdrawal intensity

Water Usage Monitoring	High-grade rotary wet water meters and flow meters are deployed, which are regularly calibrated and maintained to monitor water usage across various production stages, enhancing the precision of water management.
Water Conservation Management	Regular inspections of production equipment and pipelines are conducted to promptly identify and repair leaks, preventing water waste. Water conservation signage is strategically placed near restrooms and water dispensers to reinforce water-saving behaviors among employees.
Rainwater Reuse	The Company's facilities feature rainwater collection pools. Harvested rainwater is utilized for landscaping and irrigation, reducing water waste and effectively achieving water resource recycling.
Water Recycling	Waste liquid from the machining workshop undergoes treatment at the wastewater treatment station. Treated water with chemical oxygen demand (COD) concentrations below 500 mg/L is repurposed for preparing new cutting fluids and cleaning solutions. This reduces waste liquid discharge by approximately 50% daily while conserving 1–1.5 tons of fresh water per day.

Packaging Material Management

Estun adheres to a strategic approach focused on reduction, reusability, recyclability, renewability, and biodegradability. By prioritizing environmentally friendly packaging materials, avoiding excessive packaging, and reducing packaging waste, the Company promotes sustainable packaging transformation, aiming to achieve both environmental and economic benefits.



Pollution Prevention and Control

Estun strictly complies with national laws, regulations, policies, and local environmental protection requirements. The Company has established an Environmental Protection Management System to standardize the management of exhaust gas, wastewater, solid waste, and boundary noise generated during production and operations. Strict controls are maintained over the generation and emission of pollutants. Through source reduction, classified management, and recycling, the Company reduces solid waste discharge. Enhanced treatment and control of exhaust gas and wastewater ensure that all pollutants are 100% compliant with emission standards and properly disposed of, striving to minimize the environmental impact of production and operations.

During the reporting period, the Company's business activities **did not cause significant** impact on the environment and natural resources.

Exhaust gas Management

Estun adheres to and implements the requirements of the Law of the People's Republic of China on the Prevention and Control of Atmospheric Pollution, ensuring compliant emission of exhaust gases. Standardized management and operations are applied to exhaust gas treatment equipment and facilities in factories to ensure the normal operation of all treatment facilities.



IC monitoring sessions for wastewater, exhaust gas, and noise were conducted across three plant areas, with all results meeting national emission standards.

Emission	For volatile organic compounds (VOCs), online monitoring equipment for coating VOCs has been employed, w
Ionitoring	weekly maintenance and calibration to ensure accurate emission data.

In the motor production impregnation process, solvent-free, environmentally friendly insulating varnish replaces original insulating varnish and solvent-based coatings, eliminating the need for thinners. The product VOCs Source comply with the limit requirements in the Technical Requirement for Low-Volatile-Organic-Compound-Substitution Content Coatings Products (GB/T 38597-2020). Motor shaft cleaning agents have been replaced with waterbased cleaners with undetected VOCs content. The Company is seeking water-based cleaning agents with lower VOCs content to replace original spray water-based cleaners, further reducing pollutant emissions.

Technological In the welding process, high-precision, high-speed laser welding technology has been introduced, effectively reducing welding material waste and lowering the generation of harmful gases during welding. Innovation

Exhaust Gas Emission Performance						
Indicator	Unit	2022	2023	2024		
Total exhaust gas emissions	10,000 cubic meters	29,463.20	26,013.71	20,642.28		
Exhaust gas emission intensity	10,000 cubic meters/RMB 1 million revenue	7.59	5.59	5.15		
Non-methane hydrocarbons	kilograms		347.56	378.98		
Particulate matter (PM)	kilograms	270	405	160.36		
Tin	kilograms			135.03		
Nitrogen oxides (NO _x)	kilograms			3.55		

Wastewater Management

Estun strictly adheres to the requirements of the Law of the People's Republic of China on Water Pollution Prevention and Control, establishing internal policies and management standards to ensure wastewater is effectively treated before discharge.

Source Reduction

In surface treatment processes, new environmentally friendly surface coating technologies replace traditional high-pollution electroplating processes, achieving better protection and decorative effects while avoiding heavy metal wastewater discharge. In three-in-one electric control lines, the proportion of aluminum materials in processed parts has been increased from 40% to 90%, effectively reducing pollution emissions from carbon steel electroplating.

Wastewater Reuse

In 2024, the Company initiated a wastewater reuse project. Cleaning wastewater from machining processes is treated at the wastewater treatment station and then reused for machine tool cutting fluid replenishment. After validation, the plan is scheduled for formal implementation in 2025. Once operational, it is expected to reduce factory production wastewater discharge by approximately 200 tons, striving to achieve zero industrial wastewater discharge.

Wastewater Discharge Performance						
Indicator	Unit	2022	2023	2024		
Total wastewater discharge	tons			96,461		
Chemical oxygen demand (COD)	tons	6.84	7.20	10.98		
Ammonia nitrogen	tons	1.24	0.91	1.53		
Suspended solids (SS)	tons	3.81	2.85	9.6		
Total phosphorus	tons		0.08	0.19		
Total nitrogen	tons		0.93	0.58		
Animal and vegetable oils	tons		1.23	0.01		
Petroleum	tons			0.05		
5-day biochemical oxygen demand (BOD5)	tons			3.37		
Anionic surfactants (LAS)	tons			0.04		

Waste Management

Estun rigorously complies with the Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste and the National Hazardous Waste Inventory, along with other relevant regulations, to enhance standardized waste management. The Company effectively utilizes the Jiangsu Provincial Solid Waste Management Information Platform for comprehensive reporting, maintaining meticulous records of waste types, generation volumes, and treatment quantities to ensure data accuracy and traceability.

General Industrial Solid Waste

Solid Waste Discharge Performance					
Indicator	Unit	2022	2023	2024	
Hazardous waste generation	tons	85.38	97.44	136.46	
Hazardous waste comprehensive utilization rate	%	2	5	16.25	
General waste generation	tons	2,597.28	2,217	1,716.15	
General waste comprehensive utilization rate	%	42	45	36	

Noise Management

Estun thoroughly considers the impact on the environment and surrounding communities during its production processes. Regular maintenance and servicing of production equipment and facilities are conducted to mitigate and control noise generated by production machinery. For general facilities and equipment, daily inspections of operational status are carried out in each workshop. Any abnormal equipment operation is promptly addressed, with severe cases resulting in immediate shutdown for repair. High-noise equipment such as dust removal fans, air compressors, and fire pump rooms are subject to focused monitoring and control, with timely implementation of sound insulation and noise reduction measures. Annual noise monitoring at facility boundaries is conducted by certified environmental monitoring units to ensure compliance with regulatory standards.

Biodiversity Protection

Estun strictly adheres to local environmental protection regulations throughout the design, construction, and operational phases of new project developments and renovations. Comprehensive environmental impact assessments are conducted to achieve a harmonious balance between company business growth and ecological preservation.

The Company's Environmental Impact Report Form for Servo Motor Production Line Renovation Project and Environmental Impact Report Form for Robot Parts Production Line Renovation Project in the Machining Workshop have received approval from the Nanjing Jiangning Economic and Technological Development Zone Management Committee. These environmental assessments identify potential ecological impacts of the projects and propose targeted measures to prevent or mitigate adverse environmental effects, thereby enhancing project performance in resource utilization, ecological protection, and pollution control. Notably, the servo motor production line renovation project successfully passed the environmental protection acceptance inspection upon completion in September 2024.



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Hazardous Waste



Social Chapter Advancing Together on a New Journey



Human Capital Development

Estun considers employees to be its most valuable asset and a core component of its competitive advantage. We are committed to fully safeguarding employee rights and interests, striving to create a workplace environment that is fair, just, safe, healthy, and diverse for all staff members. We consistently enhance our talent development system, offering a wide range of training support and competitive compensation and benefits. Our focus on work-life balance enables employees to enjoy their work and maintain a healthy lifestyle, thus helping them realize their personal potential.

Talent Attraction and Retention

In line with its business development plans. Estun consistently refines its recruitment system. The Company has implemented recruitment management policies, including the Recruitment and Allocation Management System, the Personnel Management System, and the Probation Management System, to standardize its talent acquisition process. Through diverse development programs, we attract outstanding talents, establish a scientific and effective performance management system, standardize the entire employee performance Total number of management process, and optimize our compensation and incentive systems. By offering competitive salaries, employees we aim to ensure the stability and vitality of our talent pool.

Talent Acquisition

The Company has developed a strategic, dynamic talent pool aligned with its development goals and strategic planning. We conduct comprehensive analyses of the requirements for various positions, with particular emphasis on key technical and senior management roles, to proactively plan talent allocation. Our recruitment needs are forecasted based on market trends, leading to the formulation of diversified recruitment strategies, expansion of talent sourcing channels, and optimization of recruitment methods. We actively recruit suitable talents through various means, including campus recruitment, industry job fairs, and internal referrals, taking into account the conditions, culture, and job characteristics of each plant location. Furthermore, we have established fair and objective interview evaluation standards, employing structured interview methods that assess both current abilities and long-term potential. We conduct interviewer training courses to enhance the professional capabilities of our interviewer team, thereby improving recruitment efficiency and job matching accuracy. This comprehensive approach provides robust talent support for the Company's ongoing development.

Campus Recruitment

We have forged partnerships with numerous universities, particularly those excelling in automation, computer science, mechanical engineering, and related fields. To attract graduate applications, we organize campus presentations and corporate Open Day recruitment events. During these sessions, we provide students with detailed information about the Company's history, corporate culture, business scope, and potential career paths, offering a holistic view of Estun.

Newly recruited fresh graduates

346

New hires during the reporting period

Social Recruitment

We utilize leading recruitment platforms such as Zhaopin, 51job, and zhipin to advertise job openings, attracting professionals with relevant work experience. Additionally, we engage with industry forums and professional communities to precisely target specific talent groups.

Internal Referrals

We encourage employees to recommend outstanding talents from their networks, offering incentives for successful referrals to enhance recruitment efficiency. Candidates recommended by internal employees often demonstrate a strong alignment with the Company's needs.





Employee Development

Estun continues to intensify its focus on talent development. The Company has established the Estun Academy, adhering to the principle of empowering employees internally while strengthening the industrial ecosystem externally. We actively refine our training system, enhance our training models, develop comprehensive training resources, and strive to foster a learning organization. Through these efforts, we aim to build a talent team that is well-equipped to adapt to our business development needs.

Employee Training System

Leadership Trainin	ng	
Training Programs	Training Content	Annual Progress
Advanced Study Class	Training is conducted on topics including Team Performance and Motivation, Digital Transformation, Estun Solution Transformation, Strategic Thinking: Contemplating Company Strategic Development Direction and Business, and Operational Thinking: Viewing Investment in People, Products, and Markets from an Input-Output Perspective.	34 attendees
Transformation Program for Middle and Junior Management	Training is divided into four phases: team integration, quick win planning, influence enhancement, and operational alignment, assisting managers in successfully adapting to their new roles and responsibilities.	25 attendees
Project Management Enablement Program for Intelligent Technology Management Personnel	Courses are designed based on six key competencies of project management qualifications to enhance managers' project operation capabilities and build a robust project management talent pool.	34 attendees, encompassing senior, middle, and junior management personnel.
General Compete	ncy Training	
Training Programs	Training Content	Annual Progress
Training for Newly Hired Employees through Social Recruitment	Comprehensive training is offered, covering an introduction to Estun (company overview, facility tour), corporate culture immersion, HR, finance, and administrative procedures, product familiarization, robot operation skills, safety protocols, and occupational health knowledge. These modules are designed to help new employees quickly adapt to the Company and integrate into their roles.	Conducted 8 sessions of training for 298 newly hired employees through social recruitment.
Fresh Graduate Training (Seedling to Forest Project)	Holistic training is delivered encompassing company orientation, corporate culture immersion, departmental management systems and processes (HR, finance, administration, office systems), product line and industry application knowledge, self-awareness and career development, safety protocols, and occupational health. Additional activities include debate competitions, exhibition presentations, and team-building exercises to support graduates' transition from academia to the professional world.	Conducted 1 session lasting 6 days for 65 fresh graduates.

72

Professional Competency Training

Training Programs	Training Content	Annual Progress
Super Engineer Project	Training spans product lines including industrial robots, motion control, sheet metal automation, and intelligent technology subsidiaries, fostering versatile, multi-skilled talent.	26 individuals successfully passed the certification assessment.
Iron Triangle Empowerment Project	A distinctive "Iron Triangle" talent development system with Estun-specific characteristics has been established, with AR, SR, and FR cultivation projects launched accordingly. Innovative teaching methods has been introduced, including instructional videos, exemplary role models and case studies, and specialized knowledge cards, to enhance the professional capabilities of cross-functional teams.	168 attendees
Transformation Empowerment	Targeted empowerment training has been delivered for transformation projects in IPD (Integrated Product Development), finance, and quality management to deepen employees' understanding of organizational change initiatives.	Implemented 42 sessions of empowerment training.
Business English Training	Tailored English training programs have been developed for various employee groups to enhance their international communication skills.	13 attendees

Enhancing Online Training

The Company leverages its digital learning platform, Estun Academy Online, to encourage employees to utilize microlearning opportunities. To standardize the platform's operational framework, we introduced the Estun Academy Online Operation Management Measures during the reporting period, streamlining course upload and review processes. We systematically reorganized the knowledge base, implementing a scientifically designed course catalog and reclassifying all online courses to establish a standardized curriculum system. Additionally, we optimized training management across departments by adopting a project-based approach, enabling real-time monitoring of departmental training plan execution and fostering a culture of self-directed learning.

787 Training projects launched

94.44%

coverage rate

47.08

Average online training

hours per employee

Employee online training

39,276 Attendance in online training

Expanding External Resources

The Company offers employees access to a range of external training resources, including TÜV Rheinland certification for mechanical and electrical safety compliance design, FEMA boot camps, lean production training, and intelligent technology project management camps. These initiatives provide comprehensive support for employee growth and development.



Internal Trainer Development

To foster the consolidation and transmission of knowledge and skills, the Company has established the Estun Instructor Management Measures and implemented a comprehensive internal trainer management and incentive system. We independently develop learning resources to cultivate a self-nurturing organization. During the reporting period, we conducted four Estun Light internal instructor empowerment sessions and one micro-course to enhance the professional capabilities and sense of pride among internal trainers. The Company added 56 new internal trainers, bringing the total number to 93.

Online training coverage rate by gender

94.27% 95.10% Male Female employees employees

Average Online Training Duration per Employee (hours)



Note: Employee training data is based on operations in China.







113,080.26

Total online training hours

Online Training Coverage Rate (%)





57.50

Frontline

Online training coverage rate by hierarchical level





Promotion and Incentives

Aligning with its business development strategy, Estun has designed and constantly refines its performance management system. The Company has revised policies such as the Compensation Management Handbook, Individual Performance Management System, and Employee External Professional Title Management Measures. These policies encourage employees to excel in their roles, make significant contributions, and actively pursue professional qualifications, offering comprehensive career development support and fair, open advancement opportunities.

Clear Career Development Paths

The Company has established management (M-series) and professional (P-series) career tracks. The Position and Rank Management System, Job Series Qualification Standards, Cadre Selection Management System, and Estun Super Engineer Management Measures clearly define the qualifications employees should possess in both management and professional sequences. These policies standardize employee career development paths and facilitate both lateral and vertical progression. Employees can choose their development path based on their interests, strengths, and abilities. The Company conducts annual qualification assessments and super manager certifications and reviews. In 2024, 234 individuals underwent preliminary reviews for job gualifications, with 119 ultimately passing certification, achieving an overall pass rate of 51%. This process drives employee career development and self-actualization.

Competitive Compensation System

The Company focuses on employees' overall compensation levels and has established a comprehensive remuneration structure covering fixed salaries, short-term incentives, and medium to long-term incentives. This ensures employees receive fair compensation for their work and adhere to the principle of equal pay for equal work. Fixed salaries are disbursed monthly based on a set amount, primarily considering employees' key skills, including work experience, education, position, and market scarcity. Short-term incentives include immediate rewards, special bonuses, and annual bonuses, designed to motivate the achievement of company, departmental, and individual performance goals. Medium to long-term incentives include honorary rewards and equity incentives, primarily offered to core employees to align the interests of shareholders, the Company, and employees, while retaining key talent. Except for fixed salaries, short, medium, and long-term incentives are variable bonuses closely linked to the Company's operating performance, organizational performance, and individual employee performance. This mechanism allows employee income to be dynamically adjusted based on actual performance, effectively enhancing employee satisfaction and work output while reducing turnover rates among core employees.

The Company regularly monitors and assesses market compensation levels and annual salary increases to ensure alignment with market rates. Compensation is closely tied to overall company performance and individual achievements, maintaining internal equity. In 2024, we implemented compensation reforms in the production system, adjusting the original time-based salary structure. This new approach considers job value, individual skills, and work performance for comprehensive evaluation and flexible management across different workshops. We also introduced monthly assessment and salary implementation methods for marketing personnel, clearly stipulating that the financial indicator scores for marketing staff are determined by actual performance, thus motivating employees to be enterprising and innovative.

Strengthening Performance Evaluation and Incentives

• Refining Comprehensive Incentive Policies —

We have issued the 2024 Company Incentive Implementation Rules, introducing special incentive awards such as the Quality Management Innovation Award, Efficiency Improvement Breakthrough Award, Quality Improvement Breakthrough Award, and Solution Innovation Award. New honorary incentive awards for Outstanding Managers, Technical Innovation, and Gold Lecturers have also been added.

• Implementing Equity Incentives

To encourage talent retention, we provide core employees with long-term incentives through annual equity awards.

Optimizing the Performance Management System-

We have revised and improved the Individual Performance Management System and established a comprehensive performance indicator database. This system evaluates performance based on multiple dimensions, including work achievements, financial indicators, strategic initiatives/key tasks, learning and growth, bonus/penalty items, and values. Using an agile performance management approach, we conduct regular differentiated assessments by level and layer on a guarterly/annual basis to ensure fairness and effectiveness in performance evaluations. To strengthen employee goal management and ensure the realization of company strategic objectives, we implement monthly assessments for AR and SR personnel, linking evaluation results to performance-based pay to enhance employee initiative and sense of responsibility. The Company has established open channels for performance communication, actively collecting employee feedback and strengthening communication between superiors and subordinates on goal setting, performance evaluation results, and performance improvement guidance to help employees and the organization improve performance and achieve objectives. If employees have objections to their evaluation results, they may appeal to the Group's Human Resources Department within three working days after the performance result communication.

Employee Rights and Well-being

Estun upholds the cultural philosophy of "people-oriented, respect for talent" and places paramount importance on protecting employee rights. Through the implementation of comprehensive labor management systems, open communication channels, and extensive employee care and welfare programs, we aim to foster an innovative, inclusive, and respectful team, thereby building harmonious labor relations.

Rights Protection

Estun strictly adheres to the Company Law of the People's Republic of China and the Labor Law of the People's Republic of China, as well as other relevant laws and regulations. The Company supports and respects the ILO Declaration on Fundamental Principles and Rights at Work and other applicable international principles. Policies such as the Employee Handbook have been developed and are consistently improved, with regular training conducted to standardize management practices in areas including recruitment and dismissal, compensation and promotion, working hours, and leave, thereby safeguarding employees' lawful rights and interests. For outsourced production personnel, the Company signs Talent (Labor) Dispatch Agreements with outsourcing service providers, while Labor Dispatch Agreements are used for non-production dispatch workers, ensuring their rights are properly protected

The Company maintains a zero-tolerance policy towards violations of employee rights. To support this commitment, the Company has established the Estun Reporting Management System, which includes designated complaint email addresses and reporting channels accessible to all employees. Clear procedures are in place for handling reports, and strict confidentiality requirements are implemented to protect whistleblowers, ensuring that all issues are addressed in a timely and fair manner.

ATA Equal Employment and

The Company adheres to legal employment practices. During recruitment and employment, we treat all employees equally, without discrimination based on gender, age, ethnicity, beliefs, or other differences. We strictly prohibit child labor, forced labor, and other illegal or policyviolating employment practices. We respect employees' right to freely choose their employment, commit to publishing objective and truthful recruitment information for job seekers to choose freely, and do not restrict employees from engaging in specific work or work against their will. We provide equal employment and development opportunities for every employee.

In the Employee Code of Conduct section of the Employee Handbook, based on requirements related to the protection of female employees and human rights policies, the Company clearly states its strong opposition to workplace harassment. This includes, but is not limited to, physical harassment, psychological harassment, sexual harassment, verbal harassment, or abuse. Equal opportunities and treatment are guaranteed regardless of race, culture, religion, color, gender, age, or disability status.

Labor contract signing rate

Social insurance coverage rate

Employee Rights Protection Provisions in the Employee Handbook

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Anti-discrimination and

The Company consistently revises the leave and attendance regulations in the Employee Handbook, clearly defining working hour systems and overtime management standards to ensure reasonable rest periods for employees. We offer paid annual leave that exceeds national policy requirements and flexible working hours. We quarantee maternity leave for female employees as required by national regulations, as well as marriage leave, bereavement leave, and paternity leave for male employees in accordance with local regulations at each operating location.

Return-to-work rate after parental leave

Total number of employee discrimination incidents

Diversity and Inclusion

Estun strives to create a diverse, inclusive, and open workplace environment, bringing together talents from various backgrounds. Through mutual respect, understanding, communication, and acceptance, we strengthen cooperation, achieve workforce diversity, and thereby enhance team creativity and innovation capability.

Diverse Employee Composition

Ethnic minority employees of Chinese nationality



Ethnic minority employees proportion among employees of Chinese nationality



Number of employees by educational level

Employees

degrees

1,352

with bachelor's

Number of employees by gender (persons)



Number of employees by region (persons)



Number of employees by age (persons) Employees aged Employees 30 and under aged 31-50



Number of employees by job function (persons)



Supporting Female Employee Development

Estun has clearly stipulated in its Employee Handbook and Compensation System Handbook that eligible female employees are entitled to prenatal check-up leave, maternity leave, breastfeeding leave, International Women's Day holiday, and paid leave for parent-teacher conferences. Breastfeeding leave can be taken flexibly and accumulated on a monthly basis, which further protects the rights of female employees. During the reporting period, the average paid parental leave was 63.73 days per person.

86 Female proportion among newly hired employees in China

Proportion of female employees in China



Estun values employee opinions and strictly adheres to relevant laws and regulations. The Company has implemented the Estun Workers' Congress Management Measures to foster an open, trustworthy, and efficient communication environment. This approach enables employees to stay informed about company developments in real-time and encourages them to demonstrate ownership by offering thoughtful and constructive suggestions for continuous improvement.

Implementing Employee Representative System	• The Company fully leverages the Workers' management and staff, ensuring that en information, participation, and oversig environment for employees to contribute in the Company held one Workers' Congress, reviewed and approved revisions to <i>Compensation Management Handbook</i> <i>Management System</i> , thereby safeguardin
Opening Employee Communication Channels	 The Company has established compreh- including employee general meetings, forur and suggestions. We regularly collect and cultivate positive and harmonious labor relat
Conducting Employee Satisfaction Surveys	 The Company conducts annual anonymous surveys, covering areas such as employ professional development. The results are to gain a comprehensive understanding of By extensively soliciting feedback, analyz promptly adjusting management strategies, satisfaction.

CASE

Launching the "Me and Estun" Employee Forum to Enhance Company Vitality

In April 2024, the Company introduced the "Me and Estun" employee forum, providing an accessible and open platform for employees to offer suggestions and engage in interactive communication. The forum encourages employees to voice opinions on systems, processes, service quality of functional departments, and responsibility implementation. Clear timelines are set for responsible departments to provide feedback and develop action plans, ensuring employee concerns are addressed promptly. The Company maintains a non-retaliation policy for all feedback shared. Since its launch, the forum has gained significant traction, with a cumulative 221 posts, 2,652 likes, and 178 comments.

or below 1,730

Employees with

associate degrees

(persons)

Employees with graduate/ MBA degrees or above

490

Number of Chinese employees by hierarchical level (persons)



Congress as a bridge between mployees fully enjoy rights to ht. This creates a conducive ideas and suggestions. In 2024, where employee representatives the Employee Handbook, , and Individual Performance ng employee rights.

ensive feedback mechanisms. ns, and platforms for complaints analyze employee opinions to ions.

us online employee satisfaction ovee activities, benefits, and tracked and analyzed over time employee needs and opinions. ing root causes of issues, and we consistently improve overall

105 Effective employee suggestions

adoption and implementation rate

100° Union membership rate

Employee satisfaction score

Benefits and Care

Estun aims to fulfill employees' aspirations for a better life by providing a comprehensive range of supplementary benefits. We focus on addressing practical issues faced by employees, promoting work-life balance, and enhancing employee satisfaction, happiness, and sense of fulfillment.

Welfare Assurance

The Company offers multifaceted welfare policies. The Employee Handbook specifies various benefits and subsidy standards, including social insurance and housing provident fund, accident insurance, holiday and paid leave, employee activities, and compassionate assistance, all designed to enhance employees' experience and sense of well-being.



Different allowances are provided based on job nature, such as transportation, communication, and computer allowances.

Employee Care

and paid leave.

provident fund, statutory holidays,

The Company has established the Estun Love Fund and formulated the Estun Love Fund Management Measures to assist employees facing financial hardships due to severe illnesses or accidental injuries, alleviating urgent financial pressures for employees and their families. Since its inception, the fund has supported five employees in difficulty, providing a total of RMB 105.000 in assistance. In 2024, the fund assisted one employee in need with RMB 10,000. Additionally, we organize seasonal welfare activities such as summer cooling initiatives, winter warmth campaigns, and care packages for expatriate employees to foster a sense of collective care and support.

Work-Life Balance

The Company organizes a diverse range of cultural and sports activities, including employee sports meets, family fun days, and birthday parties, to enrich employees' lives.



Occupational Health and Safety

Estun rigorously adheres to the Law of the People's Republic of China on Work Safety, the Fire Protection Law of the People's Republic of China, and other pertinent laws and regulations. We steadfastly implement the principle of "safety first, prevention foremost, comprehensive governance," constantly enhancing our production safety system. We have developed robust production safety management policies to prevent and mitigate significant safety risks at their source, thereby safeguarding the occupational health and safety of employees.

RMB 5.60 millio Π Production safety investment Major production safety accidents 0.84 0.42 Lost time injury frequency Employee injury rate

rate (LTIFR)

per thousand

Safety Management System

Management Structure and Responsibilities

The Group has established a Production Safety Committee, chaired by the CEO. This committee oversees and manages the Group's production safety strategy, objectives, and performance implementation, as well as reviews and decides on critical production safety matters. Estun Automation Co., Ltd. and Estun Robotics Co., Ltd. have each formed their own Production Safety Committees and established dedicated Safety Management Departments, implementing multi-tiered production safety responsibility systems.

Improved Management Systems

We regularly review and update our safety management system documents. In alignment with the key elements of the ISO 45001 Occupational Health and Safety Management System, we have enhanced our production safety management framework. We have revised and improved 14 regulations, including the Production Safety Responsibility System, Production Safety Accident Management System, and Hazardous Operation Safety Management Regulations. These apply to all employees, including outsourced production personnel entering the Company's operational facilities, providing scientific and efficient guidance for production safety management.

Clear Management Objectives

We establish annual safety management goals and regularly review and assess safety management work and its effectiveness. We enter into the Safety Performance Agreement with relevant management personnel, linking goal achievement to management performance evaluations.

Occupational Health and Safety Target	Breakdown Indicator	Achievement Status	
	Major casualty incidents: 0		
Major or above casualties: 0	Major fire incidents: 0	All achieved	
	Electric shock incidents: 0		
Occupational disease incidents: 0	Occupational disease cases identified in health examinations: 0	All achieved	





Estun's Occupational Health and Safety Management System Certificate

Risk Identification and Hazard Investigation

The Company conducts annual hazard source identification and risk assessments, thoroughly updating risk identification levels. Across three plant areas, over 500 risk points were identified, including 49 relatively significant risks, with no major risks detected. We formulate targeted prevention and control strategies based on risk levels. Through the implementation of a rigorous safety permit system, we have developed detailed safety operation procedures and instruction manuals, conducting regular risk point inspections and control measures to ensure risks remain manageable. Throughout the year, we conducted 4 comprehensive safety inspections, 12 monthly safety inspections, and 6 specialized safety inspections, thoroughly investigating safety hazards and supervising their prompt rectification.

Enhancing Safety Awareness and Capabilities

The Company organizes annual Production Safety Month activities, including emergency evacuation drills, safety knowledge competitions, and awareness campaigns to enhance employees' safety consciousness and operational skills, Additionally, we conduct targeted drills for scenarios such as electric shock and sudden fires, focusing on control requirements for major risks, primary hazards, key areas, and critical processes. These initiatives aim to improve the Company's emergency response capabilities and bolster overall business resilience.



Note: Safety training and emergency drill data is based on operations in China



100% Health and safety training coverage rate

Average health and safety

training hours per employee

1.94

26 Total health and safety training sessions

Emergency drills conducted

10

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3,040 Total attendance in health and safety training



ALC: N

Safeguarding Employee Health

In compliance with the Law of the People's Republic of China on the Prevention and Control of Occupational Diseases. the Company has formulated a comprehensive Occupational Health Management System. We implement a robust occupational disease prevention responsibility system, regularly conduct occupational hazard monitoring and evaluation, and prioritize source prevention to enhance the safety of work environments and equipment operation. We diligently apply the Labor Protection Equipment Safety Management Regulations, providing employees with appropriate and effective personal protective equipment. We organize pre-employment, on-the-job, and post-employment occupational health examinations for employees exposed to occupational hazard factors, eliminating pre-employment risks, controlling occupational disease risks during employment, and ensuring sustained employee health.



Work-related injury insurance investment

2,402 Employees covered by workrelated injury insurance

Note: Occupational health-related data is based on operations in China.

Supply Chain Management

Estun recognizes the significant social and environmental impact of activities throughout the industrial chain. The Company meticulously adheres to relevant national laws and regulations, including the Law of the People's Republic of China on Invitation and Submission of Bids and its associated implementation regulations. Our aim is to foster a respectful, equitable, and transparent cooperation environment, striving to build long-term, stable, and mutually beneficial relationships with suppliers and partners, collectively constructing a responsible supply chain.

Governance

- Implement a supply chain management structure spearheaded by integrated supply chain management, with close collaboration from other relevant departments, ensuring stability and continuity in raw material and product supply.
- Introduce 4 new management systems and refine 3 existing ones.

Impact, Risk, and Opportunity Management

· Constantly refine management systems for key material procurement and material shortage risk warning to enhance the procurability of critical categories and reduce overall costs.

Participants in occupational health examinations

100

Special operations personnel certification rate

100.

Work-related injury insurance coverage rate

Strategy and Management Approach

- Develop a comprehensive supplier lifecycle management system encompassing admission, tiered management, performance evaluation, and elimination/replacement protocols, ensuring suppliers consistently meet standards and requirements.
- Maintain regular communication with suppliers, promptly and accurately conveying the latest policies and pertinent information. Conduct targeted supplier training to enhance their capabilities.

Indicators and Targets

• Establish long-term qualitative quality objectives, cascading them through departments to ensure comprehension and implementation by all employees.

Supplier Management System

Estun adheres to the procurement philosophy of "constructing high-quality strategic ecological partnerships with supply safety as the baseline and the creation of an industrial ecosystem as the value proposition." The Company has established and enhanced management systems including the *Strategic Supplier Management Process, Production Material Supplier Management Process, Non-production Material Supplier Management System, Production Material Procurement Management Process, and Production Material Supplier Performance Management Measures.* These systems clearly delineate requirements and standards for supplier lifecycle management while integrating quality management requisites. They reinforce incoming inspection and quality constraints, constantly improve supplier performance, and help establish an efficient and reliable supply chain.

607 Total number of suppliers



Chinese suppliers (including Hong Kong,

Overseas suppliers

Lifecycle Management



• Evaluate potential suppliers based on the *Supplier Development Application Form* and *New Supplier Survey Form*.

• Facilitate the issuance and completion of four key agreements: the Estun *Quality Agreement, General Purchasing Framework Agreement, Confidentiality Agreement,* and *Supplier Commitment Letter.*

• Introduce a trial production stage this year. Following sample verification, suppliers undergo a 3-6 month trial period before formal qualification, contingent on the absence of major quality or delivery issues.



Evaluation

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Tiered

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• Conduct monthly performance evaluations based on the *Supplier Performance Evaluation and Elimination Management Measures*, assessing quality, supply, technology, service, and cost dimensions, with results summarized comprehensively.

• Classify suppliers into A, B, C, and D categories based on performance ratings. Consider establishing strategic partnerships with A-class suppliers maintaining this status for 6 consecutive months or more; maintain standard cooperation with B-class; implement improvement or elimination measures for C and D-class suppliers.



• For suppliers rated C or below for two consecutive months, initiate a Supplier Elimination Recommendation Form and communicate the proposed elimination plan to relevant departments.

Incorporate suppliers rated D for two consecutive months into the elimination plan by procurement,



triggering relevant elimination procedures.Gradually reduce supply proportions for suppliers in the elimination plan over a 3-month period.

• Terminate procurement relationships with suppliers who refuse to address market quality issues with their products and pursue appropriate accountability and compensation for losses.

Supplier Audits

The Company has formulated and implements the *Supplier Audit Management Measures*, regularly conducting new supplier audits, mass production supplier process audits, and unannounced inspections of mass production suppliers. Based on annual supplier performance, we develop an *Annual Supplier Process Audit Plan*, conducting on-site audits of suppliers in critical areas such as product development, incoming inspection, process control, customer service, and compliance commitments. We issue comprehensive audit reports with detailed conclusions and actively follow up on supplier improvements. When necessary, we provide targeted guidance on systems, quality, and technology to ensure suppliers implement effective measures to resolve issues within a reasonable timeframe, supporting their continuous improvement efforts.



Responsible Procurement Management

Estun steadfastly adheres to responsible procurement principles, integrating supplier ESG factors into its admission and management processes. We actively promote green procurement practices and collaborate closely with suppliers to fulfill our shared social responsibilities, thereby fostering a responsible supply chain.

Advocating Responsible Procurement

During the supplier admission phase, Estun mandates that all suppliers sign a comprehensive *Supplier Commitment Letter*. This document clearly delineates expectations regarding supplier conduct and requires them to thoroughly consider the direct and indirect social impacts of their business activities. The commitment encompasses a wide range of critical areas including child labor prevention, elimination of forced labor, workplace safety and health standards, fair wages and benefits, reasonable working hours, non-discrimination policies, equitable treatment practices, freedom of association, ethical behavior, environmental stewardship, anticorruption measures, conflict of interest management, and fair competition practices. The letter also explicitly outlines breach of contract consequences and remedial measures, thereby incentivizing suppliers to enhance their environmental, safety, and overall social responsibility performance. We place significant emphasis on risk assessment of key suppliers while also scrutinizing non-key suppliers operating in high-risk ESG industries or regions. Upon verification of any major controversial incidents, we maintain a strict policy of terminating cooperation.

Implementing Green Procurement

In its commitment to reducing environmental impact, Estun has implemented a green procurement policy. We prioritize suppliers that utilize renewable energy in their production processes and demonstrate a commitment to waste minimization strategies. In 2024, the Company undertook a significant transition, replacing all oil-based cleaning agents used in metal material processing with water-based alternatives. Additionally, all robot painting processes exclusively utilized water-based paints, thereby reducing the environmental footprint of our procurement activities.

passing successfully.

process audits of mass production suppliers, 100% of which passed successfully.



Supporting Supplier Growth

Estun actively engages in collaborative quality improvement initiatives with its suppliers. Addressing critical issues such as substandard PPM failure rates and inconsistent quality processes among certain suppliers, we deploy dedicated technical and management teams to provide targeted support. We engage in joint improvement actions with suppliers, effectively ensuring supply chain product quality while enhancing suppliers' quality management capabilities.

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Implementing Quality Improvement Initiatives to Empower Supplier Development

In 2024, the Company launched a comprehensive quality improvement plan to address issues of excessively high PPM failure rates and unstable quality processes in products from specific suppliers. Cross-functional teams comprising R&D, procurement, and other relevant personnel formed quality improvement project teams in partnership with suppliers. These teams collaboratively determined improvement objectives and strategies. By meticulously examining suppliers' material anomaly records, categorizing material defects, identifying key areas for rectification and process optimization, proposing targeted improvement plans, and rigorously following up on the implementation of corrective measures, we effectively assisted suppliers in enhancing their product guality control and management standards.

Enhancing Supply Chain Resilience

Improving supply chain resilience and security has become a critical imperative for enterprises pursuing high-quality development. Estun has formulated a Risk Material Shortage Early Warning Management System. Leveraging data on supplier geographical distribution and material delivery performance, we systematically identify, assess, manage, and monitor potential supply chain risks, including supply disruptions, price inflation, ESG concerns, and unforeseen events. We have established a tiered risk classification system and implement targeted remedial or alternative measures accordingly. Our approach involves building a diversified supply chain ecosystem and employing differentiated procurement strategies to ensure supply continuity and reliability. In 2024, the Company maintained stable raw material supply, with no production disruptions attributable to material shortages.

Risk Prevention and Control Measures



Supply Disruption Risk

- Diversified Suppliers: We have established a dedicated Supply Risk Elimination Team tasked with regularly reviewing high-risk materials with single-source supply across the Group. This team develops comprehensive solutions and reviews progress in weekly meetings to mitigate supply risks. For critical categories with single-source supply and no immediate alternatives in the market, we proactively develop strategic partnerships to enhance supplier support and reliability.
- Inventory Pre-management: We have formulated the Material Planning Strategy Management Measures to develop sound material procurement strategies. These strategies encompass safety stock settings and supplier inventory management, based on supplier preference models, supplier categories, material delivery cycles, supplier cooperation levels, and material risk profiles. We consistently update these strategies to ensure efficient and agile management of material resources, enabling rapid response to supply needs, improved inventory turnover, proactive risk mitigation, and enhanced product competitiveness.



Price Fluctuation Risk

- Unified Management: Our Procurement Center and R&D Department have established a specialized unification team to address material standardization challenges. This team works to unify primary and backup material codes, subsequently allocating procurement shares based on supply risks, pricing dynamics, and other relevant factors.
- Long-term Cooperation: We strategically sign long-term contracts with high-quality suppliers to secure stable pricing for key raw materials, thereby mitigating risks associated with market price fluctuations.



Estun maintains an unwavering commitment to avoiding the procurement of conflict minerals from conflict-affected and highrisk areas. This includes, but is not limited to, tantalum, tin, tungsten, gold, cobalt, and their derivatives. We actively encourage our suppliers to comply with Section 1502 of the Dodd-Frank Wall Street Reform and Consumer Protection Act, requiring them to disclose the origin of minerals used in their products. This ensures the compliance and transparency of our supply chain by clearly identifying the sources of minerals procured by suppliers. During the reporting period, no suppliers were found to be using conflict minerals or their derivatives.

Community Engagement and Philanthropy

Every action reflects our dedication; each endeavor reveals our founding principles. Estun actively responds to the national call for rural revitalization by consistently integrating the principles of co-building, co-governance, and shared benefits into community development. We engage in a wide range of charitable activities and volunteer services, standing in solidarity with our communities.



We implement targeted consumption support initiatives by purchasing highguality agricultural products from rural areas. This approach helps farmers increase their income while contributing to broader rural revitalization efforts.

Committing to Public Welfare and Charity

We actively support and encourage employees to participate in various volunteer service activities, fostering positive societal impact through practical actions within our capabilities. During the reporting period, Estun donated a total of six industrial robot equipment sets to Anhui University of Science and Technology and Chengdu Industry & Trade College. These donations, valued at approximately RMB 460,000, provide crucial support for teaching, scientific research, and practical applications in the field of intelligent robotics at these institutions. This initiative aims to enhance students' practical skills and employment competitiveness, thereby advancing intelligent manufacturing education in higher education institutions.

гль 169,200 Specialized consumption support procurement

Supporting Rural Revitalization





Key Performance Table

Environmental Indicators

Indicator		Unit	2023	2024
	Total investment in environmental protection	million RMB	1.93	1.72
Environmental Management	Environmental pollution incidents	/	0	0
	Compliance rate for wastewater, exhaust emissions, and plant boundary noise	%	100	100
	Hazardous waste disposal compliance rate	%	100	100
	Natural gas	cubic meters	392,466.02	396,673.24
Energy Management	Gasoline	tons	18.69	24.27
	Diesel	tons	26.90	63.18
	Outsourced electricity	million kWh	16.17	17.30
	Self-built photovoltaic	million kWh	1.48	3.45
	Total comprehensive energy consumption ¹	tons of standard coal equivalent	2,575.80	2,781.12
	Comprehensive energy consumption intensity	tons of standard coal equivalent/ RMB 1 million revenue	0.55	0.69
	Direct GHG emissions (Scope 1)	tons of CO ₂ equivalent	842.00	882.05
Greenhouse Gas	Indirect GHG emissions (Scope 2)	tons of CO ₂ equivalent	8,721.85	8,994.82
Emissions ²	Total GHG emissions	tons of CO ₂ equivalent	9,563.85	9,876.87
	GHG emission intensity	tons of CO ₂ equivalent/RMB 1 million revenue	2.06	2.46
Water Resource	Total water withdrawal	tons	177,681.00	136,176.00
Management	Water withdrawal intensity	tons/RMB 10,000 revenue	0.38	0.34
	Total wastewater discharge	tons	/	96,461
	Chemical oxygen demand (COD)	tons	7.20	10.98
	Ammonia nitrogen	tons	0.91	1.53
	Suspended solids (SS)	tons	2.85	9.6
Wastewater	Total phosphorus	tons	0.08	0.19
Management	Total nitrogen	tons	0.93	0.58
	Animal and vegetable oils	tons	1.23	0.01
	Petroleum	tons	/	0.05
	5-day biochemical oxygen demand (BOD5)	tons	/	3.37
	Anionic surfactants (LAS)	tons	/	0.04
	Total exhaust gas emissions	10,000 cubic meters	26,013.71	20,642.28
Exhaust gas Management	Non-methane hydrocarbons	kilograms	347.56	378.98
	Particle matter (PM)	kilograms	405	160.36
	Tin	kilograms	/	135.03
	Nitrogen oxides (NO _x)	kilograms	/	3.55
	Hazardous waste generation	tons	97.44	136.46
Waste	Hazardous waste recycling rate	%	5	16.25
Management	General waste generation	tons	2,217	1,716.15
	General waste recycling rate	%	45	36

 Note: 1. Total Comprehensive Energy Consumption: Calculated according to the State Administration for Market Regulation and the Standardization Administration's GB/T 2589-2020 General Rules for Calculation of Comprehensive Energy Consumption, expressed in units of standard coal.
 2. GHG Emissions: Exclusively refer to carbon dioxide emissions, not including other GHGs such as methane and nitrous oxide. Scope 1 GHG emissions include emissions from the combustion of fossil fuels such as diesel, gasoline, and natural gas, as well as from industrial production processes. The emission factors for Scope 1 are derived from the guidelines issued by the National Development and Reporting Environmental Key Performance Indicators. Scope 2 emissions cover those from outsourced electricity; the emission factors for 2024 power in China are taken from the national average power grid factor or velocity in the Automatic to the Development and the 2020 Diversion of 2020 power in China are taken from the national average power grid factor or velocity in the Automatic to the Development of 2020 power in China are taken from the national average power grid factor or velocity in the Automatic to the Development of 2020 power in China are taken from the national average power grid factor or velocity in the Automatic to the Development of 2020 power in China are taken from the national average power grid factor or velocity. published in the Announcement on the Release of Carbon Dioxide Emission Factors for Electricity in 2022 (Announcement No. 33 of 2024) issued jointly by the Ministry of Ecology and Environment and the National Bureau of Statistics. For international operations, emission calculations follow Greenhouse gas reporting: conversion factors 2024 and Power Sector Carbon Intensity in Germany 2000-2023.

Social Indicators

Indicator		Unit	2023	2024	
R&D Innovation	Total R&D investment		million RMB	503	503
	R&D investment as a percentage of operating revenue		%	10.81	12.55
	Number of	R&D staff	persons	1,201	1,032
Proportion of R&D staff		of R&D staff	%	31.19	28.89
	Total numbe	er of suppliers	/	499	607
Supply Chain Management	Ву	Chinese suppliers (including Hong Kong, Macao, and Taiwan)	/	443	596
	region	Overseas suppliers	/	56	11
Production	Investment	in production safety	million RMB	6.66	5.60
Safety	Major produ	Major production safety accidents		0	0
	Total numbe	er of employees	persons	3,851	3,572
	Gender	Male employees	%	80.38	80.40
	Structure ¹	Female employees	%	19.62	19.60
		Employees aged 30 and under	%	36.02	31.83
	Age Structure	Employees aged 31-50	%	54.16	57.61
	Structure	Employees aged 51 and above	%	9.82	10.56
		Employees with associate degree or below	%	50.04	48.43
	Academic Structure	Employees with bachelor's degree	%	37.70	37.85
		Employees with graduate/MBA degree or above	%	12.26	13.72
Employees		Technical staff	%	31.19	28.89
LITIPIOyees		Sales staff	%	22.41	23.24
Pro Stri	Professional	Financial staff	%	2.16	2.32
	Structure	Administration staff	%	9.06	10.33
		Production staff	%	33.91	33.90
Pro		Others	%	1.27	1.32
	Proportion of senior mana	Proportion of Chinese female employees in middle and senior management		18.91	23.54
	Employee turnover rate		%	19	20.18
Total atten Total onlin		otal attendance of online employee training sessions		33,987	39,276
		Total online employee training hours		81,736	113,080.26
	Annual onlir	ne training hours per employee	hours	35.9	47.08
Community	Total spend	ing on charity donations	RMB	2,269,900	781,400
Engagement	Total spending on consumer support		RMB	352,800	169,200

Note: 1. The gender structure data in 2023 is based on operations in China.

Governance Indicator

Indicator	Unit	2023	2024
Special Audit on business ethics and anti-corruption	times	3	2

Index Table

Estun disclosed the information referenced in this index for the period from January 1, 2024, to December 31, 2024, in accordance with the *Shenzhen Stock Exchange – Guidelines for Self-Regulation of Listed Companies No. 17 – Sustainability Reporting (Trial)*, and aligned with the *Global Reporting Initiative (GRI) Standards*.

Reporting Framework	Shenzhen Stock Exchange Sustainability Reporting Guidance	GRI Standards	
Message from the Chairman	/	2-22	
About Estun	/	2-1, 2-6, 201-1	
Responsibility 2024	/	/	
Sustainable Development Management Strategy	Section 12.1, Section 12.2, Section 12.3, Section 12.5, Section 13, Section 14.1, Section 15.1, Section 15.3, Section 17, Section 18.1, Section 18.2, Section 18.3, Section 18.4, Section 51, Section 52, Section 53.1, Section 53.2	2-12, 2-13, 2-14, 2-16, 2-17, 2-22, 2-24, 2-29, 3-1, 3-2, 3-3	
Responsibility Topic Robotics + Education: Empowering Educational Innovation and Transformation	Section 38, Section 40, Section 41	203-2	
Future Chapter Activating N	lew Quality Productive Forces		
Creating Industrial Value	Section 20, Section 28, Section 41, Section 42.3, Section 42.4	203-1, 203-2, 305-5	
Innovation-Driven Development	Section 11.1, Section 11.2, Section 11.3, Section 11.4, Section 19, Section 41, Section 42.1, Section 42.2, Section 42.3, Section 42.4, Section 43.1	2-27, 3-3, 203-2	
Professional Quality Service	Section 11.1, Section 11.2, Section 11.3, Section 11.4, Section 19, Section 44, Section 47.1, Section 47.2, Section 47.4	2-25, 2-27, 3-3, 416-2, 417-1, 417-2, 417-3	
Governance Chapter Pror	noting High-Quality Development		
Enhancing Corporate Governance	Section 11.1, Section 11.2, Section 11.3, Section 11.4, Section 19, Section 51, Section 53.1, Section 53.2	2-9, 2-10, 2-11, 2-12, 2-17, 2-18, 2-19, 2-20, 2-21, 2-27, 3-3, 405-1	
Risk and Compliance Management	Section 11.1, Section 11.2, Section 11.3, Section 11.4, Section 12.4, Section 19	2-27, 3-3, 2-13, 2-24, 207-1, 207-2, 207-3	
Upholding Business Ethics	Section 11.1, Section 11.2, Section 11.3, Section 11.4, Section 19, Section 54, Section 55.1, Section 55.3, Section 55.4, Section 56.1, Section 56.2	2-27, 3-3, 205-2, 205-3, 206-1	
Information Security and Privacy Protection	Section 11.1, Section 11.2, Section 11.3, Section 11.4, Section 19, Section 44, Section 48.1, Section 48.2, Section 48.3, Section 48.4	2-27, 3-3, 418-1	
Environmental Chapter Bui	lding a Sustainable Future Together		
Environmental Management	Section 19, Section 20, Section 33.1, Section 33.2	2-27, 3-3	
Addressing Climate Change	Section 11.1, Section 11.2, Section 11.3, Section 11.4, Section 19, Section 20, Section 21, Section 22.1, Section 22.2, Section 22.3, Section 23.1, Section 23.2, Section 23.3, Section 23.5, Section 24, Section 25.3, Section 26, Section 34, Section 35.1, Section 35.2, Section 35.3	2-27, 3-3, 201-2, 302-1, 302-3, 302-4, 302-5, 305-1, 305-2, 305-4	
Resource Management	Section 34, Section 36.1, Section 36.2, Section 37.2, Section 37.3	2-27, 3-3, 303-1, 303-3, 303-5	
Pollution Prevention and Control	Section 29, Section 30.1, Section 30.2, Section 30.3, Section 30.4, Section 30.5, Section 31.1, Section 31.2	2-27, 3-3, 303-2, 303-4, 305-7, 306-1, 306-2, 306-3, 306-5	
Noise Management	Section 29	/	
Biodiversity Protection	Section 29, Section 32.2	2-27, 3-3, 101-2, 101-4, 101-5, 304-1, 304-2, 304-3	
Social Chapter Advancing Together on a New Journey			
Human Capital Development	Section 49, Section 50.1, Section 50.2, Section 50.3	2-7, 2-19, 2-23, 2-27, 2-30, 3-3, 201-3, 401-1, 401-2, 401-3, 403-1, 403-2, 403- 3, 403-4, 403-5, 403-6, 403-7, 403-9, 403-10, 404-1, 404-2, 405-1, 406-1, 408- 1, 409-1	
Supply Chain Management	Section 11.1, Section 11.2, Section 11.3, Section 11.4, Section 19, Section 44, Section 45.1, Section 45.2	2-27, 3-3, 204-1, 408-1, 409-1	
Community Engagement and Philanthropy	Section 38, Section 39.2, Section 39.3, Section 40	3-3, 203-1, 203-2, 413-1	
Appendix			
Key Performance Table	/	/	
Index Table	/	/	
About This Report	/	2-2, 2-3, 2-14	

About This Report

This is the fourth Environmental, Social and Governance (ESG) report publicly released by Estun Automation Co., Ltd. It aims to inform stakeholders of the Company's practices and accomplishments in economic, social, and environmental aspects. Meanwhile, the Company also seeks oversight from stakeholders to enhance its ESG management practices more effectively.

Reporting Scope

Organizational Scope:

The scope of this report aligns with that of the annual consolidated financial statements of the Company.

Time Range:

This report covers the period from January 1, 2024, to December 31, 2024.

Reporting Period:

This report is an annual report.

Definition of Terms

Abbreviation in the Report	Definition of Terms
Estun, the Group, the Company, we	Estun Automation Co., Ltd.
Cloos	Carl Cloos Schweißtechnik GmbH
Trio	Trio Motion Technology Ltd
M.A.i.	M.A.I GMBH & CO.KG
Barrett	BARRETT TECHNOLOGY, LLC

Reporting Principles

The *GRI Standards* by the Global Sustainability Standards Board.

The United Nations Sustainable Development Goals (SDGs).

ISO 26000: 2010 - Guidance on Social Responsibility by the International Organization for Standardization

The national standard Guidance on Social Responsibility Reporting (GB/T36001-2015) by Standardization Administration of China.

The Shenzhen Stock Exchange Guideline No.17 on Self-Regulation for Listed Companies – Sustainability Reporting (Trial), the Shenzhen Stock Exchange Guideline No.3 on Self-Regulation for Listed Companies – Preparation of Sustainability Reports.

Source of Information

The operational and management data disclosed in this report are as of December 31, 2024. The data and cases presented in this report are all derived from original operational records or financial statements of Estun and its subsidiaries. Unless otherwise specified, all monetary amounts mentioned in this report are measured in RMB. In the event of discrepancies with the financial statements, the financial statements shall prevail.

Preparation Process

Develop the preparation plan \rightarrow Assemble the drafting team \rightarrow Identify stakeholders and significant issues \rightarrow Determine the reporting framework \rightarrow Write, revise, and refine the report \rightarrow Report review \rightarrow Report publication \rightarrow Collect feedback for continuous improvement.

Assurance of Accuracy

The Company assures that there are no false records, misleading statements, or significant omissions in the contents of this report, and is responsible for its truthfulness, accuracy, and completeness.

Report Availability

This report is published in PDF format and is available on the following websites: the Shenzhen Stock Exchange official website (http://www.szse.cn), the CNInfo news portal (http:// www.cninfo.com.cn/new/index.jsp), and the official website of Estun Automation Co., Ltd. (http://www.estun.com).

For a hard copy of the report, please email zqb@estun.com or contact us at 025-52785597.

(To minimize environmental impact, we recommend choosing the digital version of the report. We appreciate your cooperation!)



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