TCL 华星

2023 Sustainability Report



TCL China Star Optoelectronics Technology Co., Ltd.

CONTENTS

Report Guide 04
Message from the Chairman 06
Message from the CEO and Chairman of Strategy and Sustainability Committee 07

01 About TCL CSOT



Fifteen Years of Endeavor 08
Sustainability Performance 11

02 Sustainability Management



Sustainability Concept 13
Sustainability Governance 14
Stakeholder Engagement 15
Materiality Assessment 16

03 Environment



Responding to Climate Change 20
Green Product 24
Energy Management 30
Water Resource Management 34
Pollution Prevention 36
Biodiversity 39

04 Products and Value Chain



Smart Innovation 42
Product Responsibility 49
Responsible Supply Chain 55

05 Employees and Community



Labor and Human Rights 62
Occupational Health and Safety 66
Employee Development and Care 71
Community Engagement 77

06 Governance and Compliance



Corporate Governance 80
Risk Management 81
Business Ethics 83
Information Security 85

Appendix 1: Key Performance Indicator Table 86
Appendix 2: GRI Content Index 89
Appendix 3: Independent Assurance Report 92

REPORT GUIDE

Overview

This Sustainability Report ("Report") is the first sustainability report released by TCL China Star Optoelectronics Technology Co., Ltd. ("TCL CSOT", "the Company", "We", or "CSOT"). This Report objectively and comprehensively discloses TCL CSOT's goals, practices, and performance in Environmental, Social, and Governance ("ESG").

Scope and Boundary

Unless otherwise specified, the Reporting Period of this Report is from January 1, 2023 to December 31, 2023.

The content of this Report pertains to TCL CSOT and its 10 subsidiaries:

Shenzhen China Star Optoelectronics Semiconductor Display Technology Co., LTd. (hereinafter referred to as "Shenzhen CSOT Semiconductor")

Wuhan China Star Optoelectronics Technology Co., Ltd. (hereinafter referred to as "Wuhan CSOT")

Wuhan China Star Optoelectronics Semiconductor Display Technology Co., Ltd. (hereinafter referred to as "Wuhan CSOT Semiconductor")

Guangzhou China Star Optoelectronics Semiconductor Display Technology Co., LTd. (hereinafter referred to as "Guangzhou CSOT")

Suzhou China Star Optoelectronics Technology Co., Ltd. (hereinafter referred to as "Suzhou CSOT")

Suzhou China Star Optoelectronics Display Co., Ltd. (hereinafter referred to as "Suzhou CSOT Display")

Huizhou China Star Optoelectronics Display Co., Ltd. (hereinafter referred to as "Huizhou CSOT")

Huaxian Optoelectronics Technology (Huizhou) Co., Ltd. (hereinafter referred to as "Huizhou Huaxian")

Guangzhou ChinaRay Optoelectronic Materials Co.,Ltd. (hereinafter referred to as "Guangzhou ChinaRay")

Guangdong Juhua Printing Display Technology Co., Ltd. (hereinafter referred to as "Guangdong Juhua")

Data Explanation

Data used in this Report are statistics from January 1, 2023, to December 31, 2023, unless otherwise specified, and primarily include data from TCL CSOT and its 10 subsidiaries. The Company reasonably assures that there are no false records, misleading statements, or significant omissions in this Report.

Referenced Standard

This Report is prepared with reference to the *Global Reporting Initiative Standards* ("*GRI Standards*") issued by the Global Sustainability Standards Board (GSSB) and the *IFRS S1 General Requirements for Disclosure of Sustainability-related Financial Information* ("*IFRS S1*") issued by the International Sustainability Standards Board (ISSB). The Report discloses ESG-related strategic goals and practice outcomes, proactively responding to the requirements of stakeholders.

External Assurance

To further ensure the accuracy of the content and information in this Report, we invite an independent third-party verification agency to perform limited assurance on selected key data in this Report. For the independent assurance report and its basis, please refer to Appendix 3 of this Report.

Report Release

This Report is published annually and is available for viewing and download in both Chinese and English versions on the TCL CSOT official website.

Release date of this Report: June 2024

Release date of next report: Estimated June 2025

If you have any questions or suggestions regarding this Report, please contact us through the following channels:

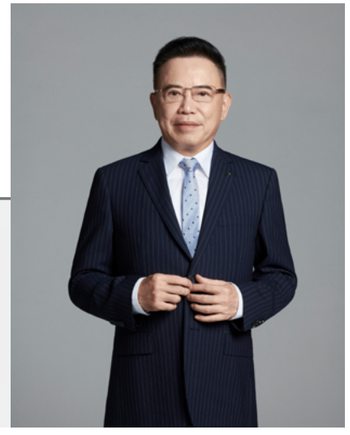
Tel: 0755-86908853

Email: csot.ESG1@tcl.com

Address: 9-2 Tangming Avenue, Guangming District, Shenzhen City, Guangdong Province, China

Postal Code: 518107

Message from the Chairman



Chairman of TCL Technology Group Corporation
Chairman of TCL China Star Optoelectronics Technology Co., Ltd.

Dear readers:

Climate change poses a significant threat to human society, and green development has become a global collective action. Embracing ESG practices is not only an external requirement for Chinese enterprises to align with international trends and enhance global competitiveness, but also an inevitable requirement and historical mission to achieve high-quality development and promote China's modernization.

In 2023, TCL CSOT implemented a strategy of "Improving Operating Quality and Profitability, Consolidating Advantages and Improving Disadvantages, Accelerating Global Layout, and Promoting Innovation-Driven Development". Upholding the spirit of "Perseverance and Daring to Exceed" and guided by the globally leading strategy, the Company strengthened innovation breakthroughs, accelerated global operations, and while continuously consolidating its core business, actively transformed and created competitive advantages, achieving high-quality development and continuously injecting momentum into the high-tech manufacturing field. Through the concerted efforts of our global employees and the strong support of our partners, we achieved significant results. In 2023, our revenue reached RMB 72.1 billion, an increase of 28.1% year-on-year; we invested over RMB 6.7 billion in research and development, accounting for 9.3% of our total expenses.

Green development is TCL CSOT's long-term business strategy. We are elevating ESG management to new strategic heights, establishing a sustainability governance system directly led by the Board of Directors, promoting the integration of ESG with our business, and exploring business models that deliver long-term value. Facing the increasingly fierce and complex international environment, we are enhancing compliance, improving risk management capabilities, and enhancing our ability to operate through economic cycles and global competitiveness.

Climate change presents both challenges and opportunities. In 2023, we established a governance framework to address climate change, set the dual carbon goal and action plans, and reduced the environmental impact of our operations and industrial chains through optimizing resource allocation, industrial technology upgrades, and transitioning to a circular economy. At the same time, we actively seized opportunities in the clean technology sector to meet the growing demand for green products driven by climate transition.TCL CSOT aims to accelerate its low-carbon transformation and contribute to global sustainable development through its efforts.

Building an superior talent system and an innovation-driven work environment are the cornerstones of maintaining global leadership. We adhere to the principle of "Achieving Global Leadership with First-Class Talent", construct a diverse, equal, and inclusive workplace, establish a scientifically and competitive compensation and benefits system, and fully guarantee the workplace safety and health of our employees.

With aspirations for the future and steadfast determination, 2024 is a year for TCL CSOT to embark on a new chapter of ESG governance and sustainability. "Building a Sustainable & Connected Future with Advanced Technology" is our unwavering mission. We will work hand in hand with colleagues and partners worldwide and continuously create higher economic, environmental, and social value through innovative technology and practical actions, making greater contributions to the enhancement of new and quality productive forces, national high-quality development, and global sustainable development.

I would like to express my heartfelt gratitude to all stakeholders who have always paid attention to, recognized, and supported TCL CSOT! We will continue to collaborate with all stakeholders, seek common development, and open up the future together.

Message from the CEO and Chairman of Strategy and Sustainability Committee



CEO and Chairman of the Strategy and Sustainability Committee
of TCL China Star Optoelectronics Technology Co., Ltd.

Dear readers:

In the context of a new round of technological revolution and industrial transformation, the display industry must actively embrace change to achieve high-quality development. Green development is the foundation of high-quality development and the core of new and quality productive forces. As key players in innovation, enterprises must proactively take on responsibilities in technological innovation, low-carbon transformation, and sustainability, using ESG as a guide to create long-term value.

Over the past year, TCL CSOT has elevated sustainability to a strategic priority, striving forward with determination and creating new momentum for high-quality development. We have improved our ESG governance structure by establishing the Strategy and Sustainability Committee under the Board of Directors. We have put forth the ESG vision of "Empowering Life with Leading Technology for a Sustainable & Connected Future", integrated material issues into our decision-making processes and formulated four ESG policies: Green Development, Technological Empowerment, Harmonious Coexistence, and Responsible Operations, with the aim of closely cooperating with all stakeholders to create a better future together.

Green development is the cornerstone of sustainable development for enterprises. On July 6, 2023, we officially released the *Carbon Neutrality White Paper*, committing to peak carbon emissions by 2030 and achieve carbon neutrality in our operations by 2050. To this end, we have established a dedicated Climate Change Task Force, developed a "1+8" carbon neutrality roadmap and implemented 638 energy-saving projects, reducing carbon emissions by 284,600 tonnes. Seven of our factories have been recognized as national green factories.

Technological innovation is the driving force behind sustainable development. We have increased our R&D investment, promoted the transformation of results, and accelerated our low-carbon transition. We have led the establishment of two national innovation centers, leading and participating in the development of various standards. We have developed the "X-Intelligence" AI model, applying AI technology to support intelligent manufacturing in China. Leveraging our technological strengths and carbon reduction experience, we actively explore "external empowerment," creating a green, resilient, and win-win supply chain to drive the sustainable development of the display industry.

Harmonious coexistence is the guarantee of sustainable development for enterprises. Internally, we provide employees with an equal, harmonious, and inclusive workplace environment and ample opportunities to showcase their talents, becoming the employer of choice for thousands of talents. Externally, we continuously support rural education and engage in volunteer and environmental activities. We aim to emit more light and heat, contributing TCL CSOT's power to building a better future.

Responsible operations are the premise of sustainable development for enterprises. We have improved our corporate governance structure, strengthened our compliance system, and protected the rights and interests of all stakeholders. We uphold business ethics, adhere to operation with integrity, and maintain "zero tolerance" for corruption. We respect intellectual property rights, protect information security, and enhance business continuity management to improve our operational resilience.

The future has arrived, and action is imminent. Since its establishment fifteen years ago, TCL CSOT has remembered its national mission, adhered to its entrepreneurial spirit, rooted itself in the real economy, and supported industrial transformation, contributing significantly to China's high-quality development and sustainability for humanity. We are grateful for your trust and support in TCL CSOT and look forward to working hand in hand with you to create a better future.

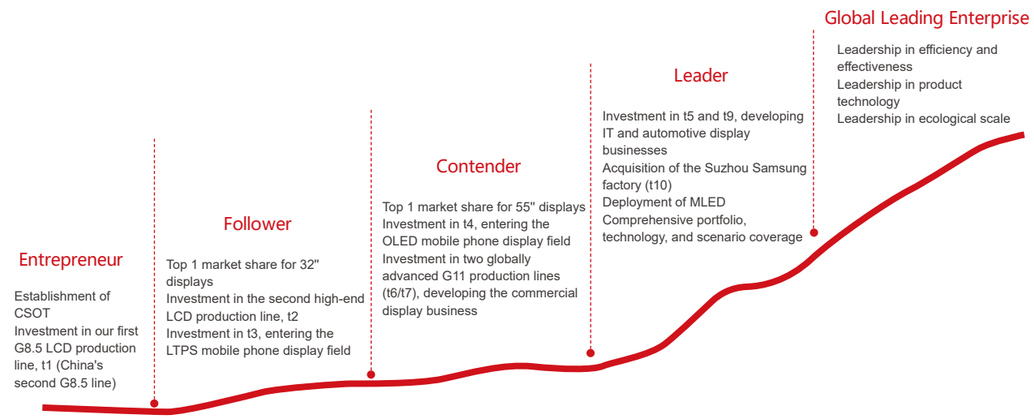
1
About TCL CSOT

1.1 Fifteen Years of Endeavor

Company Profile

TCL China Star Optoelectronics Technology Co., Ltd., founded in 2009 and headquartered in Shenzhen, Guangdong, is a high-tech enterprise specializing in the research and development and manufacturing of semiconductor displays. With a cumulative investment of over RMB 260 billion, TCL CSOT has established nine display panel production lines across its bases in Shenzhen, Wuhan, Huizhou, Guangzhou, and Suzhou. Additionally, the Company has set up a global marketing service network in Japan, South Korea, Singapore, North America, and Europe. The Company's products cover a wide range of applications, including small, medium, and large-sized panels and touch modules, electronic whiteboards, video walls, automotive displays, and high-end gaming displays, establishing a leading core competitiveness in the global display industry.

Through its leading technological innovation capabilities and global resource integration, TCL CSOT has evolved from a "follower" to a "contender" and further into a "leader", embodying a global enterprise's ultimate pursuit of "Change, Innovation, Accountability, and Excellence".



Revenue in 2023 **RMB 72.1 billion** Year-on-Year Growth **28%**



6.32 Mm^2 No.2



0.24 Mm^2 No.1



0.12 Mm^2 No.4

Monthly Production Capacity in 2023

Business Layout

TCL CSOT always adheres to its entrepreneurial spirit, seizing the opportunities brought by the era of digital transformation, continuously leading technological innovation, and gradually forming a "3+2+N" business layout. We provide global customers with comprehensive display products and technology solutions across full sizes, categories, and forms, continuously injecting new energy into the high-tech manufacturing field.



Global Operations

TCL CSOT's Overseas Revenue Share

60%+

For Chinese enterprises to become global leaders, the overseas market becomes a decisive factor. TCL CSOT actively adapts to international market environments, strategically positioning itself in global industrial chains. From product exportation to co-building industrial capabilities, TCL CSOT aims to meet the demands of global intelligent manufacturing and delivery for its customers.



Operating Performance

In 2023, TCL CSOT adheres to the business strategy of "Improving Operating Quality and Profitability, Consolidating Advantages and Improving Disadvantages, Accelerating Global Layout, and Promoting Innovation-Driven Development". Maintaining the spirit of "Perseverance and Daring to Exceed," we have achieved significant growth in overall operating performance. Market share rankings in key areas have remained stable with progress, and the Company has maintained industry leadership in specific segments.

Market Share Ranking of Display Panel Products

LCD TV Panel	Monitor Panel	LTPS NB Panel	LTPS Mobile Panel
No.2	No.3	No.2	No.3

No.1 Industry Leader in Specific Segments

55'' TV | 8K TV | 120Hz+ TV | Gaming Monitor | LTPS TB

* The above are the market share rankings for 2023
Data Source: Omdia

Corporate Culture

TCL CSOT's vision is to **become a global leading display solutions provider**, committed to integrating its mission, vision, and values closely with its sustainability strategy, thereby injecting new momentum into high-quality development.

Mission

Building a Sustainable & Connected Future with Advanced Technology

Core Values

Change
- Adapt to change at any moment
- Think out of the box and make breakthrough
- Embrace challenges instead of resting on laurel

Accountability
- More sincerity, less stereotype
- Act proactively, identify root cause internally
- Inspire others with your passion

Innovation
- Stay hungry, stay foolish
- Be bold and take smart risks
- Innovate for customer value and business success

Excellence
- Be thirsty for excellence
- Do right things, even if it's a tough decision
- Strive for a mission with GRIT

Talent Mindset

Acquiring Global Leadership through the Use of Top Talent
- Recruiting exceptional individuals on a global scale
- Cadres are established through combat, and talents are honed through practice
- High-quality talents are prioritized in terms of resources and opportunities

1.2 Sustainability Performance

Green Development

Highlights

Proportion of Recycled Materials in Module Products	Annual Self-Built Photovoltaic Installed Capacity	Annual Photovoltaic Power Generation
51.5%	123.8 MW	100.49 million KWh
Annual Implemented Energy-Saving and Emission-Reduction Projects	**Achieved Electricity Savings**	**Reduced Carbon Emissions**
638	499 million kWh	284,600 tonnes
Water Recycling Rate	**Investment in Artificial Wetlands**	**Daily Processing Capacity of Artificial Wetlands**
97.65%	RMB 60 million+	20,000 m^3

Achievements and Honors

- 7 panel production lines have received the national-level "Green Factory" Certification, and 1 production line has received the provincial-level "Green Factory" Certification
- The Company was recognized as a "China's Top Runner for Industrial Carbon Peaking"
- Our photovoltaic project was designated as a "Pilot Demonstration of Intelligent Photovoltaics" by the Ministry of Industry and Information Technology of the People's Republic of China
- 2 factories have achieved the LEED Platinum Certification, and 4 factories have achieved the China Three-Star Green Building Certification
- TCL CSOT received the honor of "Guangdong Provincial Water Conservation Benchmark"

Technological Empowerment

Highlights

Annual R&D Investment	As a Percentage of Revenue	Cumulative Global Patent Applications
RMB 6.7 billion	9.3%	62,694
Customer Complaint Handling Rate		
100%		
Supplier Certified Through CSR On-Site Audits	**Participation in the Supplier Conference**	
100%	306 suppliers	

Achievements and Honors

- Received the 2023 "China Industry Award Commendation Prize"
- 3 panel production lines have reached the National Intelligent Manufacturing Capability Maturity Level IV
- Won the title of "2023 IDC China Future Digital Industry Leader"
- Helped TCL Technology Group Corporation ("TCL Technology") enter the Recommended List for the China Quality Award

Harmonious Coexistence

Highlights

Annual Employee Satisfaction

75 /100

Occupational Health and Safety Training Conducted Throughout the Year

13,793 sessions

Number of Individuals Covered

950,094

Coverage Rate

100%

Total Investment in Employee Training

RMB 10.16 million

Average Training Hours Per Person

14.4 hours

Coverage Rate

100%

Employees Benefited by Star Residence Program

100

Interest-Free Loans Provided

RMB 47.74 million

Achievements and Honors

- All display panel production sites undergo regular external audits by RBA and have received Silver Certification
- Huizhou Huaxian has once again been recognized by the Disabled Persons' Federation as a Demonstration Unit for Employing Disabled Persons in Huizhou
- Received the Lockin "Global Most Popular Employer" Award

Responsible Operations

Highlights

Number of Participants in Compliance-Specific Training Sessions

9,000+

Total Training Hours

4,500+ hours

Number of Participants in Anti-Corruption and Ethical Conduct Courses

72,708

Annual Information Security Training

38 sessions

Number of Individuals Covered

380,110

Achievements and Honors

- 100% of display panel production bases have obtained the ISO 27001 Information Security Management System Certification

2 Sustainability Management

2.1 Sustainability Concept

TCL CSOT integrates sustainability principles deeply into its corporate strategy, incorporating environmental, social, and governance factors into decision-making. The Company has formulated four major ESG guidelines: "Green Development, Technological Empowerment, Harmonious Coexistence, and Responsible Operations". TCL CSOT aims to build trust with all stakeholders and work together to create a better future.



2.2 Sustainability Governance

To deepen the implementation of its sustainability strategy, TCL CSOT has established a comprehensive ESG governance framework, which ensures that ESG practices are closely integrated with the Company's operations and business activities, thereby enhancing its sustainability competitiveness.

Board of Directors

- The Board of Directors oversees ESG initiatives, integrates sustainability into the Company's strategy, and supervises the Strategy and Sustainability Committee in fulfilling its responsibilities.

Strategy and Sustainability Committee

- Authorized by the Board of Directors of TCL CSOT, the Strategy and Sustainability Committee ("Committee") is the internal ESG executive body at the highest level of the Company. The Committee is responsible for formulating the Company's vision and policies for sustainability, and reviewing and approving the Company's medium to long-term sustainable development goals as well as annual material issues and sustainability reports.

ESG Task Force

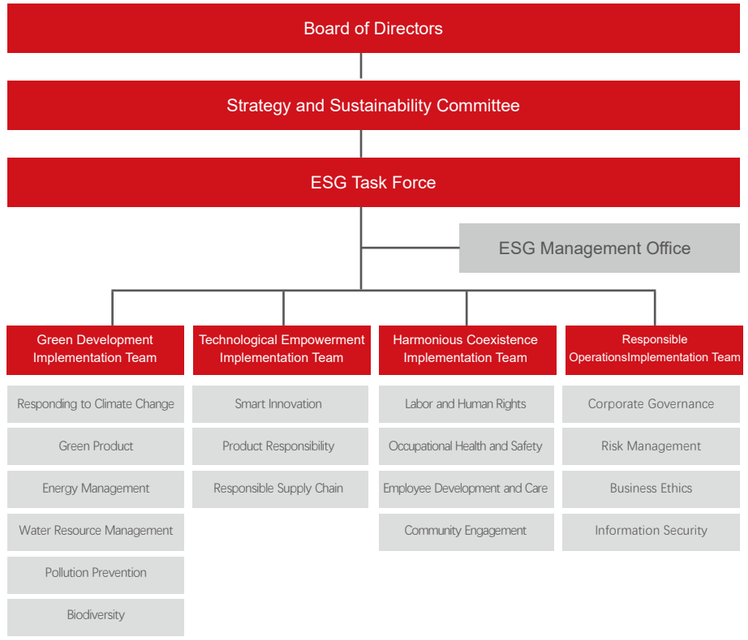
- Reviewing the Company's material issues, formulating medium to long-term sustainable development goals, and setting annual strategic objectives; coordinating the allocation of ESG resources within the Company and implementing the Company's sustainability strategy.

ESG Management Office

- Under the leadership of the ESG Task Force, the ESG Management Office ("Office") is responsible for broadly listening to the needs of various stakeholders and analyzing international sustainability trends. The Office collaborates with various specialized implementation teams to discuss the planning of annual strategic objectives and is responsible for compiling the annual sustainability report.

ESG Implementation Teams

- With the assistance of the ESG Management Office, the ESG Implementation Teams ("Teams") evaluate ESG issues related to the Company's operations according to the principle of materiality. Based on respective material issues, the Teams develop and implement corresponding strategies and objectives, and oversee their execution and implementation.



We believe that through continuous technological empowerment and our commitment to green development, harmonious coexistence, and responsible operations, TCL CSOT will make a positive contribution to the future of global sustainable development while also creating more value for our customers, partners, and society.

2.3 Stakeholder Engagement

TCL CSOT communicates through various channels with numerous stakeholders, including shareholders/investors, government/regulatory agencies, customers, suppliers/partners, employees, and community. This helps us understand the issues that concern our stakeholders and convey our progress and changes in sustainability management to the public through open information, to achieve future goals. The Office regularly reports stakeholder communication to the Committee each year.

Stakeholders	Key Issues of Concern	Engagement Channels	Key Communication Initiatives for 2023
Shareholders/ Investors	Corporate Governance Business Ethics Risk Management	Information Disclosure Investor Outreach TCL Technology Performance Briefing	Held 3 shareholder meetings and 9 board meetings cumulatively Attended the TCL Technology performance briefing
Government/ RegulatoryAgencies	Corporate Governance Business Ethics Responding to Climate Change Energy Management Water Resource Management Pollution Prevention Biodiversity	Information Disclosure Various Meetings (Seminars, Roundtables, Government Project Negotiation Meetings) Subject to Regulatory Scrutiny	Irregular government site visits and exchanges Regular reporting of environmental data to the government Acceptance of real-time government supervision of environmental data
Customers	Green Product Product Responsibility Responding to Climate Change Energy Management Smart Innovation Information Security	Customer Audits Technical Workshops and Seminars Regular Communication and Follow-Ups Customer Meetings Customer Satisfaction Surveys Official Website/WeChat Official Account	Regular meetings with clients Regular responses to customer survey questionnaires Conducted a total of 7 sessions of on-site ESG communication with clients
Suppliers/Partners	Business Ethics Responsible Supply Chain Green Product	Training and Seminar Events Ecological Partner Conference Supplier Conference Supplier Audits	Annual supplier conference convened with participation from 306 suppliers 85 suppliers underwent annual CSR audits
Employees	Occupational Safety and Health Labor and Human Rights Employee Development and Care	Employee Mailbox Employee Satisfaction Survey Challenge T Platform Union Activities	Employee satisfaction survey scored 75 Organized over 50 frontline executive meetings Employee communication platform development, with a closure rate of 97.7% for employee feedback 825 employee activities, with 171,967 participants
Community	Community Engagement	Information Disclosure Complaint Hotline Volunteer Service	Organized a total of 66 public welfare activities, with 459 participants

2.4 Materiality Assessment

TCL CSOT refers to the *GRI Standards* (*GRI 3: Material Topics 2021*) to construct a framework for assessing material issues. We analyze the internal and external contexts faced by the organization to identify existing and potential ESG issues that may impact the Company. Through communication with various stakeholders, we prioritize the importance of ESG issues and form an annual materiality matrix. The Office reports annually on the assessment of material issues to the ESG Task Force, and the final annual list of material issues is approved by the Committee.

Analyzing the Context Faced by the Organization

- Analyzing the Company's main values, policies, strategies, core capabilities, and strengths
- Focusing on ESG issues and future development directions of industry peers
- Studying national policies, market trends, international agreements, or voluntary agreements, and refering to ESG risks or opportunities identified by professional organizations

Identifying Existing and Potential Impacts

- Identifying the needs and expectations of internal stakeholders (such as employees and shareholders) and external stakeholders (such as investors, customers, suppliers, regulatory agencies, and community)
- Combining with the Company's business characteristics, strategic goals, industry best practices, international sustainability trends, and regulatory requirements to create a list of ESG issues

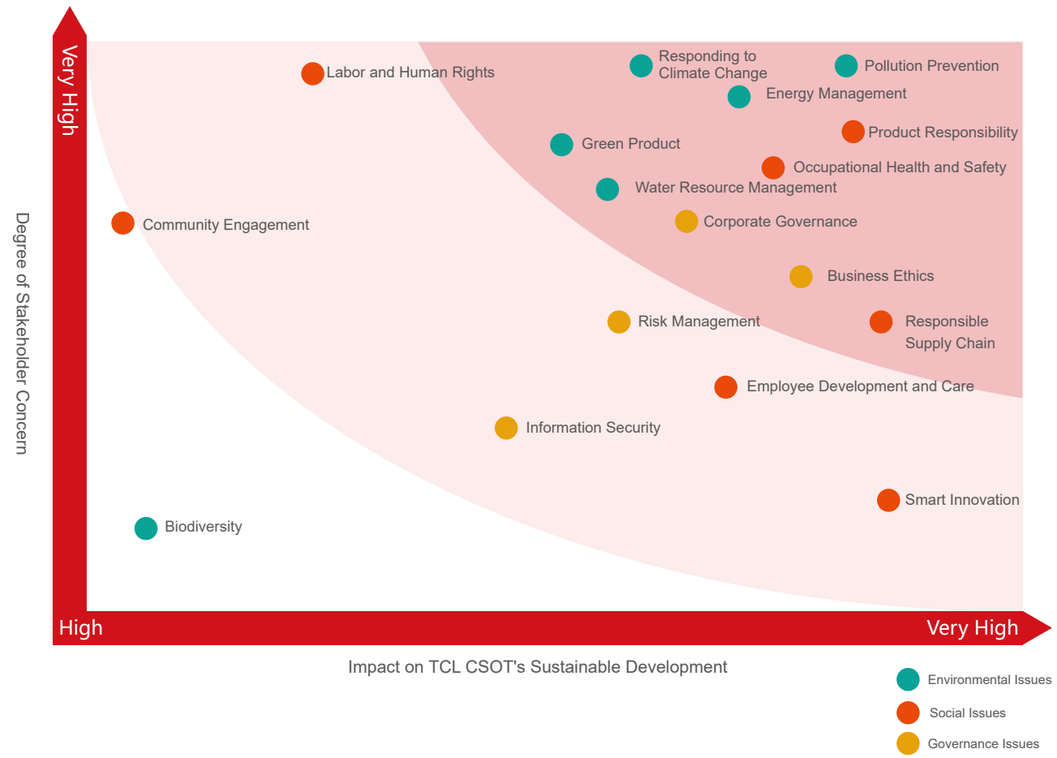
Communicating the Importance of Material Issues

- Maintaining close communication with identified stakeholders through various methods such as interviews, meetings, and questionnaires
- Our material issues survey sources include:
  Shareholders/Investors | Government/Regulatory Agencies | Customers | Suppliers/Partners | Employees | Community

Prioritizing Material Issues

- Based on the results of interviews and questionnaires, prioritizing ESG issues around two dimensions: "Degree of Stakeholder Concern" and "Impact on TCL CSOT's Sustainable Development"
- Internal and external experts at TCL CSOT further validate the identification and prioritization of material issues
  Form a materiality matrix consisting of 10 core issues, 5 important issues, and 2 general issues

TCL CSOT 2023 Materiality Matrix



Category	Material Issues	Section in Response
Environment (E)	Responding to Climate Change | Green Product | Energy Management | Water Resource Management | Pollution Prevention | Biodiversity	Environment
Social (S)	Smart Innovation | Product Responsibility | Responsible Supply Chain	Products and Value Chain
	Labor and Human Rights | Occupational Health and Safety | Employee Development and Care | Community Engagement	Employees and Community
Governance (G)	Corporate Governance | Business Ethics | Risk Management | Information Security	Governance and Compliance

3

Environment

Green Development, Leading the Sustainable "Star" Value

TCL CSOT not only focuses on the speed and scale of business growth but also emphasizes the quality and sustainability of operational performance. Through multidimensional initiatives addressing climate change, green product, energy management, water resource management, pollution prevention, biodiversity, and more, we promote the coordinated development of ecological and economic benefits, supporting TCL CSOT's green development and enhancing the Company's sustainability value.

This Chapter

- Responding to Climate Change 20
- Green Product 24
- Energy Management 30
- Water Resource Management 34
- Pollution Prevention 36
- Biodiversity 39



Highlights

51.5%	Proportion of Recycled Materials in Module Products
11,104 tons	Redution in Packaging Materials at the Shenzhen-Huizhou Base Throughout the Year
100.49 million kWh	Annual Generation of Self-Built Photovoltaic Power
499 million kWh	Electricity Saved by Implementation of 638 Energy-Saving and Emission-Reduction Projects Throughout the Year
97.65%	Annual Water Recycling Rate at Display Panel Production Bases
96.7%	Waste Recycling Rate at Display Panel Production Bases

3.1 Responding to Climate Change

To address extreme climate events, the world is closely monitoring climate risks and promoting green transformation in businesses. TCL CSOT actively responds to the call for sustainable development, seize the strategic opportunity presented by the dual carbon goal, together with supply chain partners, initiate and carry out climate actions, striving to lead a new era of green development in the industry and create a low-carbon and environmentally friendly future.

3.1.1 Climate Risk Management

TCL CSOT responds to the national dual carbon goal. By referencing the *IFRS S2 Climate-related Disclosures* ("*IFRS S2*") released by the International Sustainability Standards Board (ISSB), we analyze global climate change trends and international response directions to identify and assess the risks and opportunities brought by climate change. Based on this analysis, we formulate the Company's climate change mitigation strategies to achieve the goal of green development.

Governance

TCL CSOT has established a climate change governance system led by the Board of Directors and formed a Climate Change Working Group. The Safety and Environmental Management Committee formulates specific implementation and supervision plans, with branch committees responsible for implementation at production bases in Shenzhen, Wuhan, Guangzhou, Huizhou, Suzhou, and other locations.

Decision-Making Level	Strategy and Sustainability Committee: The Company's highest decision-making and governance level for climate change, responsible for reviewing and approving climate change strategies and medium to long-term goals, and overseeing the management of identified climate risks and opportunities.	
Planning Level	ESG Task Force: Regularly assessing the risks and opportunities posed by climate change; formulating medium to long-term climate change plans and reviewing annual work plans.	
Implementation Level	ESG Management Office: As the Company's ESG coordinating body, responsible for planning, organizing, coordinating, and implementing the Company's medium to long-term ESG goals, including climate action commitments.	Safety and Environmental Management Committee: As the Company's dual carbon management and coordinating body, responsible for formulating specific climate action implementation plans and overseeing their implementation at various production bases.

Risk Management

TCL CSOT recognizes the risks and opportunities of climate change. Based on operational regions and referencing policies and historical records of extreme weather events, we have systematically identified the impacts of climate change on the Company's business and finances. We actively collaborate with employees, suppliers, customers, and other stakeholders to comprehensively advance various climate actions aimed at mitigating the effects of climate change and enhancing corporate resilience continuously.

Risk	Opportunities
• Extreme weather impacts company infrastructure and operational activities	• Timely attention and response to dual carbon strategies can lead to gaining market opportunities or initiative in green trade regulations
• Not adhering to dual carbon policies poses compliance risks for the Company	• Meeting customers' low-carbon requirements helps secure orders
• Not adhering to customer policies or requirements may result in order cancellations or cooperation termination	• Expansion of green and low-carbon products and businesses
• Inadequate focus on green trade may hinder product entry into overseas markets or increase tax costs	• Low-carbon transformation achieves energy efficiency and cost-effectiveness in production and operations
• Missing out on low-carbon transformation opportunities could lead to a decline in overall competitive strength for the Company	• Enhancing corporate image

Strategy and Commitment

Based on TCL CSOT's greenhouse gas emission profile and industry layout, we employ a comprehensive approach using both top-down and bottom-up analyses to scientifically formulate the dual carbon goal and pathways. This includes focusing on energy and carbon emission management as "a central theme", implementing "eight measures": green manufacturing, use of green electricity, energy efficiency improvements, circular production, fluorinated gas reduction, green buildings, low-carbon offices, and carbon offsetting.

In July 2023, TCL CSOT took the lead in the industry by releasing the Carbon Neutrality White Paper titled ***Seeking Innovation and Promoting Change, Moving towards Green***, committing to:

Peaking carbon emissions by 2030 and achieving carbon neutrality by 2050

Metrics and Targets

To address the impacts of climate change transformation, TCL CSOT has mapped potential emission trajectories based on historical data from internal and external environments and set climate actions and goals:

Annual Average Reduction in Carbon Intensity Per Unit of Production Capacity by 2030
3% (Scope 1 and 2)

Company-Wide Utilization Rate of Green Electricity by 2050
100%

3.1.2 Climate Change Mitigation

To address the identified risks and opportunities of climate change, we have established policies such as the *CSOT Greenhouse Gas/Carbon Emission Management Process* and the *Energy and Resource Management System,* which standardize energy and carbon emission management standards, strengthen process monitoring, and ensure the continuous implementation and improvement of climate actions. In 2023, we undertook measures including carbon emission accounting, energy-saving and efficiency improvements, self-built photovoltaic systems, and purchase of green electricity to actively and continuously respond to climate change.

Carbon Emission Accounting

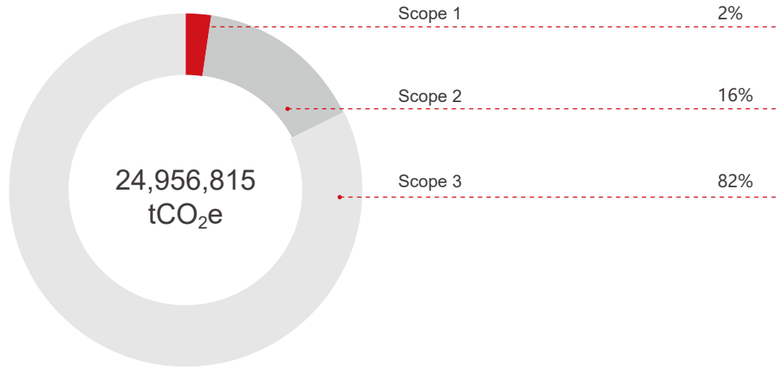
In 2023, all production bases in stable operations have achieved

100% ISO 14064-1

Verification coverage

TCL CSOT actively pursues ISO 14064-1 Greenhouse Gases Verification to enhance the greenhouse gas emission management capabilities at its various sites and to effectively advance carbon reduction efforts.

TCL CSOT commissioned an authoritative third-party verification agency to conduct a comprehensive accounting of the 2023 greenhouse gas emissions for TCL CSOT and its 10 subsidiary companies, in accordance with ISO 14064-1:2018. The specific emission data are as follows:



Scope of Verified Companies

The above greenhouse gas emission data include the following eleven companies:

- TCL China Star Optoelectronics Technology Co., Ltd.
- Shenzhen China Star Optoelectronics Semiconductor Display Technology Co., LTd.
- Wuhan China Star Optoelectronics Technology Co., Ltd.
- Wuhan China Star Optoelectronics Semiconductor Display Technology Co., Ltd.
- Huizhou China Star Optoelectronics Display Co., Ltd.
- Huaxian Optoelectronics Technology (Huizhou) Co., Ltd.
- Suzhou China Star Optoelectronics Technology Co., Ltd.
- Suzhou China Star Optoelectronics Display Co., Ltd.
- Guangzhou China Star Optoelectronics Semiconductor Display Technology Co., LTd.
- Guangdong Juhua Printing Display Technology Co., Ltd.
- Guangzhou ChinaRay Optoelectronic Materials Co., Ltd.

Carbon Reduction Pathways and Achievements

To achieve our operational carbon neutrality goal, we promote a green manufacturing strategy across all stages of our production and operations. We implement an efficient, clean, low-carbon, and circular green development model. By embracing a life-cycle green design concept, we create low-carbon products. We continuously enhance energy efficiency and reduce greenhouse gas emissions through technological upgrades, equipment modifications, and energy management. These efforts support the Company's transition to a low-carbon future.

Action Pathways	Main Initiatives and Achievements
Energy Conservation and Efficiency	**Comprehensive and systematic optimization of production energy efficiency, achieving energy consumption reduction goals from multiple dimensions** □ Implementing a total of 638 energy-saving and emission-reduction projects,saving 499 million kWh of electricity and reducing approximately 284,600 tonnes of carbon dioxide emissions
Fluorinated Gas Reduction	**Appropriate use of low-greenhouse-gas-emitting gases to replace existing industrial gases, optimizing production processes to reduce the use of specialty gases** □ Installing exhaust gas treatment equipment to process emissions from CVD processes, achieving over 99% NF_3 treatment efficiency
Green and Intelligent Manufacturing	**Building green and smart factories, steadfastly and wholeheartedly promoting the Company's transformation towards green and digitalization** □ Continued development of the intelligent manufacturing management platform, resulting in a 28.5% increase in labor productivity in the manufacturing sector in 2023
Circular Production	**Establishing the concept of "Waste is a Resource" and building a circular economy** □ Wuhan base achieves a stripping solution waste recovery rate of over 90% by implementing the SRS system □ Shenzhen base achieves a copper recovery rate of over 95% by implementing copper etching waste liquid recycling technology, recovering more than 229 tons of refined copper metal annually
Green Electricity Usage	**Promoting the full deployment of rooftop photovoltaic systems and expanding the proportion of green electricity production** □ Constructing 123.8 MW of rooftop photovoltaic systems, generating 100.49 million kWh of electricity
Green Building	**Continuously tracking and managing building energy consumption, optimizing the energy use of buildings, and effectively reducing building carbon emissions** □ Projects t4 and t6 have achieved LEED Platinum Certification and China Three-Star Green Building Certification
Low Carbon Office	**Promoting the green office concept, controlling energy use, carbon emissions, and resource consumption from various aspects to create a favorable green office environment** □ Constructing a total of 273 sets of video conference systems □ Promoting paperless office across the entire company □ Using 100% electric buses at Shenzhen base
Carbon Offsetting	**Initiating carbon neutrality pilots, actively participating in carbon trading, and advancing carbon markets** □ Purchasing green electricity and green electricity certificates totaling approximately 30.456 million kWh, resulting in a reduction of approximately 17,400 tonnes of carbon dioxide emissions



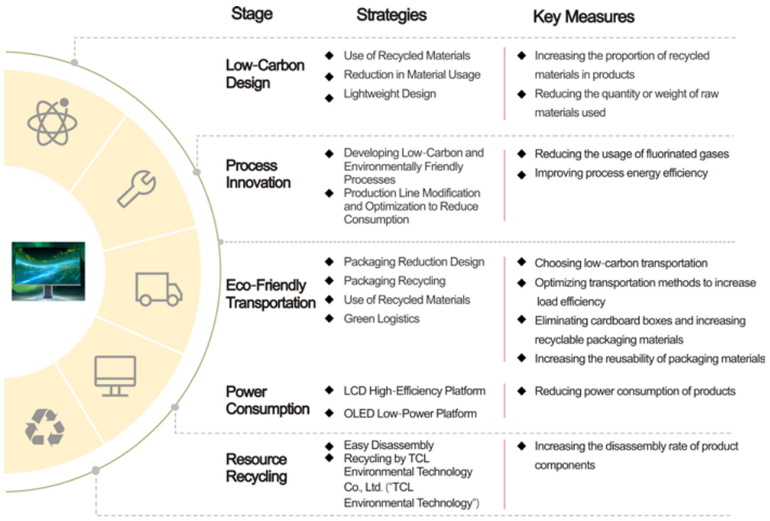
In 2023, Wuhan Base Completed a Product Carbon Footprint Assessment and Verification Report



In 2023, TCL CSOT Was Awarded the Title of "China's Top Runner for Industrial Carbon Peaking"

3.2 Green Product

TCL CSOT embraces the concept of green development, using technology to create a future of green products. We focus on enhancing environmental value throughout the entire lifecycle of our products. From design to production, transportation, use, and recycling, we infuse green principles into every stage, striving to reduce the environmental impact of our products and to build a net-zero, circular, and reliable green supply chain.



3.2.1 Low-Carbon Design

We incorporate low-carbon concepts into our product design, using technological innovation to promote the green transformation of our products. By increasing the use of recycled materials, reducing the usage of raw materials, and implementing lightweight design, we provide customers with a new experience of green products.

Use of Recycled Materials

We use recycled, environmentally friendly, and non-hazardous alternative materials to increase the proportion of recycled materials in our module products, thereby reducing the product carbon footprint. After undergoing audits by third-party organizations for supplier review, management system validation, confirmation of recycled materials, as well as production capacity and safety assessments, the product has obtained the Recycled Content Verification.

Case

The 23.8-inch display module has received Recycled Content Vertification verified by TÜV Rheinland (TÜV),with a recycled material content of 51.5%.



Reduction in Material Usage Lightweight Design

We have made breakthroughs in reducing the usage and quantity of chips and glass, achieving product lightweighting and reducing greenhouse gas emissions of raw material. Additionally, thanks to the reduction in product weight, transportation efficiency has improved, resulting in decreased greenhouse gas emissions of transportation.

Case

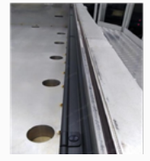
• Reduced Usage of Driver Chips	Achieving a 50% reduction in the number of COFs for NB products through DLS technology
• Lightening of Glass Substrates	Introducing 0.4T ultra-thin glass substrates to improve upstream material utilization
• Thinning and Lightening of Modules	Further developing thinning technology for metal backplates and light guide plates, reducing their weight by over 25%

3.2.2 Process Innovation

TCL CSOT has always adhered to the concept of green development, focusing on and striving to reduce greenhouse gas emissions during the production process. Through process innovation and production line transformation, we continuously promote low-carbon development in the display industry.

Case 1 Substituting and Reducing Fluorinated Gases in Processes

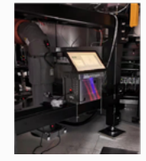
To effectively reduce greenhouse gas emissions, we actively explore optimization of production processes and are committed to reducing the use of specialty gases to control the generation of fluorinated gases. NF_3, as one of the main contributors to the greenhouse effect, accounts for more than 20% of all specialty gases used at CSOT. To reduce NF_3 consumption, we significantly improved cleaning efficiency through advancements in the chemical vapor deposition (CVD) process for mold cleaning, effectively reducing the amount of NF_3 used. Additionally, by installing advanced waste gas treatment equipment, we achieve over 99% efficiency in treating the exhaust gases generated by the CVD process, ensuring environmental friendliness throughout the production process.



CVD CFC Equipment
Improving Cleaning Airflow, Reducing NF_3 Usage



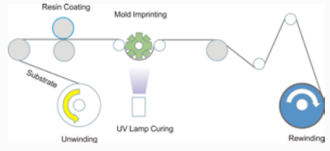
CVD Scrubber
Exhaust Gas Treatment Device, NF_3 Removal Rate Over 99%



CVD EPD Equipment
Monitoring Cleaning Spectra, Reducing NF_3 Usage

Case 2 Introducing Zero-VOC Materials to Achieve Zero Carbon Emissions

We have adopted an innovative zero-VOC (Volatile Organic Compound) diffusion material selection technology that eliminates the use of any VOC materials. Instead, the technology utilizes mold transfer printing technology to produce corresponding products, thereby avoiding dependence on toluene and achieving zero greenhouse gas emissions. Simultaneously, through the transformation of our production lines, we have reduced the original 60-meter long and 10-meter high line to 30 meters in length and 3 meters in height. This significant upgrade has greatly enhanced energy efficiency, resulting in an overall energy savings rate of 48%.



Case 3 Exploring Less Mask technology to Reduce Process Energy Consumption

Through design and process optimization, TCL CSOT reduces the number of Mask layers in products to save energy. For example, in the Array process for mobile phones, the number of Masks has been reduced from 16 to 14, eliminating one layer of metal wiring and reducing the chemical reagents used for cleaning and maintenance.

3.2.3 Eco-Friendly Transportation

Packaging Optimization

In 2023, Shenzhen-Huizhou base reduced packaging material usage by approximately

11,104 tons

In 2023, Wuhan base reduced plastic packaging material usage by approximately

5%

Proportion of Plastic Packaging Materials

↓8%

We focus on the efficiency of resource usage and the sustainability of environmental protection. We incorporate eco-friendly principles into our packaging design and material selection processes, adhering to the "3R" principles. By reducing the amount of packaging material used in designs, reusing packaging materials, and adopting recycled materials, we continuously improve resource efficiency and protect the environment.



Packaging Reduction Design

TCL CSOT upholds the concept of a green and circular economy, advocating for compact and minimalist packaging design to save resources. We streamline product packaging from the source, such as optimizing the design, structure, and density of box lids (EPS), spacers (EPE), partition walls (HDPE/PC/ABS), pallets (WOOD), and boxes (BOX), achieving the maximum possible reduction in materials.

Target to **100%** eliminate the use of cardboard boxes for MNT products by 2024

Weight Reduction Through Packaging Design in 2023

1,108 tons

(Shenzhen-Huizhou Base)



Packaging Design Optimization Diagram

Packaging Recycling

TCL CSOT is one of the earliest companies in the industry to collaborate with customers on packaging material recycling. In partnership with TCL Environmental Technology, we actively promote and expand the recycling and reuse of key packaging materials such as box lids, spacers, and pallets at the customer end.



Target to achieve a **20%** reuse rate of customer-side packaging materials by 2024

Reduction in Packaging Through Recycling in 2023

9,996 tons

(Shenzhen-Huizhou Base)

Recycling and Reuse Rate of Cell Packaging Materials

95%+

Recycling and Reuse Rate of 32 Injection-Molded Boxes

70%+

Use of Recycled Materials

One of the key initiatives to achieve green packaging is the use of recycled materials. In 2023, we conducted a survey of suppliers regarding Post-Consumer Recycled (PCR) packaging materials and developed green materials such as **100% recycled pearl cotton (PCR EPE)** and **100% recycled plastic bags (PCR HDPE)** for backlight module (LCM) products. In 2024, we plan to continue developing recycled materials for other product categories.

Green Logistics

We effectively reduce carbon emissions by minimizing air transport, employing advanced loading techniques, refining logistics management, maximizing the use of low-carbon transportation methods, optimizing transport space, and minimizing empty returns.

Air Freight Volume Year-Over-Year

↓31%

- Substituting Sea Freight for Air Freight
- Substituting Water Transport for Land Transport

Vehicle Comprehensive Loading Efficiency Increased to

96%

- Increasing the Proportion of Less-Than-Truckload Transportation and Introducing Larger Vehicle Types
- Improving Large-Size Packaging Specifications and Implementing Double-Stack Transportation

3.2.4 Power Consumption

TCL CSOT harnesses technological innovation as its driving force, continuously enhancing core technical capabilities and focusing on breakthroughs in cutting-edge technologies. By establishing LCD and OLED as two major display technology platforms, we consistently introduce innovative display solutions that offer high image quality and low power consumption, which further strengthens the green and energy-saving characteristics of our products, providing users with a more realistic and environmentally friendly visual experience.

LCD High-Efficiency Platform

Through iterative development using HFS/HVA high-efficiency technology, we have achieved **a comprehensive 15% increase in OC penetration rate and a 20% reduction in LCM power consumption.** Meanwhie, **our product energy efficiency continues to lead the industry.**

High-Mobility Oxide

Through collaborative efforts and independent development of high-mobility oxide target materials, we have achieved a high mobility rate of ≥30 $cm^2/V·s$, which has resulted in **a 20% reduction in logic power consumption and a 10% reduction in backlight power consumption**

TSS Technology

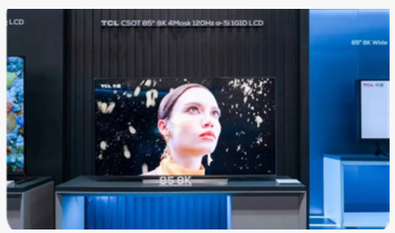
Through independent research and development of high-transmittance TSS pixel and algorithm technologies, we have achieved **industry-leading specifications in transparency**

High-Efficiency BLU

Through the development of high-efficiency LED/LGP and high-gain materials, we have achieved **a 20% increase in BLU efficiency**

Case | 85" 8K 4Mask 120Hz a-Si 1G1D LCD

TCL CSOT's 85" 8K 4Mask 120Hz a-Si 1G1D LCD, featuring TSS technology, achieves a 20% increase in transparency and a 15% reduction in power consumption. This model seamlessly integrates high-end picture quality with efficient performance and is also the only 85" 8K product in 2022 that meet the minimum EU energy efficiency standards, earning it the accolade of "Global Highest Efficiency 85" 8K TV".



OLED Low-Power Platform

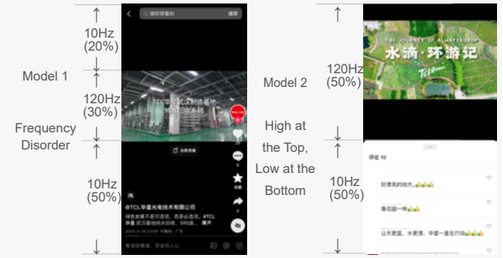
WQ-LTPO Technology

By introducing IGZO TFTs into the pixel circuitry to replace some LTPS TFTs, the display panel gains the ability to operate at 1Hz. This allows the screen to autonomously switch between 1Hz and 120Hz based on the displayed content. At lower refresh rates, the screen achieves reduced driving power consumption. This technology marks the first in China to achieve mass production.

Achieving a reduction in IC power consumption of

10%~20%

LTPO technology continues to iterate, with version 3.0 introducing zone and frequency division technology, supporting 2x and 3x frequency divisions, and enabling frequency adjustment by multiples within the range of 1-120Hz.



Polarizer-Free Panel (PLP) Technology

Eliminating polarizers and introducing structured color films to enhance transmittance while maintaining low reflectance, thus reducing screen power consumption. This technology was first achieved in mass production domestically in 2023.

Transmittance is enhanced to

>60%

Power consumption of display decreases by

20%~30%

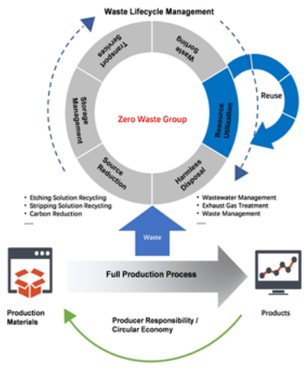
Case | **6.36" Full-Scene Split-Frequency Display LTPO OLED Screen**

This product supports 2x and 3x frequency divisions, and frequencies within the range of 1-120Hz can be adjusted in multiples. Through zone and frequency division technology, the IC power consumption is efficiently reduced, making the product environmentally friendly, energy-efficient, and long-lasting in battery life.



3.2.5 Resource Recycling

Designing products to be easily dismantled and recycled is a key principle in product lifecycle management. Such design not only conserves resources and reduces environmental pollution but also promotes social and economic benefits. Meanwhile, in collaboration with TCL Environmental Technology, we are exploring the recycling and reuse of display screens. Our goal is to achieve transition from compliance to value enhancement, and drive the transformation towards green development.



3.2.6 Green Industrial Chain

To create a net-zero, circular, and reliable green supply chain, TCL CSOT actively collaborates with upstream suppliers to explore the application of low-power, non-hazardous, and recycled materials. We also work with downstream customers to jointly develop environmentally friendly products, and invite authoritative third-party organizations for supervision and certification, reducing environmental impact and enhancing user satisfaction.

Hazardous Substance Management

To manufacture safer and more environmentally friendly products, we strictly comply with *RoHS*, *REACH*, QC080000 standards, and customer requirements. We have established a hazardous substance management system that ensures comprehensive control from raw material procurement and product development to final product manufacturing.

In 2023, **100%** of display panel production bases have achieved **QC080000** Certification.

TCL CSOT's Management of Hazardous Substance in Products and Materials

Strengthening Control → Gradual Substitution of Regulated Chemicals

	Standards as Basis	Systems and Processes	Chemical Substitution Measures
International GP Regulations	European Union: *RoHS / REACH* United States: *California Proposition 65/CPSIA* Canada: *Prohibition of Certain Toxic Substances Regulations* China: *China RoHS*	*Hazardous Substance Risk Assessment and Management Standards* *Hazardous Substance Management Procedures* *Standards for Testing and Inspection of Hazardous Substances in Products and Materials*	1. Identifying regulated chemical inventory and control limits 2. Conducting supplier surveys and providing improvement plans 3. Gradually converting into internal company standards and disseminating to suppliers, regularly communicating relevant regulatory information to suppliers 4. Requiring suppliers to provide material testing reports
Industry GP Standards	IEC Halogen-Free Requirement		
Customer GP Requirements	Related Standards and Guidelines for Chemical Substance Management	.....	

Note: GP stands for Green Partner.

Joint Laboratory

TCL CSOT collaborates with third-party organizations, academic and research institutions, and customers to establish joint laboratories, leveraging respective strengths. We promote joint research and development and collaborative innovation to build a green and healthy industrial chain, aiming to provide users with a superior product experience.

With Third-party Organizations

- Partnering with TÜV to establish the Health Vision Joint Laboratory, jointly exploring display technology and standards, conducting deeper research in eye health, gaming and esports displays, and Mini LED displays, seeking more possibilities to enhance consumers' visual experience with display products

With Industry-University Research Institutions

- Establishing a joint laboratory with the National Engineering Research Center for Ophthalmic Equipment, jointly conducting research on visual health aspects of display products, and developing standards for eye health and vision protection products, aiming to provide healthier products for more consumers

With Customers

- Establishing joint laboratories with multiple clients, leveraging strengths together to pioneer new consumer experiences with leading technologies, and collectively advancing energy-saving and low-power products

Joint R&D Collaborative Innovation



3.3 Energy Management

TCL CSOT is committed to leading the trends of green, low-carbon, and sustainable development. Through actively applying for energy management system certification and engaging in renewable energy projects, we transform existing energy configurations; through technological innovation, we promote energy efficiency and reduce greenhouse gas emissions. Additionally, we prioritize the construction of green factories and green buildings, taking practical actions to embrace the path of green development.

3.3.1 Management System

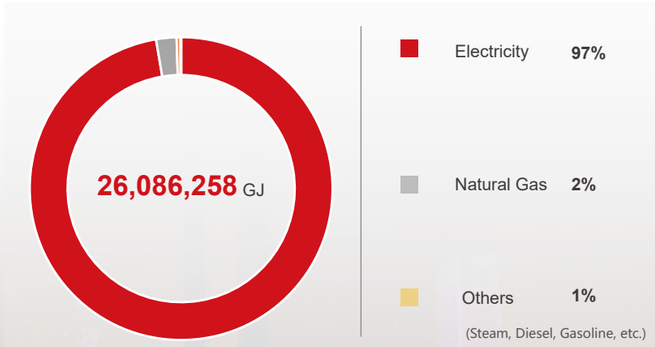
Display panel production bases have achieved

100%
ISO 50001
Certification coverage

TCL CSOT actively pursues ISO 50001 Energy Management System Certification and regularly organizes energy-saving training to effectively implement energy-saving and emission-reduction initiatives. Additionally, the Company is advancing the digitalization of energy management by planning and utilizing energy efficiently. Through big data algorithms, the Company conducts intelligent monitoring and analysis of equipment energy consumption, promptly addressing equipment anomalies, effectively managing energy loss, and improving energy efficiency.



Energy Usage in 2023



3.3.2 Clean Energy

Distributed Photovoltaic Construction

TCL CSOT's production bases continuously develop and utilize renewable energy. By actively collaborating with TCL Zhonghuan Renewable Energy Technology Co., Ltd., and Huizhou TCL Photovoltaic Technology Co., Ltd., we maximize rooftop photovoltaic installations to create low-carbon and environmentally friendly production parks.

In 2023, our total installed capacity of photovoltaic power generation reached 123.8 MW, with a photovoltaic power generation of 100.49 million kWh.

In 2023, TCL CSOT was awarded the "Pilot Demonstration of Intelligent Photovoltaic" by the Ministry of Industry and Information Technology of the People's Republic of China



Photos of Photovoltaic Panels in the Factory Area

Green Electricity and Green Electricity Certificate

In addition to self-built photovoltaic power for self-consumption, we actively purchase green electricity and green electricity certificates.

In 2023, TCL CSOT **purchased approximately 10 million kWh of green electricity and 20,456 I-REC international green electricity certificates, reducing carbon dioxide emissions by about 17,400 tonnes.**

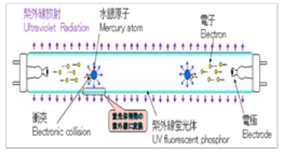
3.3.3 Energy Conservation and Emission Reduction

TCL CSOT implements a comprehensive energy conservation and emission reduction program, integrating green and environmental protection principles into every aspect of production and operation. We adopt various energy-saving and emission-reduction measures, focusing not only on immediate goals but also on long-term planning. Our achievements in energy conservation and emission reduction in 2023 are as follows:

Energy Conservation and Emission Reduction Projects Implemented	Achieved Energy Savings of	Carbon Emissions Reduced by Approximately
638 projects	**499** million kWh	**284,600** tons

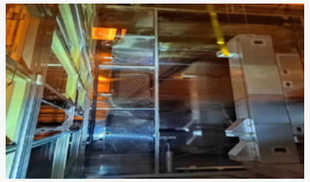
Case 1 **UPW System UV Lamp Retrofit**

Light guiding is one of the core aspects of LCD technology, but traditional UV lamps used in this process consume high energy, generate significant heat, and require complex cooling equipment, leading to additional energy consumption and maintenance costs. To overcome this challenge, TCL CSOT has introduced ECO energy-saving lamps, which effectively reduce energy consumption and heat generation while ensuring the functionality of light guiding. Through the implementation of the UV Lamp retrofit project, we reduce the number of lamps by 2,130 annually, saving over 10 million kWh of electricity per year, with equipment achieving a 99% higher energy efficiency compared to before the retrofit.



Case 2 CF ITO Oven Heating Energy Savings

TCL CSOT has adopted a 15-minute baking solution to replace the previous 30-minute, 230°C high-temperature baking process, reducing the energy consumption of the CF ITO Oven. To ensure unchanged product performance, we conduct rigorous testing, demonstrating that the improved products meet production standards in terms of conductivity and transmittance. This improvement results in an annual energy saving of 7.1 million kWh.



Case 3 Energy Saving of FAB Lighting

We significantly reduce electricity consumption by turning off unnecessary lights in certain areas of the FAB and production floors, saving up to 9.1 million kWh of electricity annually.





Case 4 Recovery of Waste Heat

TCL CSOT's Shenzhen base has achieved energy savings by retrofitting the full heat recovery system and adding hot water pipelines. During winter, we shut down the condenser cooling water and recover all the condenser heat, saving 3.94 million kWh of electricity annually.

Meanwhile, Wuhan CSOT has installed bypass valves in the compressed air cooling water pipeline to recover waste heat generated during compressor operation. This recovered heat is used for heating instead of using a hot water boiler, saving approximately 1.9 million m^3 of gas annually and reducing carbon dioxide emissions by about 4,195 tonnes.



3.3.4 Green Factory

TCL CSOT operates its various bases strictly according to the standards of green factories, integrating green production and manufacturing concepts into daily operations. As of 2023, TCL CSOT has a total of 7 panel production lines certified as National Green Factories by the Ministry of Industry and Information Technology of the People's Republic of China, and 1 production line certified as a Provincial-Level Green Factory.

National Green Factory
t1 | t2 | t3 | t4 | t5 | t6 | t7

Jiangsu Green Factory
t10

Zero Carbon Factory Certificate, Shenzhen Environmental Integrity Green Label Enterprise, Excellent Cleaner Production Audit Enterprise
t1 | t2

Having Passed the Clean Energy Audit and Achieved the "Zero-Waste Factory" Certification
t4



A Part of Green Factory Certification Medals

3.3.5 Green Building

TCL CSOT extensively applies BIM (Building Information Modeling) technology in its construction project designs to enhance the level of informatization and intelligent management, thereby improving the quality of construction projects. Meanwhile, we continuously track and manage building energy consumption, improve HVAC systems, upgrade low-carbon lighting systems, and optimize building energy use, effectively reducing building carbon emissions.

Building Energy Efficiency

Energy Consumption Tracking

Continuous tracking and management of building energy through mechanical and electrical commissioning, pre-setting energy monitoring instruments to capture energy data from FMCS and monitoring systems; after design acceptance, conducting a one-year equipment energy consumption analysis and tracking of buildings. This allows us to promptly identify and improve any anomalies during operation, ensures efficient and low-consumption equipment operation throughout our operation and ensures full control and management of the Company's energy consumption.

Insulation Measures

Using insulation materials and applying thermal insulation techniques to the roof and east-west outer walls.

Rooftop Garden

CSOT Semiconductor has set up a rooftop garden on the 4th floor, creating ventilation corridors to enhance airflow.

Constructing a garden-style rooftop with green roofing covering more than 50% of the available roof area. Landscape water is sourced from rainwater and recycled water.

Equipment Energy Efficiency

Adopting central air conditioning systems meeting Level 1 energy efficiency index standards.

Implementing intelligent temperature control to save heating and cooling energy consumption.

Using high-efficiency and energy-saving lighting fixtures with centralized grading, zoning, and grouping controls. Utilizing energy-saving elevators with group variable frequency control.

Installing water-saving appliances (Level 2 water efficiency) and equipment, with three-level electricity and water metering, ensuring 100% metering device coverage, and achieving a water-saving rate of no less than 10%.

Sponge City

Designing a sponge city, ensuring that more than 50% of the site area uses permeable paving materials and controlling over 70% of rainwater runoff.

Energy-Efficient Lighting

Using transparent glass curtain walls and large windows in design to maximize natural lighting.

Green Building Certification

- Wuhan CSOT

The t4 project has achieved both LEED Platinum certification and China Three-Star Green Building Certification, as well as the Municipal Construction Bureau's Three-Star Green Building Certificate in 2019.

- Shenzhen CSOT

The t6 project has achieved both LEED Platinum and China Three-Star Green Building Certification. The t7 project has received China Three-Star Green Building Certification.

- Suzhou CSOT

The t10 project has obtained both National Three-Star Green Building Design Label and Operation Label.

- Huizhou CSOT

Huizhou CSOT has achieved China Three-Star Green Building Certification.



3.4 Water Resource Management

We adhere to stringent and meticulous water resource management. By setting water-saving goals, implementing measures such as using water-saving appliances, improving leakage issues, upgrading equipment, and adjusting water valves, as well as undertaking projects such as reclaimed water reuse, wastewater recycling, and compressor cooling water recycling to minimize water resource waste and enhance water resource utilization.

3.4.1 Water Risk Assessment

TCL CSOT references the water risk assessment tool developed by the World Resources Institute (WRI) to conduct risk assessment and analysis, identifying the water stress and consumption levels of each base location. In 2023, aside from the Suzhou base, which faces high water stress and consumption pressure, all other bases are categorized as medium to low risk. The specific risk levels are shown in the table below:

Water Stress

Low <10%	◆ Guangzhou Base ◆ Wuhan Base ◆ Huizhou Base	Low <5% ◆ Shenzhen Base ◆ Wuhan Base ◆ Guangzhou Base ◆ Huizhou Base
Low-Medium 10-20%	◆ Shenzhen Base	Low-Medium 5-25% ◆ Suzhou Base
Medium-High 20-40%		Medium-High 25-50%
High 40-80%		High 50-75%
Extremely High >80%	◆ Suzhou Base	Extremely High >75%

Measures for High-Risk Water Areas

TCL CSOT's Suzhou base has established a water-saving leadership team to manage and supervise the rational use of water resources, continuously improving water resource utilization. In accordance with the requirements of the Suzhou Water Authority, the Suzhou base has set a water intensity target of 1.02 m^3/m^2. In 2023, the actual water consumption per unit product was 0.8 m^3/m^2, which is well below the target. The specific water management measures for each TCL CSOT base are as follows:

	Establishing a Water-Saving Organization	Setting Water-Saving Targets	Pure Water Recycling	Reclaimed Water Recycling	Process Wastewater Recycling	Indirect Cooling Water Circulation	Steam Condensate Reuse
Suzhou Base	√	√	√	√	√	√	√
Shenzhen Base	√	√	√	√	√	√	√
Wuhan Base	√	√	√	√	√	√	√
Guangzhou Base		√	√	√	√	√	√
Huizhou Base	√	√	√	√	√		

3.4.2 Water Resource Goals

In 2023, TCL CSOT was honored as **Guangdong Provincial Water Conservation Benchmark Enterprise**

Based on national laws and regulations, international standards, and the water risk conditions at each base, TCL CSOT has formulated corresponding water resource management policies, including the *Wastewater Management System*, *Water Conservation Management Responsibility System*, *Water Conservation Management System*, *Water Use Plan Management System*, *Regular Inspection and Maintenance System*, and *Water Conservation Work Meeting System*, all implemented by the water departments at each base. These efforts are dedicated to reducing the environmental impact of water consumption. To this end, we have established challenging water resource management goals:

Annual Reduction in Water Consumption Per Unit of Production Capacity from 2023 to 2025: **1%**

Water Recycling Rate No Less Than: **97.5%**

Water Consumption Overview 2023

Total Water Intake	Total Water Discharge	Total Water Consumption
53.77 million tons	**40.79 million tons**	**12.98 million tons**

Water Recycling Rate	Pure Water Recycling Rate	Pure Water + Reclaimed Water Recycling Rate
98%	**70%**	**79%**

3.4.3 Water Recycling

TCL CSOT places high importance on water resource management, aiming to eliminate water wastage. Through strengthened management and tailored measures, we effectively enhance water recycling rates, reducing water resource development and usage, and contributing to the conservation of global water resources.

Pure Water Recycling

TCL CSOT handles process equipment discharge wastewater by categorizing it based on water quality. Low-concentration wastewater undergoes activated carbon filtration and UV sterilization, or it passes through processes such as activated sludge treatment, activated carbon, membrane treatment, and reverse osmosis to be reused as high-quality water source in the production of pure water. High-concentration wastewater is managed through dedicated recycling systems at the wastewater treatment station, where it undergoes further treatment, and the resulting secondary reverse osmosis water is reused as high-quality water source in the pure water preparation system.

In 2023, we successfully recycled **76.04 million tons** Achieved a recycling rate of **70%**



Reclaimed Water Recycling

Through an efficient reclaimed water collection system, we recycle concentrated reverse osmosis water, air conditioning condensate, and other sources, reusing them in various processes such as waste gas scrubbing towers, cooling towers, and pure water preparation. This approach significantly reduces the consumption of fresh water. Additionally, we innovatively supply this reclaimed water directly to CVD & DRY equipment for use.

In 2023, we achieved a high reclaimed water volume of **10.07 million tons**

With a total reclaimed water and pure water recycling rate reaching **79%**



3.5 Pollution Prevention

TCL CSOT, based on the ISO 14001 management system, has established a robust emissions management system. By reducing pollutant generation, monitoring emissions, and controlling compliant discharge of "three types of wastes", we aim to minimize the negative environmental impact of emissions.

We adhere to national laws and regulations and formulate various management documents, including the *Air Emissions Management System*, *Regulations on Sewage, Exhaust Gas Emissions, and Noise Control*, *Methods for Pollution Control and Management of Solid and Liquid Waste*, *Hazardous Waste Warehouse Management System*, *Regulations on Waste Management* and *Guidance on Hazardous Waste Handling Operations*. These documents outline specific requirements for wastewater and exhaust gas management, enhance the lifecycle management process from solid waste classification to storage and disposal, and prevent significant environmental impacts caused by improper waste management.

In 2023, TCL CSOT did not experience any major environmental pollution violations.

Wuhan CSOT was honored as one of the first batch of "Pollution Permit Management Benchmark Enterprise" in Wuhan

3.5.1 Wastewater Management

TCL CSOT strictly adheres to national and local wastewater discharge standards and closely monitors internal wastewater management processes. To prevent water pollution at the source, we have implemented a system for separating rainwater, domestic wastewater, and production wastewater. Each production base is equipped with sewage treatment stations where various types of wastewater are collected, classified, and treated using advanced industry technologies. Additionally, we have installed online real-time monitoring devices for parameters such as chemical oxygen demand (COD), ammonia nitrogen, and total nitrogen at discharge outlets to ensure 100% compliant wastewater discharge. In 2023, the COD emissions totaled 1,443 tons.

3.5.2 Exhaust Gas Management

We are actively taking measures to mitigate the environmental impact of exhaust gas emissions at TCL CSOT. This includes process improvements to reduce emissions during production processes. We conduct regular inspections and maintenance of our exhaust gas emission treatment facilities and equipment to ensure they are in good operational condition. Additionally, we have developed emergency response plans for exhaust gas emission leaks and conduct regular emergency drills to prepare for unforeseen circumst ances. In 2023, the air pollutant emissions were as follows: 77 tons of nitrogen oxides (NOx) and 352 tons of volatile organic compounds (VOC).

Case 1 VOC Exhaust Gas Treatment

TCL CSOT has implemented a zeolite wheel + RTO process for air emission treatment. This approach not only ensures strict control over emission levels but also reduces energy consumption while maintaining compliance with emission concentration standards. Compared to traditional RTO processes, the zeolite wheel + RTO combination can save over 60% of natural gas consumption. Each RTO unit saves 300 cubic meters of gas per day, with an overall treatment efficiency reaching 96%, effectively removing harmful substances from the emissions.



Case 2 CVD Exhaust Gas Treatment

For CVD exhaust gas, we have adopted an innovative treatment process involving dust collection and a three-stage washing system, successfully introducing the new "three-stage serial distribution treatment" technology. This new process not only significantly enhances the efficiency of exhaust gas treatment but also markedly reduces the concentration of fluoride emissions. At TCL CSOT's Shenzhen base, the treated exhaust gas fluoride emission concentration has been reduced to below 2.5 mg/m^3, well below the local standard limit of 9 mg/m^3.



3.5.3 Waste Management

TCL CSOT strictly complies with national waste management laws and regulations, and has established corresponding disposal measures for different types of waste. The solid waste generated at each site is classified into general waste and hazardous waste, with the disposal methods as follows:

General Waste Disposal

For general waste, we classify it by type for recycling and disposal.

Discarded Packaging Materials	• Maximizing recycling; for packaging materials that cannot be recycled, categorized into cardboard, plastics, and EPS, then transfering to qualified third parties for centralized disposal
Discarded Electronic Products and Non-Recyclable Industrial Waste	• Transfering to qualified third-party recycling companies for disposal
Household Waste	• Renting sanitation bins from municipal sanitation agencies for storage and having them collected and disposed of on a scheduled basis
Kitchen Waste	• Handled by the cafeteria contractor for recycling, transport, and disposal

Hazardous Waste Disposal

Regarding hazardous waste such as waste liquids, oils, hazardous chemicals, and empty containers, we have established and continuously update a *Hazardous Waste Inventory*. We implement a hierarchical responsibility system for hazardous waste management based on the hazard categories and control requirements of the waste materials. We standardize the disposal process for hazardous waste. By 2023, we have achieved the goal of 100% compliant handling of hazardous waste.

Safe Storage	• Establishing a hazardous waste warehouse specifically for storing hazardous waste, and assigning dedicated personnel to manage the entry and exit of hazardous waste
Compliant Disposal	• Timely implementing the collection, storage, and transfer of hazardous waste, and signing waste disposal contracts with qualified third parties to ensure proper handling of all hazardous waste

Waste Reduction Management

TCL CSOT sets annual waste reduction targets and unit product emission targets as key ESG performance indicators, which are included in the annual assessment of department heads.

In 2023, TCL CSOT's display panel production bases achieved a waste recycling rate of **96.7%**

Annual Waste Reduction Target

Annual Compliance in Solid Waste Disposal	Annual Reduction of Hazardous Waste Per Single Panel Production	Reduction of General Waste Per Unit of Production Capacity
100%	1% (By 2025)	0.5% (By 2025)

Waste Disposal Overview 2023

Total Amount of Solid Waste: **8,262,169 tons**

Total Amount of General Solid Waste: **7,375,248 tons**

Total Amount of Hazardous Solid Waste: **886,921 tons**

Total Amount of Solid Waste Recycled: **132,801 tons**

TCL CSOT has established internal control standards for waste emissions, setting annual environmental KPIs for each unit and conducting monthly assessments to ensure compliance with waste emission regulations. Additionally, we employ multiple measures to reduce waste generation, increase recycling of waste, actively promote the construction of a zero waste group, and build a more green, circular, and sustainable production model.

Case 1 Stripper Recovery (SRS System)

TCL CSOT has pioneered the adoption of an advanced SRS (Stripper Recovery System) for stripping liquid recovery. This system integrates functions such as dehydration, distillation, concentration management, storage, supply, waste liquid treatment and monitoring, and fire safety, achieving fully automated, efficient, stable, energy-saving, and safe operation.

Taking Wuhan CSOT as an example, the implementation of the SRS system at Wuhan CSOT has achieved a stripping liquid waste recovery rate of over 90%, reducing hazardous waste emissions by more than 16,000 tons per year.



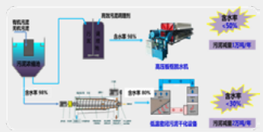
Case 2 Copper Etching Solution Recovery

TCL CSOT's Shenzhen base, in collaboration with overseas organizations, has jointly developed and successfully promoted a pioneering domestic technology for recycling low-concentration copper etching waste solution. Through extraction, counter-extraction, and electrolytic refining, copper contaminants from the etching waste solution are converted into valuable copper tubes. The copper recovery rate exceeds 95%, with an annual recovery of over 229 tons of refined copper metal and a reduction of approximately 4,416 tons per year in copper-containing sludge.



Case 3 Sludge Reduction and Recovery

TCL CSOT collaborates with third-party verification agencies and government regulatory units to conduct technical assessments, exploring optimized management solutions for hazardous waste. This includes refining control over copper-containing inorganic sludge, organic sludge, and waste glass specifications, classifying them as general industrial waste and promoting their recycling as resource waste, such as in the production of building materials and fertilizers. This initiative aims to annually reduce hazardous waste by 26,300 tons. Utilizing efficient conditioning and high-pressure plate frame dehydration technologies, we achieve an annual reduction in sludge volume of approximately 30,000 tons.

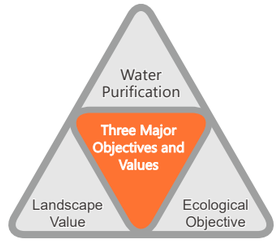


3.6 Biodiversity

We believe that protecting biodiversity is key to maintaining ecological balance on Earth. We are committed to integrating eco-friendly principles into our business to reduce habitat destruction. Through the construction of ecological wetland parks, we aim to achieve sewage treatment functionality while also preserving ecological balance and biodiversity in the area.

Artificial Wetlands

TCL CSOT's Shenzhen base has actively responded to environmental calls by investing over RMB 60 million in Guangming District, Shenzhen, to create an artificial wetland covering an area of 45,000 square meters. This initiative not only achieves advanced wastewater treatment and resource utilization but also plays a proactive role in ecological conservation, environmental education, and recreational activities. The wetland's effluent meets Class IV surface water standards, effectively reducing pollution loads in the Maozhou River, improving water quality, and significantly reducing environmental pollution. Additionally, treated wastewater is integrated into the municipal water reuse system, achieving the regeneration and reuse of water resources.



The artificial wetland has enhanced the ecological environment around it through protection and restoration efforts, beautifying the urban landscape. The artificial wetland provides citizens with improved leisure spaces and serves an educational function, allowing visitors to appreciate natural beauty while learning about wetlands. This enhances awareness of wetland conservation and environmental protection.







4

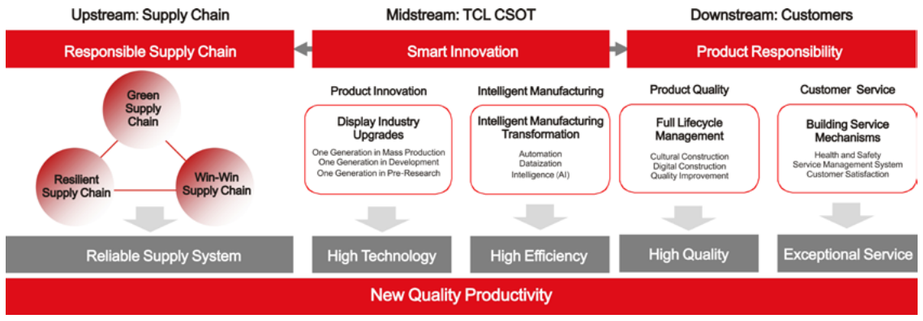
Products and Value Chain

——Technological Empowerment, Unleashing the "Star" Quality Productivity

Technological innovation is key to TCL CSOT's development of new productive forces and achievement of high-quality development. We are committed to leading the display industry in innovation and upgrading through intensive investment in research and development of product and technology. We actively integrate AI technology to continuously enhance intelligent manufacturing, enabling efficient production. By maintaining strict quality control and providing exceptional customer service, we offer reliable products. Additionally, by incorporating sustainable concepts into the supply chain, we build a responsible supply chain system and achieve long-term mutual benefits with our ecological partners through scientific management and collaborative research and development.

This Chapter

- Smart Innovation 42
- Product Responsibility 49
- Responsible Supply Chain 55



Highlights

3	Panel Production Lines Reaching the National Intelligent Manufacturing Capability Maturity Level IV
9.3%	Annual R&D Investment as a Percentage of Revenue
62,694	Patent Applications Filed
100%	Annual Customer Complaint Resolution Rate
100%	Coverage Rate of New Suppliers Passing Environmental and Social Responsibility Audits

4.1 Smart Innovation

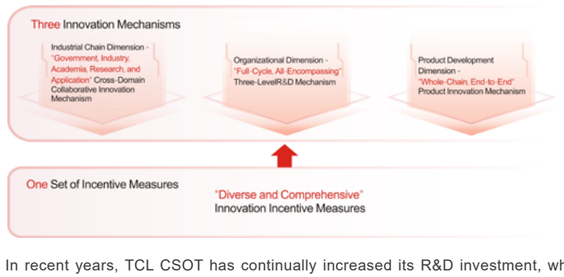
TCL CSOT drives development through innovation, with continuous high-intensity R&D investment and technological exploration to accelerate the transformation of scientific and technological achievements and promote the formulation of professional standards both domestically and internationally. By leveraging technological innovation, we aim to drive high-quality development in the display industry. Meanwhile, we uphold the concept of high-level intelligent manufacturing, achieving efficient production and accelerating the formation of new production capabilities, contributing to the construction of a "technologically strong country" and a "quality strong country".

4.1.1 Innovation and R&D

TCL CSOT adheres to high-intensity R&D investment, continuously enhancing core innovation capabilities and conducting frontier technology exploration. We are committed to building a technology innovation management system that ensures the Company's sustained leadership in the future, accelerating the transformation of scientific and technological achievements, and becoming a powerful engine driving the Company's continued leadership.

Innovation Mechanism

TCL CSOT has established an innovation mechanism from three dimensions: from the industrial chain dimension, we have set up a cross-domain collaborative innovation mechanism involving "Government, Industry, Academia, Research, and Application"; from the organizational dimension, we have established a "Full-Cycle, All-Encompassing" three-level R&D mechanism; from the product development dimension, we have set up a "Whole-Chain, End-to-End" product innovation mechanism. Additionally, we have implemented an open and inclusive "Diverse and Comprehensive" innovation incentive system to encourage innovation among all employees and ensure the continuous output of innovative achievements.



Innovation Investment

Accumulated R&D Investment Over the Past Three Years

RMB **18.39** billion

As a Percentage of Revenue

8.8%

In recent years, TCL CSOT has continually increased its R&D investment, which is the foundation of our technological innovation and product upgrades, as well as a demonstration of our confidence and determination for future development.

R&D Investment

2021	RMB 5.174 billion
2022	RMB 6.506 billion
2023	RMB 6.711 billion

TCL CSOT has established R&D departments in multiple locations, including Shenzhen, Guangzhou, Wuhan, and Suzhou, creating an advantage in the scale of global R&D talent.

Talent Investment Overview

R&D Talent	As a Percentage of Total Workforce
4,619	**16.2**%

- **1** Head of the Expert Group for the National "14th Five-Year Plan" Key R&D Program; Leader for the "Key New Materials R&D and Application" Major Project in the New Display Direction
- **7** Local Leading Talents
- **49** Foreign Experts

Innovation Achievements

National Major Science and Technology Projects

- **15 projects** Undertaking / Participating in
- **3 projects** Leading

Standards Formulation

- **179** Domestic and International Technical Standards
- **3** International Standards
- **35** National Standards

Patent Applications

- **62,694** Number of Patent Applications
- **23,399** Number of Global Patents Granted
- **97**% Proportion of Invention Patents
- **11** China Patent Excellence Awards
- A Knowledge Property Protection System Centered on "Comprehensive Intellectual Property Protection Mechanisms" and "Patent Full Lifecycle Protection and Application"

Accumulated by 2023

Case 1 | National Printing and Flexible Display Innovation Center

The center is the only national-level manufacturing innovation center in China's display industry, which brings together the highest level of industry foundational research capabilities nationwide, collaborates with industrial chain resources to tackle key common technologies, and jointly builds a new ecosystem.



Case 2 | National New Display Technology Innovation Center

The center is the only national-level technology innovation center in China's new display industry. TCL CSOT, in collaboration with leading display companies such as Tianma Microelectronics Co., Ltd. and Visionox Technology Inc., as well as over 30 universities and research institutions including Tsinghua University and Peking University, encompasses more than 120 innovation entities. The center is dedicated to addressing the industry's "bottleneck" issues.



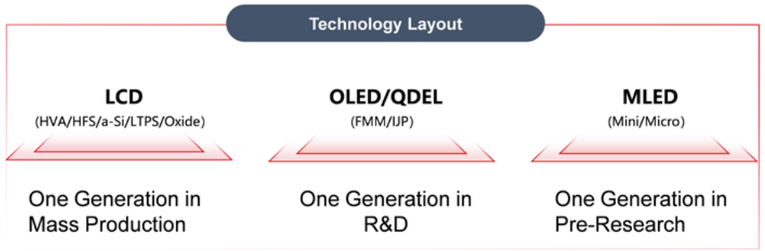
Case 3 | Enhancing Innovation Capabilities Through AI tools

In 2023, TCL CSOT launched the world's first AI model, X-Intelligence, for the semiconductor display industry. By integrating and deeply understanding vast amounts of knowledge and technical terms in the semiconductor display field, X-Intelligence simulates the work of industry experts in scenarios such as issue analysis, product development, and new employee training, which not only improves R&D efficiency but also contributes to the digital transformation and intelligent upgrading of the industrial chain.



4.1.2 Product Innovation

TCL CSOT adheres to innovation-driven development and covers a full range of technologies. By following the philosophy of "One Generation in Mass Production, One Generation in R&D, and One Generation in Pre-Research", we drive continuous breakthroughs in display technology and lead the transformation and upgrading of the display industry.



One Generation in Mass Production

With PACE (Picture Quality Enhancement, Appearance Innovation, Convenient Connectivity, Healthy Ecosystem) as the technology strategy, focusing on user needs, innovation and upgrades are centered around key directions such as high picture quality, high energy efficiency, and high-end features across product technologies like HVA, HFS, LTPS, and Oxide.

Case 1 Enhancings Appearance and Function with HFS, TCL CSOT Provides Screen for Lenovo XiaoXin 25 Daily High Refresh Rate Monitor

Lenovo Xiaoxin 25 Daily High Refresh Rate Monitor incorporates TCL CSOT's self-developed HFS and hardware low-blue-light technologies, which reduces the harmful blue light proportion in LED backlighting, fundamentally addressing eye protection issues. At present, the product has obtained TÜV Eye Protection, Eye Comfort and Eyesafe 2.0 Eye Protection Certifications.



One Generation in R&D

In the field of printed OLED, TCL CSOT has been dedicated for 11 years, breaking foreign technology monopolies and achieving autonomous control over key technologies. The number of usable invention patents ranks first globally, and the technology maturity has reached mass production levels. Small-batch production is expected to commence in Wuhan in 2024.

Case 2 The 65" 8K Flexible Printed Foldable OLED TV Won the 2023 SID People's Choice Awards

This product is the largest, highest-resolution, and highest-refresh-rate flexible OLED foldable screen developed based on printed OLED technology. It overcomes the technical challenges of large-size flexible display peeling, achieving ultra-strong folding capabilities with a bending radius of less than 25 mm and a bending lifespan of up to 100,000 times. It allows the TV to be easily stored, blending technology, texture, and minimalism into home entertainment and smart home environments. The product explores new positioning for future home displays and embodies a cutting-edge future trend.



One Generation in Pre-Research

TCL CSOT has made continuous breakthroughs in MLED technology, developing ultra-high brightness and high-resolution Micro LED display technology samples based on IGZO and LTPS processes. Notable products include 7.1" P0.4 Flexible Micro-LED Display, 1.37" 353PPI LTPS Micro-LED Smartwatch, First 4" P0.27 Glass-Based Micro-LED, 8" P0.5 Transparent Micro-LED, 6.24" P0.2 Micro-LED Automotive Display, 18.8" P0.4 Seamless Micro-LED MNT.

Case 3 The World's Largest 10.25" Triple-Panel Micro LED PHUD for Automotive Applications

The TCL CSOT 10.25" Micro LED automotive PHUD screen supports an ultra-high module brightness of 20,000 nits. It features a Tr > 70% high-transmittance windshield that enhances display effectiveness and meets the brightness requirements for safe driving, providing clear and readable screen information. Additionally, the screen is equipped with a special optical design structure with a large FOV, concentrating most of the light within a vertical viewing angle of ±5° and a horizontal viewing angle of ±30°. This significantly improves light efficiency and meets the special brightness requirements for PHUD, maximizing information display in projection scenarios.



Achievements and Honors

Exhibition	Award Category	Product Category
SID	People's Choice Awards-Best OLED Technology	The World's First 65" 8K Flexible Printed Foldable OLED TV
ICDT	Annual Best Display Product Award	The World's First High Screen-to-Body Ratio Ultra-Lightweight Flexible OLED Mid-Size Screen
		2K WQHD LTPS OLED Narrow Bezel Mid-Size Screen (K60Pro)
		The World's First Micro-Prism (MLP) Technology Foldable Screen
AWE	Annual Best Innovative Display Component Award	27" QHD 165Hz Glass-Based Mini LED Backlit Monitor
	AWE Gold Award	The World's First 49" LCD Variable Curvature Monitor
	AWE Core Award	The World's First Micro-Prism (MLP) Technology Foldable Screen
		The World's First 13.3" AM-mini Laptop Screen with 5,000+ Zones
DIC	Display Device Innovation Award	2K LTPO Ultra-Clear Flexible AMOLED Screen
	Display Application Innovation Award	150"MLCD
		The World's First 57.1" DHUD 240Hz R1000 Gaming Monitor
		The World's First Ultra-Portable Keyboard-Style Notebook
		The Industry's First OLED PLP Ultra-Narrow Bezel Watch
		10.95" Health-Care Eye Protection Adaptive Solution

A Part of the Award-Winning Products at Exhibitions in 2023

4.1.3 Intelligent Manufacturing

Strategy

TCL CSOT, leveraging its capabilities in advanced and intelligent manufacturing, provides strong support for efficient production and leads industry transformation and progress. The Company has developed a comprehensive production, equipment, and quality management platform, integrating cutting-edge technologies such as cloud computing, big data, IoT, and AI and fully applying to intelligent manufacturing, achieving a near "unmanned workshop" status.

Following a three-step strategy of "Automation, Dataization, and Intelligence" and focusing on three major business lines: "Production, Equipment, and Yield", the Company has built an integrated management platform to achieve its digital transformation strategic goal of "Achieving Global Leadership Through Intelligent Manufacturing".

Achieving Global Leadership Through Intelligent Manufacturing

4IR Transformation Strategic Pathway	Automation Automatic Control of Production/Equipment Real-Time Manufacturing Data Collection	Dataization Big-Data-Driven Intelligent Analysis, Decision-Making, and Autonomous Execution	Intelligence AI-Based Self-Perception, Self-Adaptation, and Self-Learning, Intelligent Prediction and Collaboration
Production Management Line	• MES • MCS • AGV • API	• Automatic Line Change • Material Coordination AGS • Exception Management	• Intelligent Scheduling RTS • Automatic Defect Classification (ADC) • Smart Experimentation System
Equipment Management Line	• RMS • OEE • Internet of Things (IoT)	• Change Digital Model ECPM • Automatic Reconfiguration • Fault Detection and Classification System FDC	• Health Self-Diagnosis System • Predictive Maintenance EHM • Automatic Parameter Tuning R2R • 5G Applications/Smart Inspection, AR
Yield Management Line	• EDA • SPC	• Big Data Analysis EY • Yield Analysis YMS • Product Issue Management	• Multifactor Analysis (MFA) • Virtual Measurement (VM) • Yield Prediction • Image AI Applications

Production Management Platform

The platform uses AI algorithms to optimize production planning, achieving visual management and automated dispatching for the entire production schedule, with an overall automated dispatch rate reaching 95%. The platform mainly consists of the following three modules.

Intelligent Real-Time Scheduling

- Based on rule-learning superheuristic algorithms, combined with production constraints, this module generates the optimal detailed production plan, which effectively utilizes equipment capacity, shortens production lead times, and achieves efficient delivery. Real-time production visualization improves labor efficiency by 30%, reduces lead times by 10%, and enhances line change efficiency by 16.7%

Product Line Opening Automation

- Based on the TCL Technology's self-developed Poros digital platform, this module uses a process engine and process models to automate product line opening, which shortens the line opening time, increases capacity, and saves 88% of manual work steps

AI Industrial Vision Inspection System

- Based on deep learning, the big data application system automatically detects, classifies, and analyzes defects in the panel production process. This system has increased defect identification accuracy from 85% to 95%, improved per-carton inspection efficiency by 4 times, and enhanced manpower efficiency by 500%

Equipment Management Platform

The platform enables full-process online management of equipment, including import, inspection, spare parts management, repairs, construction management, maintenance management, and decommissioning, integrating equipment with production execution and reducing risks associated with equipment abnormalities.

Engineering Change Point Management System

- The system automates process execution and autonomously controls changes to create a closed-loop management system, achieving "0" personnel involvement. This has reduced the number of quality exceptions from 33 cases per month to 6 cases/month

Equipment Health System

- The system performs full-dimensional and full-cycle collaborative management of equipment to ensure stable, efficient, and safe operation. The average equipment recovery time (Mean Time To Recovery, MTTR) has been reduced by 0.55 hours per instance, and inventory at the production line edge has been reduced by 90%

Fault Detection and Classification System

- High-frequency collection of real-time production data from equipment allows for real-time monitoring of equipment health and issuing of alerts, reducing yield losses by over RMB 20 million per year and saving 45,625 hours/year of labor for manual inspections

Chemical Vapor Deposition Chamber Self-Cleaning Status Detection System

- By employing deep neural networks and deep residual networks, the system accurately controls the ventilation time for NF_3 gas, reducing NF_3 usage by over 14,000 kilograms/year

Exposure Equipment Management Module

- By using digital twin technology to simulate on-site equipment on the management platform, comprehensive control of the production process is achieved, stabilizing and enhancing the capacity of bottleneck equipment

Quality Management Platform

By implementing differentiated management across the entire process of yield planning, analysis, monitoring, and improvement, the platform establishes model-based analysis and connects the problem-experience-knowledge conversion chain, **which has improved data processing efficiency by 75.32% and yield analysis efficiency by 8 times.**

Efficient Yield System

- The system integrates key yield business data for multi-dimensional analysis and traceability, quickly locating process and equipment anomalies, which enhances single-instance efficiency by over 87% and reduces yield loss by 40%

Multi-Factor Analysis System

- By using big data multivariate statistical techniques and algorithms, the system intelligently analyzes process parameter variations, quickly identifies abnormal factors, and improves analysis efficiency by over 90%

Case | TCL CSOT's "Quality Inspection Master" Tianshu AI Made its Debut on CCTV's "Smart Manufacturing in China"

The large-scale industrial documentary "Smart Manufacturing in China", jointly produced by CCTV-2 and the The Ministry of Industry and Information Technology of the People's Republic of China, features TCL CSOT's smart factory. It highlights TCL CSOT's advanced intelligent system, which replaces manual inspections with AI detection.

One of the biggest challenges in manufacturing LCD panels is dust. Even a single micron-sized particle can affect the brightness, contrast, and color accuracy of the display. Daily checks for these defects involve nearly 600,000 to 700,000 images. Industrial cameras only detect defects, and identifying the type of defect still relies on human eyes. Inspecting defects not only tests visual acuity but also experience. Quality inspectors must identify over 130 types of defects and decide within two seconds whether to repair or discard them. Exceptional inspectors are rare. To improve the precision and efficiency of defect identification, TCL CSOT's intelligent manufacturing R&D team developed the "Tianshu" AI system, which can analyze a photo in just 400 milliseconds. By incorporating the experience of quality inspectors, the system optimizes its algorithm model, achieving an accuracy rate of up to 90%.



Certifications and Awards

- CSOT T6, T7, T10 (2023) have received the National Intelligent Manufacturing Capability Maturity Level 4 Certification
- CSOT T1, T2 have received the Shenzhen Municipal-Level National Intelligent Manufacturing Capability Maturity Level 4 Certification
- Suzhou M10 Factory has obtained the National Intelligent Manufacturing Capability Maturity Level 3 Certification (2023)
- TCL CSOT Data Asset Management Platform was honored as the "2023 IDC China Future Digital Industrial Leader"





Background

The National Intelligent Manufacturing Capability Maturity Model (CMMM) is introduced by the China Electronics Standardization Institute, which is a maturity assessment model used for improving and enhancing the intelligent manufacturing process. The CMMM serves as a comprehensive framework and tool for evaluating a company's intelligent manufacturing capabilities.

The CMMM establishes five maturity levels, focusing on four crucial aspects of implementing intelligent manufacturing. By defining detailed evaluation levels for each area, it assesses the current overall level of intelligent manufacturing development, helps identify shortcomings and deficiencies in the development process, and determines the direction for improving intelligent manufacturing capabilities.

As of June 2024, there are 57 companies nationwide that have passed the National Intelligent Manufacturing Capability Maturity Level 4 Certification, accounting for 7.5% of the companies that have received certification.

L5 Leading Level	The enterprise should continue to drive business optimization and innovation based on the model, for realizing the synergy of the industry chain and deriving new **manufacturing models and business models**
L4 Optimization Level	The enterprise should conduct data mining of customers, resources and manufacturing, in order to form a certain knowledge and models, which can help to achieve **accurate prediction and optimization of core business**
L3 Integration Level	The enterprise should **conduct integration of equipment and systems** to achieve data sharing between businesses
L2 Specification Level	The enterprise should adopt **automation technology and information technology** to transform and standardize core equipment and services, which can help to share the data of a single service
L1 Planning Level	The enterprise should start planning the basis and conditions for implementing intelligent manufacturing, as well as **manage its core business** (design, production, logisitics, sales and service) **in a streamlined manner**

4.2 Product Responsibility

TCL CSOT is customer satisfaction-oriented, striving to meet the global demands of our clients with high-quality products and excellent services. We have established a rigorous quality management system that meticulously controls product quality throughout the entire process, ensuring every product meets high standards. Additionally, we are committed to providing exceptional customer service, earning customer trust with reliable, safe, and superior products.

4.2.1 Product Quality

Under the guidance of TCL CSOT's quality culture of "Full Participation in Quality, Doing It Right the First Time", we have established a comprehensive quality management system that covers the entire process and lifecycle. By implementing multi-dimensional incentive and assessment mechanisms, we fully leverage the initiative of all employees, contributing to continuous improvement in quality management and product quality.

Quality Lifecycle Management

In TCL CSOT's integrated product development management practices, we utilize digital technologies to effectively manage quality data throughout the entire product lifecycle—from product inception to retirement—and across all stages of the product process, including supply, production, and after-sales service. This comprehensive data encompasses elements from product development, material procurement, production, and after-sales support.

We extend the end-to-end management concept from internal operations to suppliers' procurement and production, and downward to customers' production and sales. By collaborating with upstream and downstream partners, we build a digital intelligent collaboration platform that facilitates the transfer and sharing of quality data between suppliers and customers, enhancing the quality analysis dimension and reduces risks related to material supply and product delivery.

Quality Management System

TCL CSOT adheres to a "Zero Defect" quality philosophy. Through quality management innovations driven by "Strategy-Leading, Innovation-Driven, Digital and Intelligence Empowerment, Industrial Chain Collaboration, and Value Co-Creation", we have developed a "3 Excellence 3 Leadership" collaborative quality management model based on the broad semiconductor field. We have established 2,842 quality management systems across 15 types of quality management processes, implementing comprehensive and whole-process quality control.

Customer-Oriented Process

- Customer-centric, thoroughly identifying processes directly related to customers and establishing an "From Customer Needs to Customer Satisfaction Management" end-to-end quality management system, covering customer demand management, new product development management, production manufacturing management, and customer satisfaction management. This system is designed to understand and anticipate current and future customer needs, and to provide solutions and create value for customers.

Business Support Process

- Through the establishment of systems in 9 business support processes—including procurement management, supplier management, production equipment management, quality management, exception management, human resources management, warehouse management, green product management, and document management—responding to and supporting the value realization of customer-centric processes.

Management Process

- Through quality system management and continuous improvement, based on a deep understanding of customer needs, analyzing the key value chains and activities involved in serving customers. By adopting the customer's perspective, building and refining process systems to drive the continuous optimization of quality management processes.

As of 2023, all of TCL CSOT's display panel production bases have received the

ISO 9001

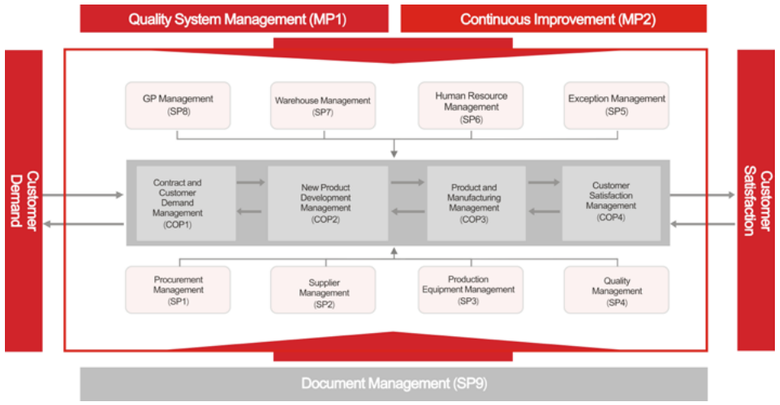
Certification

Wuhan t3 and t5 Factories have received the

IATF 16949

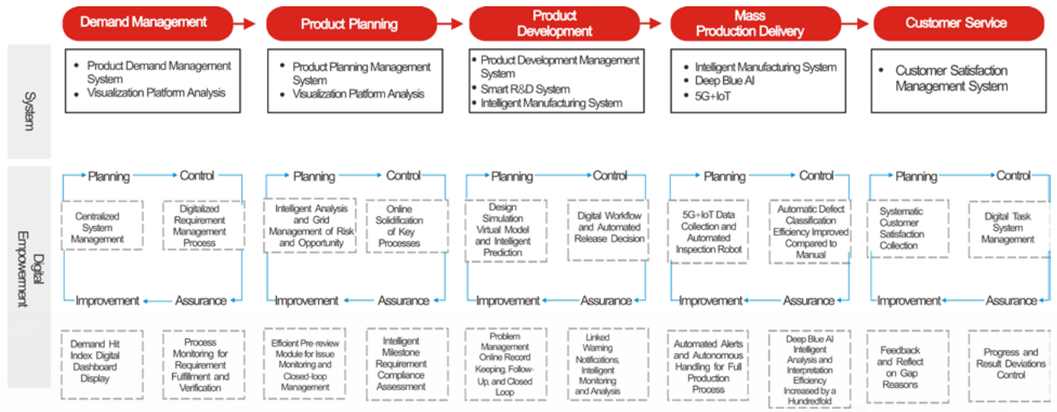
Certification

Quality Digitalization Construction



Leveraging an advanced quality management platform, TCL CSOT actively promotes the application of digital intelligence technology across the entire business flow, including demand management, product planning, product development, lifecycle management, and customer service. By focusing on the four key areas of quality planning, quality control, quality assurance, and quality improvement, TCL CSOT deepens intelligent transformation throughout the entire process, resulting in the visualization and transparency of the quality formation process. Utilizing a knowledge management platform to solidify historical experiences and drive continuous improvement, TCL CSOT achieves a closed-loop digitalized quality management system.

In our digitalization practices, we fully utilize tools such as the Internet of Things (IoT), big data, cloud computing, and artificial intelligence (AI), which enables comprehensive data collection and processing across end-to-end processes, from product demand and development to smart factory production, logistics, and after-sales service. We have built a quality data visualization and transparency system that spans the entire value chain.



Quality Culture Construction

In 2023, TCL CSOT conducted quality training sessions of

111 sessions

Amounting to

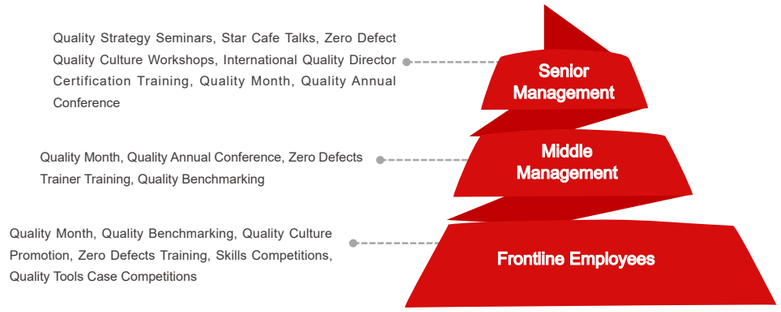
254 hours

With training coverage reaching

4,279 participants

TCL CSOT's quality culture is guided by corporate culture and quality strategy, integrating the zero-defect philosophy of "Doing the Right Things Right the First Time" to form a quality culture of "Full Participation in Quality, Doing It Right the First Time".

We have incorporated quality culture development into the Company's strategy, establishing a comprehensive three-tier quality culture system: "Senior Management Leadership - Middle Management Promotion - Frontline Employees Implementation." This approach ensures that quality culture is integrated into business operations from top to bottom and becomes part of every employee's DNA, achieving a transition from cultural recognition to behavioral consciousness.



To promote a deep understanding and implementation of quality culture across all employees, we have developed a clear roadmap for quality culture development. This includes cultural promotion, educational guidance, regulatory mechanisms, cultural empowerment, and quality-themed activities during Quality Month. Through a top-down approach, we ensure that all employees are involved and actively practice the quality culture.

Case 1 Quality Training

Quality is not only the core competitive advantage of a product but also the key to winning market and customer trust. We regularly provide comprehensive quality training for our employees to ensure they possess the professional knowledge and skills needed to meet the ever-changing market demands.



Case 2 Quality Month Activities

TCL CSOT conducts Quality Month activities, including quality knowledge training and quality-themed comics, to involve all employees in quality improvement efforts and enhance their awareness of quality.



Quality Improvement

"Doing It Right the First Time, Zero Defects", TCL CSOT continuously explores new methods for quality enhancement. We create a conducive environment and use motivational measures to encourage all employees to actively participate in various quality improvement activities. Additionally, we collaborate with customers on specialized quality improvement initiatives, striving to drive quality improvement throughout the entire product lifecycle.

Business Process Improvement

- IPD Transformation
- ISC Transformation

Quality Improvement and Enhancement

- Six Sigma
- QCC

Company-Level Improvement

- Strategic Projects
- Mountain-Top Projects
- Key Projects
- Important Projects



Proposal Improvement

- Mining for Gold
- Cost Reduction Projects
- Quality Improvement
- Quarterly Evaluation

Case 1 **TCL CSOT Launched a Quality Improvement Cooperation Project in Collaboration with Its Customers**

TCL CSOT has partnered with customers on a quality improvement cooperation project. The goal of this project is to enhance product quality by optimizing the manufacturing process to meet higher market and customer demands.

The project focuses on improving product performance both at the client-side and market-side by thoroughly analyzing defects, identifying the root causes of problems, and advancing improvement activities. This effort aims to reduce the client-side defect rate (VLRR) by 5% and the market-side defect rate (FRR) by 31%, thereby decreasing resource wastage and environmental impact caused by product quality issues.



Case 2 **Leading with Quality, Building a New Industry Standard for Excellence**

In 2023, TCL CSOT and Guangzhou Shiyuan Electronic Technology Company Limited ("CVTE") established a joint analysis laboratory to research advanced failure analysis methods. Through technological innovation and quality prevention, the lab aims to guide product design and enhance product quality. Moving forward, both parties will continue to deepen their collaboration, explore more cutting-edge technologies, and contribute to the transformation and high-quality development of China's manufacturing industry.



4.2.2 Customer Service

TCL CSOT adheres to the principle of “Customer-Centric, Value-Oriented”, establishing a comprehensive customer service system and communication mechanism. We strive to understand customer needs, optimize service quality, fulfill commitments, and create an exceptional service system that earns customers' trust.

Customer Health and Safety

TCL CSOT is committed to safeguarding user health and safety, ensuring that all products provided are safe and reliable. For returns due to product issues, we have established a product recall management procedure based on international standards. This procedure covers all products across TCL CSOT's bases. Customers can provide feedback through various online and offline channels, such as WeChat, email, phone, and meetings. The customer service department will promptly handle these issues in accordance with the procedural requirements.

Customers provide feedback on issues through various channels, including WeChat, email, phone, fax, and meetings → The Quality Department confirms product information, assigns responsibility, and determines whether the product meets the recall standards based on the product quality standards agreed upon with the customer → The Quality Department prepares the *RMA Report* → The RMA process completes the customer return or exchange procedure based on the report data

* RMA: Return Merchandise Authorization, *RMA Report*: Return Merchandise Authorization Data

Customer Service Management System

We have established a comprehensive customer service management system and developed documents such as the *Customer Complaint Management Standards* to clarify internal and external communication processes. We adhere to the "2485" response principle to provide timely, effective, and satisfactory service, maintaining the Company's reputation. Additionally, we have set up an electronic after-sales management platform, significantly improving after-sales service efficiency and providing an excellent service experience for our customers.

Customer Complaint Handling Rate in 2023

100%

Within 2 hours	Within 24 hours	Within 48 hours	Within 5 days
Rapid Response	Quick Response	Cause Analysis and Countermeasure Development	Implementation of Countermeasures and Effectiveness Verification

Customer Complaint Process

Basic Information Confirmation of Customer Complaint → Containment Measures → Defect Analysis → Root Cause Confirmation → Corrective and Preventive Actions → Effectiveness Verification → Parallel Deployment of Countermeasures → Customer Confirmation

Customer Satisfaction Management

To better understand customer needs and evaluations and continuously optimize our services, we conduct a customer satisfaction survey every six months. The survey covers two modules: customer service and product quality. We collect customer feedback through questionnaires, listen to their opinions, and analyze the survey results to determine improvement directions. We then develop and implement improvement plans until the issue is fully resolved, achieving a 100% closure rate.

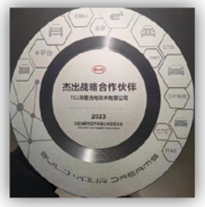
For key customers, we have set strategic goals for customer satisfaction:

Target Achievement Rate for Key Customers' Satisfaction in the First Tier for 2023	100%

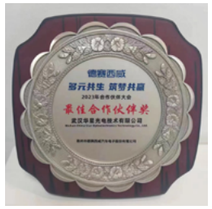
Honor and Recognition



Lenovo "Quality System Award"



BYD "Outstanding Strategic Partner Award"



Desay SV "Best Partner" Award



Changhong "Best Quality and Service Award"



Transsion Holdings "Most Valuable Partner Award"



Transsion Holdings "Technology Innovation Award"

4.3 Responsible Supply Chain

TCL CSOT is committed to building sustainability in supply chain environmental and social governance by implementing full lifecycle management of suppliers and conducting due diligence to ensure that the supply chain upholds baseline standards and responsibilities. We identify supplier-related risks from multiple dimensions and take measures to address external uncertainties, thereby strengthening supply chain resilience. Additionally, we enhance communication and collaboration with suppliers and upstream and downstream partners to build a harmonious ecosystem and promote the healthy advancement of the entire industry.

Strategy		Action
Green Supply Chain	Defining the Baseline and Implementing Green Responsibilities	◆ 75% of suppliers have signed the *Supplier Corporate Social Responsibility Statement* (*only including display panel production bases) ◆ 100% of target suppliers have undergone environmental and social responsibility assessments ◆ 100% of new suppliers have been selected using environmental and social responsibility standards
Resilient Supply Chain	BCP Risk Assessment and Strengthening Resilience	◆ Identifying environmental and social risks of suppliers and developing countermeasures
Win-Win Supply Chain	Supply Chain Empowerment and Win-Win Cooperation	◆ Reaching a strategic consensus with upstream partners based on the backlight business to jointly develop and improve product development success rates ◆ Assisting suppliers by shortening payment terms through advance payments, facilitating a swift repayment of RMB 20 million ◆ Hosting the "Display Without Boundaries, Chain Future" Global Supply Chain Conference to achieve technological co-creation and experience sharing

4.3.1 Green Supply Chain

TCL CSOT continuously optimizes its supply chain management system by developing the *CSOT Supplier Management Procedure* and *Qualified Supplier Management Standards* based on international standards, ensuring scientific and standardized supplier management. We implement the *CSOT Supplier Introduction Certification Process* and *CSOT Supplier Mass Production Audit Management Process* to rigorously select new suppliers and eliminate non-compliant suppliers, thereby reducing risk. We also require partners to strictly adhere to environmental and social responsibility laws, regulations, and international standards during the supply period, providing a solid institutional guarantee for establishing a green supply chain.

Governance

TCL CSOT has established a comprehensive ESG management framework for the supply chain, clarifying the functions at each level to achieve more efficient and professional division of labor and collaboration, ensuring that all management tasks are handled with "meticulous attention by dedicated personnel".

Decision-Making Level	• Formulating supply chain ESG management directions and strategies • Deciding business rules, supplier management, and category management
Implementation Level	• Establishing supply chain ESG processes and systems • Implementing supplier ESG surveys • Empowering and training suppliers • Implementing decisions made by the decision-making level
Secretary	• Coordinating and managing supply chain ESG affairs

Eight Major Red Lines for Supplier Management

× Violation of Business Ethics	× Violation of Laws and Regulations
× Collusion, Bid Rigging, and Fraudulent Bidding	× Unauthorized Changes
× Unilateral Breach of Contract	× Cutting Corners and Substituting Inferior Materials
× Major Safety or Quality Incidents	× Unauthorized Acquisition of Confidential or Secret Information, Breach of the *Confidentiality Agreement*

Supplier Lifecycle Management

TCL CSOT is committed to building a supply chain ecosystem that is harmonious with labor practices, health and safety, and environmentally friendly. All suppliers are required to sign the *Supplier Corporate Social Responsibility Statement*. Suppliers who violate "red lines" will face penalties according to the severity of the violation, including warnings, blacklisting, and termination of cooperation. We implement full lifecycle environmental and social responsibility management for suppliers, with specific measures as follows:

New Supplier Onboarding Management

- **Preliminary Review of Documents**
  - Considering suppliers' certification in environmental and social responsibility systems (ISO14001/ISO45001/QC080000, etc.)
  - Prioritizing suppliers with ISO certifications
- **New Supplier Onboarding Audit**
  - Supplier audits cover important environmental and social responsibility clauses (including labor and human rights)
  - For scores below 70, suppliers will not introduced
  - For scores between 70 and 84.9, suppliers will be conditionally introduced pending improvements
- **Agreement Signing**
  - Signing the *Safety and Environmental Protection Agreement, Declaration of Non-Use of Conflict Minerals, Declaration of Hazardous Substances, Supplier Corporate Social Responsibility Declaration* with suppliers

Qualified supplier management

- **Due Diligence**
  - Identifying and grading environmental and social responsibility risks of suppliers through standardized questionnaires
  - Suppliers with low risk are required to conduct self-assessment in accordance with the *Audit Guidelines*
- **Audit Management**
  - Classifying the risk levels according to the characteristics of the materials and suppliers' own management methods, formulating audit plans according to the risk levels, and conducting regular audits

Exit Management

- **Disqualification**
  - Participating in procurement activities that violate TCL CSOT's red lines of supplier management or other mismatches between the two parties will result in disqualification of suppliers

Responsible Mineral Sourcing

We will continuously improve our supply chain environmental and social responsibility practices according to international standards, set and implement management goals related to supply chain labor standards, and increase the coverage of supplier audits. Requirements such as prohibiting child labor, banning forced labor, opposing workplace discrimination, ensuring health and safety, and protecting the environment will be fully integrated into the supplier audit and management processes.

TCL CSOT has established the *Conflict Minerals Policy* to ensure that we do not procure or use minerals that may involve human rights issues or armed conflict risks. Each year, we use the *Conflict Minerals Reporting Template (CMRT)* and the *Extended Minerals Reporting Template (EMRT)* to survey our supply chain, which is the main mechanism for identifying suppliers involved with conflict minerals and assessing related risks. After collecting Smelter of Origin (SOR) data from suppliers, TCL CSOT uses the Responsible Minerals Initiative (RMI) Responsible Minerals Assurance Process (RMAP) to verify whether the SOR meets audit standards. Suppliers are required to improve projects that do not meet these standards.

TCL CSOT's Declaration of Non-Use of Conflict Minerals

- We commit that all products and their packaging delivered will not contain minerals sourced from high-risk areas identified by the Organisation for Economic Co-operation and Development (OECD) ("Conflict Minerals")
- We continuously enhance supply chain management to identify and trace the origin of raw materials, ensuring their legality and eliminating the use of "conflict minerals"
- We pledge to strictly adhere to customer requirements by accurately completing and responding to "conflict minerals" surveys and providing other relevant information, ensuring the truthfulness, correctness, and completeness of the information and materials provided

Key Indicators for Due Diligence

In TCL CSOT's Responsible Country of Origin Inquiry (RCOI) and Due Diligence (DD) efforts, we have identified the key indicators for our due diligence as follows:

Metal	Total SOR	Conformant	Active	Non-compliant	%Conformant
Tantalum	30	30	0	0	100%
Tin	58	58	0	0	100%
Tungsten	32	32	0	0	100%
Gold	87	87	0	0	100%
Cobalt	34	34	0	0	100%
Overall	241	241	0	0	100%

Other Key Statistics

Supplier CMRT Response Rate	Number of Suppliers with Non-Compliant/Inactive SORs
100%	0

4.3.2 Resilient Supply Chain

To ensure the stable and healthy operation of the supply chain, TCL CSOT identifies supply chain risks from multiple dimensions and takes corresponding measures. We have developed the *Supplier Business Risk Identification and Management Process* and the *CSOT Supplier Force Majeure Risk Management Process*. By strengthening external environment monitoring and early warning systems, we establish a supply chain risk management mechanism. We also build close cooperation with suppliers and partners to jointly address external uncertainties.

Governance

TCL CSOT has established two supply chain risk management organizations, responsible for decision-making on major risks, ensuring supply security, and providing rapid responses to emergencies.

- **Supply Security Task Force**: Responsible for developing, implementing, and monitoring measures for medium- to high-risk categories
- **Risk Emergency Response Team**: Responsible for risk identification, development and reporting of risk countermeasures, and risk closure management
  Quick reporting of progress on risk response according to the response mechanism

Supply Chain Risk Management

TCL CSOT has established a three-tier defense system to address supply risks, which involves managing supply risks through cross-organizational risk teams, enhancing risk management levels, and regularly reviewing and optimizing management processes.

Tier One	Tier Two		Tier Three
Risk Buffering	Risk Prevention		Risk Review
Business Line Management	Supply Security Team	Risk Emergency Response Team	Supply Security Task Force Secretary
Daily Operations	Bi-Weekly Meetings	As Needed + Daily	Risk Closure / Quarterly

We use various digital management systems, including third-party enterprise information query platforms, GP management systems, and supplier management systems, to monitor and assess environmental and social risks of suppliers. For identified risks, we develop response measures, report them to the Risk Emergency Response Team for decision-making, and track their implementation.

During the supplier onboarding process, we conduct strict social responsibility risk screening, utilizing authoritative third-party risk tools to comprehensively supervise suppliers' business qualifications, legal litigation records, compliance risks, and environmental violations.

In the supplier process management phase, we conduct annual CSR audits to manage environmental and social responsibility risks. The audits cover labor rights, health and safety, environmental issues, business ethics, and management systems.

New Suppliers Undergoing Environmental and Social Responsibility Audits		Suppliers Undergoing Annual CSR Audits	
77	100% Coverage Rate	85	100% Closure Rate for Identified Issues

4.3.3 Win-Win Supply Chain

We emphasize mutually beneficial collaboration in the supply chain through the "Five Collaboration Principles" of business consultation, cooperative consensus, capacity building, resource sharing, and risk sharing with our partners, ultimately aiming to achieve symbiosis, mutual benefit, and common development.

Supplier Communication and Collaboration

TCL CSOT has established diverse communication channels to build a relationship of mutual trust and assistance with suppliers.

Daily Business Collaboration	Systems such as Ariba, SUP, and the financial shared services platform facilitate information communication and management through their various functional modules
Comprehensive Business Collaboration	Senior management regularly engages in business and technical exchanges, audit guidance, special communications, and proactive supplier visits

Supplier Capacity Building

We focus on building supplier capabilities through systematic training and professional technical support, continuously promoting supplier improvement. In 2023, we conducted supplier training, providing guidance and training in areas such as environmental management, quality management, occupational health, and production safety, which further improved material yield rates, reduced production costs, accelerated new product development, and promoted quality co-development within the supply chain.

487 sessions	730 hours	632
Number of Supplier Trainings Conducted	Training Hours	Number of Suppliers Trained

Supplier Resource Sharing

To support the stable development of our partners in case of short-term financial difficulties, TCL CSOT helped suppliers swiftly receive payments by advancing payments and shortening payment terms, assisting them in quickly returning **RMB 20 million** and helping them overcome financial challenges.

Collaborative Innovation with Suppliers

TCL CSOT actively collaborates with supply chain partners in product design and development to enhance product delivery quality.

Case 1 Strategic Cooperation of Backlight Business

In 2023, TCL CSOT and upstream partners reached a strategic cooperation agreement based on long-term development strategies for the backlight business. The agreement involves early involvement in product design, joint research and development, mitigating potential risks, and increasing the success rate of product development.

Case 2 High-End Color Filter Research and Application

Jointly developing formulas and collaborating with suppliers for high-end color filters to overcome formula development challenges and enhance color filter competitiveness.

Driving Supplier Business Transformation

Driving core suppliers in consumer goods to undergo cross-domain business transformation, assisting in improving supplier profitability and strengthening collaborative engagement.

Win-Win Development of Industrial Chain

TCL CSOT holds an annual supplier conference to facilitate experience exchange and sharing of results with supply chain partners.

On December 7, 2023, TCL CSOT hosted the "Display Without Boundaries, Chain Future" Global Supply Chain Conference, bringing together 306 suppliers. We advocated for value co-creation and ecosystem development to build a green and sustainable global leading supply chain. We called on partners to co-create a zero-carbon system, achieve technological innovation and experience sharing, and establish long-term win-win relationships to build a better future together.



5

Employees and Community

——Coexistence and Harmony, Creating a Harmonious "Star" Ecosystem

TCL CSOT is committed to the development concept of harmony and coexistence and dedicated to the establishment of a corporate ecosystem characterized by a sense of responsibility and humanistic care. We create a safe, healthy and harmonious working environment for our employees while providing them with diversified growth opportunities and a broad development platform, so that every employee can find his or her own stage in the Company, and realize the common growth of the Company and its employees by creating a first-class talent system.

This Chapter

- Labor and Human Rights 62
- Occupational Health and Safety 66
- Employee Development and Care 71
- Community Engagement 77

Highlights

Silver	RBA External Audit and Certification
75 points	Annual Employee Satisfaction
13,800	Total Number of Occupational Health and Safety Training Sessions Conducted Throughout the Year
RMB 10.16 million	Total Investment in Training Throughout the Year
RMB 47.74 million	Interest-Free Loans Issued by Star Residence Program
66	Total Number of Public Welfare Activities Organized Throughout the Year

5.1 Labor and Human Rights

TCL CSOT places great importance on labor and human rights issues, firmly respecting and protecting the human rights and fundamental rights of employees. We strictly comply with national labor rights protection laws and regulations, and we reference the *United Nations Guiding Principles on Business and Human Rights* (*UNGPs*), the *International Labor Organization (ILO) Core Conventions*, and the Responsible Business Alliance (RBA) in formulating various labor and human rights policies. We are committed to creating an equal, fair, harmonious, and inclusive work environment for our employees.

	Recruitment and Hiring Stage	Employment Stage	Termination of Employment Stage
Fundamental Rights Protection	Zero Tolerance for Child Labor Equality and Voluntariness	Legal Employment Prohibition of Discrimination Humane Treatment Freedom of Association	Freedom of Choice in Employment
Harmonious and Inclusive Workplace		Diversity, Equality and Inclusion Listening to Employees' Voices	Exit Interview

5.1.1 Fundamental Rights Protection

TCL CSOT strictly adheres to employment standards and legal regulations in both the country and the locations of its operations. We have implemented policies such as the *CSOT Labor Management Handbook*, the *CSOT Female Employees' Labor Protection Management Regulations*, and the *CSOT Corporate Social Responsibility Crisis and Emergency Response Management Plan* to regulate employee and company behavior. Our aim is to create a work environment that is zero-tolerance for child labor, allows freedom of employment choice, ensures legal employment, prohibits discrimination and harassment, and supports freedom of association, all while focusing on a people-centered approach and effectively safeguarding the rights of all employees.

Theme	System
Prohibition of Child Labor	*CSOT Prohibition of Child Labor Management Regulations*
Freedom of Employment	*CSOT Prohibition of Forced Labor Management Regulations*
Legal Employment	*CSOT Work Hours, Rest and Leave Management Regulations*
	CSOT Employee Compensation Management System
Prohibition of Discrimination	*CSOT Prohibition of Discrimination Management Regulations*
Humane Treatment	*CSOT Humane Treatment Management Regulations*
Freedom of Association	*CSOT Freedom of Association Management Regulations*

Prohibition of Forced Labor and Zero Tolerance for Child Labor

TCL CSOT has a clear policy of zero tolerance for child labor. To enforce this, the Company strictly follows an age verification process for new hires. This process includes interviews, identity document checks, identity verification, and system validations to ensure that employees are of legal working age, thereby preventing the hiring of child labor. We classify the use of child labor as one of the ten red lines in our corporate social responsibility framework. If an incident of child labor occurs, we will immediately activate the Level 1 response plan of the *CSOT Corporate Social Responsibility Crisis and Emergency Response Management*, taking prompt corrective actions and remedial measures to minimize the impact on all stakeholders.

We fully respect and protect employees' rights to personal freedom and firmly oppose all forms of forced labor. We strictly prohibit the retention of employees' identity documents and prevent any acts that use violence, threats, or illegal restrictions to limit employees' freedom or coerce them into labor.

In 2023 and previous years, TCL CSOT has maintained a zero record of child labor and forced labor **"Zero Record"**

CSR Crisis and Emergency Response Management - Level 1 Response for Child Labor Incidents

Informing Stakeholders	Ensuring the Physical and Mental Health and Safety of the Child Laborer	Assuming Corporate Responsibility
Forming an investigation and handling team, and reporting to clients	Terminating the employment of the child laborer and arrange for medical and psychological examinations at a hospital	Covering expenses such as wages, benefits, medical examinations, and travel costs
Reporting to local labor authorities and awaiting their review and confirmation	Escorting the child laborer home and handing them over to their guardian	Providing support for the child laborer to complete compulsory education and offering preferential hiring rights under the same conditions once they reach adulthood

Legal Employment

In recent years, TCL CSOT has continuously strengthened its compliance with labor practices by providing wages above the subsistence level (currently adhering to local minimum wage standards in mainland China), paying social insurance and housing fund contributions, and effectively safeguarding the rights and entitlements of every employee.

Labor Contract Signing Rate	Social Insurance Contribution Rate	Compliance with Subsistence Wage Standards
100%	100%	100%

We advocate and encourage employees to reasonably arrange their work and rest periods. We adhere to the statutory holiday regulations for the Spring Festival, Qingming Festival, Labor Day, Dragon Boat Festival, Mid-Autumn Festival, National Day, and New Year's Day. We ensure employees' rights to paid annual leave, medical leave, prenatal leave, miscarriage leave, maternity leave, paternity leave, breastfeeding leave, and parental leave. Additionally, we offer 100% paid sick leave, flexible leave, and overseas leave as part of our benefits package.

Non-Discrimination and Humane Treatment

We advocate for fairness and justice in the workplace, providing equal employment opportunities and compensation and benefits, adhering to transparent recruitment processes, and following the principles of equitable distribution of labor and equal pay for equal work. Sexual harassment and discrimination are strictly prohibited at all company locations, and we have established corresponding handling procedures and remedial measures.

Reporting to headquarters and forming a special investigation team within 1 day → Closing the case within 5 working days → Providing professional EAP support → Reassigning position based on needs → Reviewing and revising policies → Implementing corrective actions and preventing recurrence

During the Reporting Period, TCL CSOT did not experience any incidents of discrimination or harassment in any form.

Freedom of Association

We fully respect employees' fundamental rights to freedom of association and collective bargaining. We have established the *Union Management System* and formed a union or employee representative organization. We hold regular employee representative meetings to actively listen to employees' voices and ensure that their demands and rights are responded to and protected in a timely and effective manner.



Freedom of Employment Choice

TCL CSOT strictly adheres to national laws and regulations and respects all rights related to employee resignation. Employees may terminate the labor relationship by giving three days' notice during the probation period or thirty days' notice after the probation period. We will promptly calculate and distribute the employee's wages and benefits to their salary account.

During the resignation period, employees will undergo interviews with the employer and the HR department. If there are any issues concerning their rights and interests, they can be promptly reported and addressed.

RBA Audit

To fully identify labor and human rights-related risks, we proactively accept external oversight. In 2023, TCL CSOT conducted human rights audits or impact assessments at all of its workplaces.

All display panel production facilities of TCL CSOT have undergone external audits by the Responsible Business Alliance (RBA) and have received the RBA VAP Silver Certification



5.1.2 Harmonious and Inclusive Workplace

Diversity, Equality and Inclusion

We promote workplace diversity, support the employment of individuals with disabilities, and respect differences in gender, age, identity, religion, region, and dietary preferences. We enhance the inclusivity of the work environment, care for women, individuals with disabilities, and minority groups, and provide facilities to meet the diverse needs of employees, thereby creating a harmonious and inclusive work environment.

Case 1 **Accessible and Disability-Friendly Facilities**

To better assist employees with disabilities in adapting to their work and living environments, we have established barrier-free access paths, accessible restrooms, and washrooms in our factories. Additionally, we have installed alarm and call systems in the dormitories to ensure the health and safety of employees with disabilities.

In 2023, Huizhou Huaxian had 25 employees with disabilities. Following our recognition by the Huizhou Disabled Persons' Federation in 2021, we were once again designated as a Demonstration Unit for Employing Disabled Persons in Huizhou in 2023.





Case 2 **Respecting Women's Strengths and Providing Support and Care**

We highly value the contributions of female employees and strive to support them in balancing work and life. We offer parental leave and benefits for International Women's Day. We have established nursing rooms for pregnant and postpartum employees and monitor the workload, working environment, and working hours of pregnant employees to ensure their physical and mental well-being during pregnancy and maternity.



Listening to Employees' Voices

TCL CSOT values communication with employees, respects their feelings, listens to their voices, and takes their suggestions seriously. By establishing communication platforms, organizing offline discussions, and forming unions and employee representative organizations, we promote the creation of a harmonious labor-management relationship together with our employees.

In 2023, all employees of TCL CSOT participated in an engagement survey, achieving an effective questionnaire response rate of **93%**

An overall satisfaction score of **75** points

Case 1 **Challenge T Forum Platform**

"Challenge T" serves as a one-stop communication platform for all employees of TCL CSOT to provide feedback and resolve issues. To ensure the quality of problem resolution, we have implemented the 135 processing mechanism: "Reply Within 1 Working Day, Feedback Provided Within 3 Working Days, and Issue Resolution Within 5 Working Days", which truly upholds our commitment to "Listening to Employees' Voices and Addressing Their Concerns".



In 2023, the Challenge T Platform Received Employee Feedback Submissions	Resolved Employee Feedback Submissions	Closure Rate
475	464	97.7%

Case 2 **Senior Management and Frontline Employees Communication Meetings**

The Senior Management and Frontline Employees Communication Meetings are one of the most important cultural activities at TCL CSOT. In these meetings, the senior management engages with employees through formats such as "Senior Management on the Frontline" and "Senior Management Face-to-Face Communication Sessions" to listen to frontline feedback and address employee concerns.

In 2023, We Held the Senior Management and Frontline Employees Communication Meetings **Over 50 sessions**



Case 3 **Employee Satisfaction Survey**

TCL CSOT places great importance on understanding employees' genuine thoughts and expectations regarding the Company's management and future development. We continuously conduct employee satisfaction surveys covering dimensions such as work environment, learning and development, compensation and recognition, communication and collaboration, organizational structure, and performance management. We actively analyze the root causes of issues and strive to implement improvement measures effectively.

5.2 Occupational Health and Safety

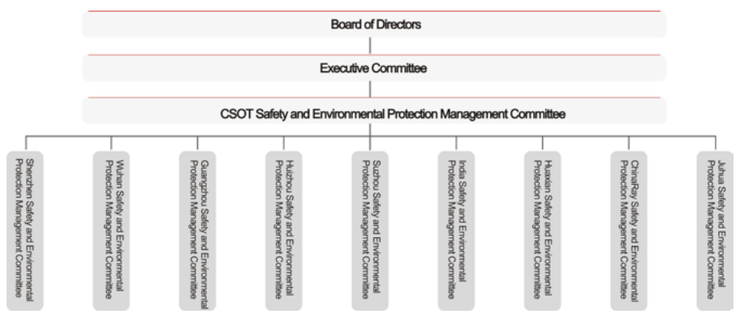
TCL CSOT consistently adheres to the principle of "people-oriented, safety first", continually improving employee health management mechanisms and safety production management systems. We set clear goals for occupational health and safety, actively identify potential risks, work diligently to prevent hazards, continuously optimize protective measures, steadily enhance employee awareness, and are committed to creating a safe and healthy work environment.

Main Measures

Organization, Strategy and Goals	◆ Establishing the Safety Management Committee ◆ Hazard Source Assessment and Identification	◆ Full Coverage of ISO 45001 Certification for All Production Bases ◆ EHS Goal Setting and Signing Responsibility Agreements
Safety Production Management	◆ Hazard Identification and Rectification ◆ Fire Drills	◆ Supervision iof Safety Production Protective Equipment ◆ Chemical Safety Management
Occupational Health Protection	◆ Intelligent Management of Occupational Health and Safety ◆ Occupational Disease Hazard Warning and Training	◆ Occupational Health Surveillance ◆ Chemical Safety Management

5.2.1 Organization, Strategy, and Goals

TCL CSOT has established the Safety Management Committee to oversee the Company's overall health and safety efforts. The Safety Management Committee is responsible for formulating and breaking down management policies and objectives, as well as supervising their implementation. Local Safety Management Committees are set up at each base, creating a tiered management system to execute policies, monitor safety measures, ensure the implementation of safety management policies and responsibilities, and achieve safety management goals.



Management System

In 2023, display panel production bases achieved

100%

coverage rate of

ISO 45001

Certification

TCL CSOT strictly adheres to laws and regulations such as the *Production Safety Law of the People's Republic of China* and the *Law of the People's Republic of China on the Prevention and Treatment of Occupational Diseases*, and has developed management policies including the *CSOT EHS System Management Manual*, *CSOT Occupational Health Surveillance Management Process*, *CSOT Fire Safety Management System*, and *CSOT Emergency Response Management Process*. Additionally, the Company has established its occupational health and safety management system based on ISO 45001 Certification standards.

Every year, we conduct internal audits of the EHS system to review its operational status. The certification body performs external audits annually to assess compliance with the system's operational compliance.


bsi.

Certificate of Registration

职业健康安全管理体系 - ISO 45001:2018

TCL China Star Optoelectronics Technology Co., Ltd.
No. 9-2, Tangming Road
Guangming District
Shenzhen
Guangdong
518132
China

OHS 698986

The design and manufacture of liquid crystal display (LCD) panels.
[Previously certified to OHSAS 18001 since 2018-11-15]

Michael Lee - Managing Director Assurance, APAC

首次发证日期: 2019-10-22
最新发证日期: 2022-12-30
生效日期: 2021-11-15
有效期至: 2024-11-14

Page: 1 of 2

...making excellence a habit.

Risk Management

TCL CSOT follows the *CSOT Risk and Opportunity Identification and Evaluation Management Specification*, updating hazard sources annually and developing risk classification standards in accordance with regulations. In 2023, 165 critical hazard sources were identified, and multiple hazard inspections were conducted. Additionally, according to the *CSOT Safety and Environmental Protection Committee Management System*, various accident reporting channels are provided, and employee EHS feedback is collected through the labor union to ensure continuous improvement in safety management standards.

Risk Level	Regulatory Definition	Company Classification Standards
Level 1 Risk	· Safety and environmental hazards are numerous and difficult to control. In the event of an accident, it could result in significant economic losses or mass casualties · Environmental emissions exceeding standards could lead to severe economic losses and damage to social reputation if penalized and reported by the government, including administrative penalties for listed companies	· Safety and environmental hazards are numerous and difficult to control, potentially leading to major company-level incidents (such as more than 1 fatality or more than 3 serious injuries, plant-wide shutdown or evacuation, and direct economic losses exceeding RMB 10 million) · Exceeding discharge limits for wastewater, exhaust gases, and noise, or improper handling of hazardous waste
Level 2 Risk	· Numerous hazards with significant control challenges. In the event of an accident, it could result in substantial economic losses or multiple casualties · Exceeding internal control standards for wastewater and exhaust gas emissions, or abnormal production of critical hazardous waste, could lead to significant legal over-discharge risks and administrative penalties	· Numerous hazards with significant control challenges, potentially leading to company-level KPI incidents (e.g., 1-3 serious injuries, partial area shutdown, or direct economic losses ranging from RMB 1.5 million to RMB 10 million) · Wastewater and exhaust gas emissions exceed internal Level 1 control standards (which are below regulatory standards), and abnormal discharge of critical waste liquids
Level 3 Risk	· Safety and environmental risks are within controlled limits. In the event of an accident, it could result in general economic losses or minor injuries	· Risks are within controlled limits, with potential for minor company-level incidents (such as 1 or more minor injuries, leaks of 20-50 m^2, or direct economic losses between RMB 20,000 to RMB 1.5 million) · Exceeding internal Level 2 control standards for wastewater and exhaust gas emissions, or abnormal discharge of non-critical waste liquids
Level 4 Risk	· Safety and environmental risks are within controlled limits. In the event of an accident, it could result in minor economic losses or injuries	· Risks are within controlled limits, with potential for near-miss incidents at the company level (such as loss of work time < 8 hours, leaks of 2-20 m^2, or direct economic losses below RMB 20,000) · Environmental risks are controllable, with wastewater and exhaust gas emissions exceeding internal Level 3 control standards

Goals and Indicators

Occupational Health and Safety Goals are issued at the beginning of the year by the TCL CSOT Safety Management Committee to each base. Each base signs an EHS responsibility agreement, and the Safety Management Committee conducts strict monthly assessments of each unit's performance. Additionally, goals are linked to the performance evaluations of management personnel to ensure that all measures are effectively implemented.

In 2023, TCL CSOT reported

"Zero"

fatalities or serious injuries

"Zero"

mass occupational diseases

2023 KPIs	2023 Actual Achievements
Personnel Fatalities or Serious Injuries	0
Direct Economic Losses Exceeding RMB 1.5 million	0
Explosions or Fires	0
Major Specialty Gas Accidents	0
Food Poisoning	0
Mass Occupational Diseases	0
Government or TCL Group Penalties	0



5.2.2 Safety Production Management

TCL CSOT has established a long-term mechanism for identifying and managing safety hazards through the *CSOT Dual Prevention Mechanism Management Process* and the *CSOT Safety and Environmental Inspection Management Specification*. These measures reinforce primary safety responsibilities, strengthen supervision and management of potential hazards, and aim to prevent and reduce accidents.
In 2023, TCL CSOT continued to implement a series of enhanced safety risk control measures:

Hazard Identification and Rectification

In 2023, TCL CSOT conducted a thorough investigation of potential hazards, imposing stricter penalties on responsible units for issues such as false case closures, hazard recurrence, and delays in corrective actions, and made these penalties publicly known. Additionally, the Company established an EHS electronic system to achieve efficient tracking and closed-loop management of hazards.

In 2023, TCL CSOT identified a total of **62,079** potential hazards, achieving a **100%** rectification rate for these hazards.

Supervision of Safety Production Protective Equipment

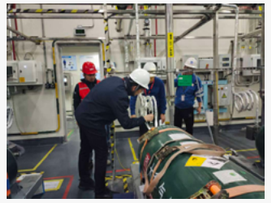
TCL CSOT strictly enforces the *CSOT Labor Protective Equipment Management Process*, effectively managing and regularly monitoring the provision and distribution of personal protective equipment. The Company conducts audits on the usage of labor protection supplies and uploads any non-compliance issues found during inspections to the Company's hazard management system. We develop and oversee the implementation of improvement plans, achieving closed-loop management of labor protection supplies.

Fire Drills

TCL CSOT organizes a company-wide fire evacuation drill every six months and conducts monthly specialized fire drills (including scenarios such as special gas chemical leaks, packaging material fires, electrical fires, etc.). These exercises continuously enhance employees' ability to handle emergencies, effectively strengthening the Company's risk prevention and emergency response capabilities for accidents and disasters.

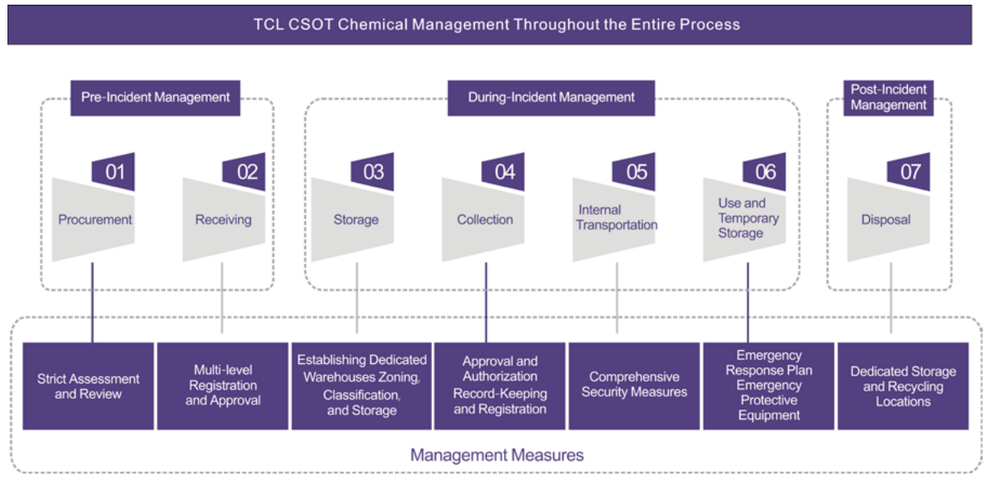
Case **Wuhan CSOT's "Fire Elimination and Source Control" Special Action**

To comprehensively eliminate and prevent fire incidents, Wuhan CSOT launched the "Fire Elimination and Source Control" Special Action in 2023. The initiative involved a thorough review of key fire safety areas within the facility, identifying high-risk fire zones, and assessing risk factors. Corresponding control measures were developed, and training, inspections, and evaluations were conducted. A long-term regional control and supervision mechanism was established to prevent fire accidents.



Chemical Safety Management

TCL CSOT has established several management systems, including the *CSOT Hazardous Substances Management Process, CSOT Product and Material Hazardous Substances Management Specification*, and *CSOT Hazardous Substances Risk and Opportunity Management Specification*. These systems strictly regulate toxic and hazardous substances and chemicals used in product raw materials and production processes. We outline safety control requirements for the entire lifecycle of chemicals, including procurement, storage, transportation, supply, usage, and disposal. The guidelines also cover the management of major hazard sources, hazard prevention, emergency response, changes, and maintenance for special chemicals. Additionally, TCL CSOT has developed emergency response plans for chemical production safety incidents, which are filed with local government authorities as required. Each production base has established a dedicated chemical management support team.



Case **Shenzhen Base Held an Emergency Drill for Ammonia Gas Leaks**

In March 2023, TCL CSOT's Shenzhen base, in collaboration with the Guangming District Emergency Management Bureau, conducted an unannounced emergency drill for ammonia gas leaks. The drill effectively tested the emergency response speed and professional skill level, receiving high praise from the Guangming District Emergency Management Bureau for its emergency capabilities.





5.2.3 Occupational Health Protection

The Company complies with the *Law of the People's Republic of China on the Prevention and Treatment of Occupational Diseases* and has established several policies and procedures, including the *CSOT Occupational Health Surveillance Management Process* and the *CSOT Occupational Environment Management Process* and has defined the organizational structure and designated personnel for occupational health management. Additionally, the Company has passed various occupational health assessment system certifications, including RBA and ISO 45001.

Intelligent Management of Occupational Health and Safety

We have developed and launched an EHS management system, achieving intelligent and systematic electronic management of health and safety work. This has greatly improved management efficiency and enhanced accuracy. Additionally, we have introduced advanced safety technologies, including intelligent monitoring of forklifts and key areas, employed robots to replace some manual tasks, and implemented fail-safe mechanisms and high-tech risk detection for hazardous operations to mitigate health and safety risks for employees.



Occupational Health Surveillance

We provide health check-up services for employees and implement preventive measures for those exposed to occupational disease hazards. Based on employees' occupational exposure history, we conduct regular or occasional medical health checks and collect health-related data to continuously monitor their health status. This approach ensures early detection, early diagnosis, early treatment, early reassignment, and early recovery.



Occupational Disease Hazard Warning and Training

In 2023, TCL CSOT conducted a total of

13,793 sessions

Total safety training hours

1,767,393 hours

Covering

950,094 persons

Coverage rate

100%

We implement several measures to ensure employee health for positions exposed to occupational disease hazards: establish "Occupational Disease Hazard Bulletin Boards" and "Informational Cards" to publicly disclose hazard factors and management standards; require 100% of employees to undergo pre-job team-level training and assessments to understand job risks before starting work. Besides, the Company provides training for specialized certification, specialized and managerial training.







5.3 Employee Development and Care

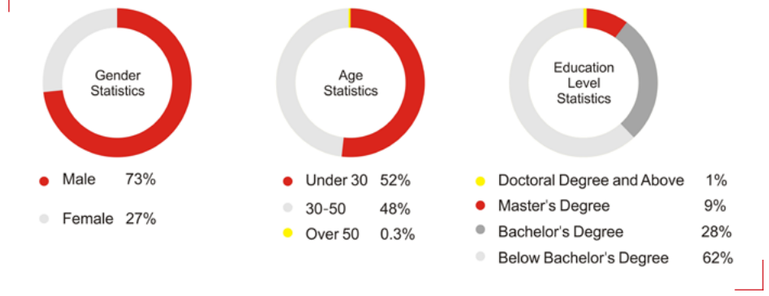
Employees are the driving force and crucial support for enterprise development. We actively engage in talent cultivation and development, establish clear and smooth promotion paths, create comprehensive and effective incentive mechanisms, implement practical and meaningful employee care measures, encourage employees to offer suggestions, and enhance their sense of belonging and well-being.

Main Measures

Talent Attraction	◆ Attracting External Talent Through Multiple Channels	◆ Internal Talent Mobility Mechanism
Compensation and Benefits	◆ Annual Salary Review, Bonus, and Long-Term Incentive Distribution	◆ Diverse Employee Benefits
Employee Growth	◆ Comprehensive Talent Training ◆ Career Advancement	◆ Performance Evaluation System ◆ Cadre Rotation
Employee Care	◆ Fun Sports Events ◆ Singles Social Events	◆ Skill Competitions ◆ Love "Star" Childcare Program

5.3.1 Talent Attraction

The Company adheres to a recruitment strategy of "Attracting Talent Widely and Employing People Wisely" and has established policies such as the *Employee Social Recruitment Management System* and the *CSOT Skilled Talent Recruitment Management System*. We prohibit all forms of recruitment discrimination, set clear and fair recruitment standards, establish a transparent and standardized recruitment process and utilize open and diverse recruitment channels to build a strong talent pool and stimulate internal personnel mobility.



In alignment with business and labor market conditions, the target for the percentage of female employees in 2023 was set at 26%, and the actual percentage achieved was 27%.

External Recruitment

TCL CSOT actively builds a comprehensive talent recruitment system by utilizing both online and offline channels to precisely attract talent and improve recruitment efficiency. We have also launched the "Referral Program", encouraging employees to refer candidates through activities such as the "Golden March and Silver April" referral theme month, executive endorsements, and doubled bonuses, to stimulate enthusiasm for referrals.

Additionally, we promote industry-academic collaboration through campus recruitment, school-enterprise partnerships, and alliances with numerous universities, creating more job opportunities for young people. In 2023, we provided employment positions for over 1,000 university students, infusing new vitality into our talent team.



Case **Collaborative Talent Development Innovation Day**

TCL CSOT, in collaboration with the School of Materials Science and Engineering at South China University of Technology, launched the "Collaborative Talent Development Innovation Day". This event included activities such as factory tours, school-enterprise signing ceremonies, and expert lectures, providing students with close interactions with the Company and in-depth learning experiences. The event also aimed to enhance the employer brand's influence on campus and achieve a win-win outcome for both the school and the enterprise.



	Award Name	Issuing Organization
1	The Most Popular Global Employer	Lockin
2	Shenzhen Top 50 Employers	Zhilian
3	2024 Most Influential Employer	Haitou.cc





Internal Recruitment

We implement an internal talent mobility mechanism and have launched the "Star Path Program", which prioritizes job opportunities for internal employees and encourages internal talent mobility. We standardize the internal recruitment process through policies such as the *Staff Internal Transfer Management System* and the *On-site Employee Transfer Management System*. We regularly post job openings internally and conduct public selection processes, filling vacancies with internal candidates and providing diverse development opportunities for employees.



5.3.2 Compensation and Benefits

Compensation and Incentives

Compensation and benefits are crucial for attracting and retaining talent. TCL CSOT adopts a comprehensive compensation concept, continuously optimizing salary and incentive mechanisms to offer competitive pay and benefits to employees.

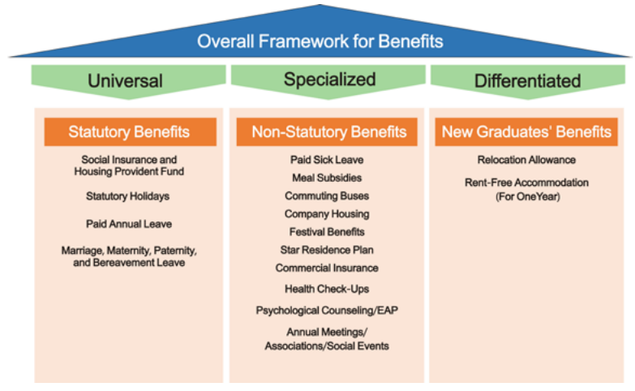
We strictly adhere to the *CSOT Labor Compensation Management Standard*, following the management principle of "Job-Based Grading, Grade-Based Salary, and Performance-Based Pay", and implementing the concept of "Favoring Outstanding Contributors, Rewarding More for More Contribution, and Encouraging Proactive Efforts". In recent years, we have comprehensively understood internal and external compensation practices through salary analysis, external compensation benchmarking, and other methods, continuously improving our compensation policies to build a compliant, fair, and competitive compensation system. We are committed to paying above the minimum wage. Additionally, we emphasize equal pay for equal work; in 2023, the average hourly wage of female employees was 0.98 times that of male employees.

TCL CSOT deepens employees' understanding of the compensation system through mechanisms such as annual salary reviews, bonus distributions, and long-term incentive plans, ensuring that every employee fully understands the compensation and benefits policies. We also address individual needs through one-on-one communication and continuously optimize our compensation and benefits policies.

To fully motivate employees and stimulate creativity, we continually explore effective incentive measures, including performance bonuses and long-term incentive plans for senior talent. Additionally, we place importance on recognizing employee value, affirming work processes, and establishing special incentives such as project incentives, process incentives, and specific incentives for R&D personnel.

Employee Benefits

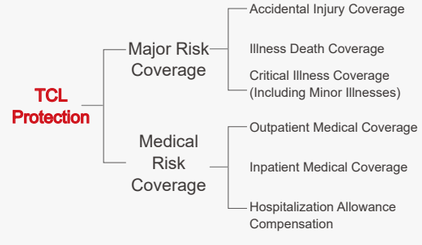
We have established the *Welfare Management Regulation* and developed a comprehensive welfare system, implementing a series of employee care measures. While ensuring statutory benefits for employees, we focus on their health, work experience, and quality of life, creating a holistic care plan. This allows TCL CSOT employees to enjoy a comfortable work environment, a happy life, and peace of mind about their health, achieving a secure and contented life at TCL CSOT.



Multiple Benefit Guarantees: In addition to the basic statutory benefits of social insurance and the housing provident fund, the Company has established a multi-layered protection mechanism, which includes providing commercial insurance for all employees, a family self-purchase plan, and million-dollar medical coverage, thereby enhancing employees' life security from multiple dimensions.

Case 1 **Commercial Insurance for All Employees**

The Company purchases group commercial insurance for all employees, covering a range of insurance types such as accidental injury medical insurance, public transportation accident insurance, illness death insurance, and medical insurance. This helps employees reduce the financial burden caused by major illnesses and accidental injuries to some extent.



Case 2 **Family Self-Purchase Plan**

The Company strives to extend benefits to employees' family members as much as possible, offering a relatively discounted self-purchase plan for employees' family members. Employees can also choose to pay for family insurance plans for additional family members at their own expense. In 2023,

2,297 persons participated in the family self-purchase plan.

Case 3 **Million Medical Coverage**

To address the challenge of employees and their family members being unable to purchase insurance due to health or age issues, and to transfer the risk of major medical expenses, the Company uses professional screening and group advantages to offer optional million medical insurance to employees. This benefit remains available to employees and their families even after they leave the Company or retire.

Experience Improvement

We provide employees with meal allowances, commuting shuttles, and dormitories, and continually improve dormitory conditions and other infrastructure to create a convenient and comfortable working environment for them.





Life Care

We offer the Star Residence Program and core talent housing subsidies to ensure employees have adequate housing.

Case **Star Residence Program**

The Star Residence Program is a housing benefit policy from TCL CSOT for its employees. Through this program, we provide interest-free home loans to employees who meet certain criteria based on service length, performance, and other factors. This effectively alleviates the down payment pressure on employees and helps them achieve their dream of "living and working happily". In 2023, the program benefited 100 employees, with a total of RMB 47.74 million in interest-free loans disbursed.

Employee Health

We arrange annual physical examinations for employees, purchase commercial insurance, overseas dispatch insurance, and travel insurance, and provide an EAP psychological counseling program, ensuring employees' health and peace of mind at work.

Case **EAP Psychological Counseling Program**

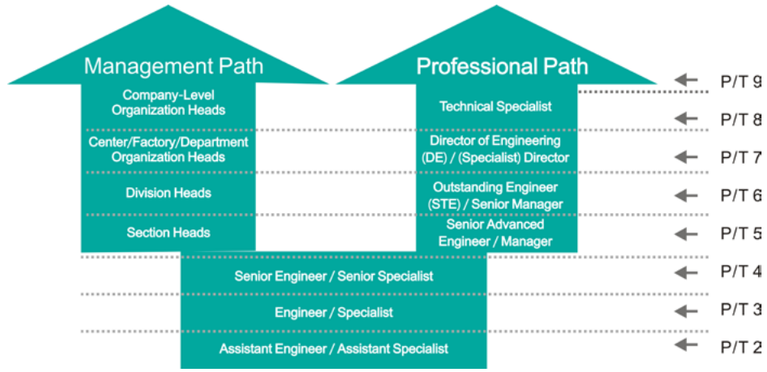
We are committed to translating our pledge of "Caring for Every Employee's Mental Health" into concrete actions. Each year, we conduct regular mental health assessments for all employees, hold quarterly mental health seminars, and during Mental Health Awareness Month, we promote and educate employees on mental health topics. Together with every employee, we strive to safeguard mental well-being.



5.3.3 Employee Growth

We regulate performance evaluation and career advancement processes through the *CSOT Staff Performance Management System*, *CSOT On-Site Performance Management System*, and *CSOT ECP Management System*. These frameworks provide a clear and fair career development path and promotion system, offering reliable guidance for employee growth and strong recognition of their value.

In alignment with the needs of the business and the characteristics of different roles, we have established dual career paths—"Management" and "Professional"—to offer employees broader career development opportunities.



Talent Training

TCL CSOT continuously optimizes its talent training system, strives to improve the quality of talent development, and organizes employee training through multiple channels, methods, and fields.

Total Investment in Training in 2023	Average Training Hours Per Person	Training Coverage Rate
RMB **10.16** million	**14.4** hours	**100**%

Based on our development plans and employee needs, we have established a comprehensive training system and launched four major development programs: "Eagle Scout", "Flying Eagle", "Elite Eagle", and "Soaring Eagle". Through training in professional skills, management capabilities, and corporate responsibilities, we aim to enhance employees' professional competencies and competitiveness, achieving mutual growth for both employees and the Company.

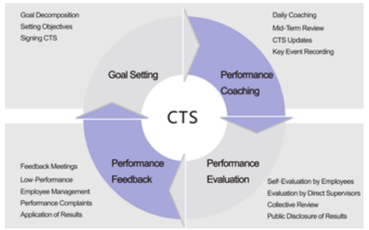


Performance Evaluation

In 2023, percentage of employees undergoing regular performance evaluations was

100%

We have established a performance evaluation system that includes four major components: performance planning, performance coaching, performance evaluation, and performance feedback. We conduct regular annual performance evaluations to gain an in-depth understanding of employee performance, provide timely work feedback, and develop targeted improvement plans. Combined with an incentive mechanism, this helps employees clarify their development direction and challenge infinite possibilities.

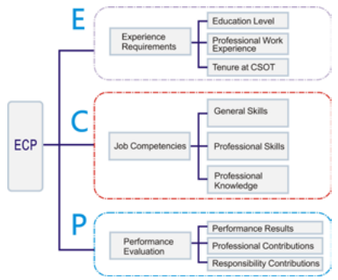


Career Advancement

A robust promotion mechanism is a solid foundation for matching people with positions. We continuously build and optimize the ECP certification system, enhancing the fairness and reliability of promotion management, providing upward momentum for employees, and creating development opportunities.

For cadre promotions, we implement a promotion management system that combines "position-level adjustments" and "person-level promotions" to invigorate cadre effectiveness.

For employee promotions, we conduct annual promotion assessments, considering certification qualification defenses and performance evaluation results to ensure fair promotion for employees.



Cadre Rotation

To build a well-rounded and experienced cadre team, we implement projects such as the Cadre Succession Ladder Program and the Business Talent Development Program. These initiatives create internal rotation opportunities for high-potential cadres, providing limitless possibilities for their development across various fields.

In 2023, the Company had **248** employees participating in job rotation, accounting for **22%** of the total.

5.3.4 Employee Care

We not only focus on employees' career development but also emphasize their work experience and overall well-being. We believe that a relaxed, enjoyable, and dynamic work environment can unleash employees' potential and creativity. We are dedicated to creating a unique workplace by organizing activities such as summer care programs for employees with children, social events for single employees, and fun sports events to help employees achieve a better work-life balance.



TCL CSOT Employees Participated in and Achieved Excellent Results at the 1st Shenzhen Occupational Health Expert Skills Competition



The TCL CSOT 2023 Single Youth Social Event Helped Employees Broaden Their Social Networks and Opportunities for Making New Friends



TCL CSOT 2023 Fun Sports Event



TCL CSOT Love "Star" Childcare Program

5.4 Community Engagement

TCL CSOT always considers social welfare as a key channel for giving back to society. Through the TCL Charity Foundation and the Company's laborunion, we actively engage in social welfare activities, working together with employees to contribute to poverty alleviation, environmental protection, education, and other fields.

In 2023, the Company organized a total of **66** charity events, with **459** participants.

5.4.1 Volunteer Service

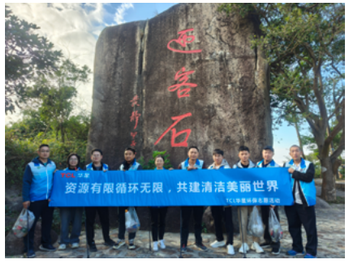
TCL CSOT has established a volunteer service team, which has gradually expanded in scale. The team conducts various forms of volunteer activities in the community, such as environmental cleanup, elderly care, and child companionship, actively fulfilling the Company's social responsibilities through concrete actions.





5.4.2 Environmental Protection Volunteering

TCL CSOT actively responded to environmental protection calls by organizing a volunteer team on December 2, 2023, to carry out an environmental volunteer activity on Shangchuan Island, Jiangmen, Guangdong. The team collected trash generated from tourism, sorted the collected waste, and placed it orderly at the recycling station.



5.4.3 Caring for Education

Middle School Students' Smart Calligraphy Class

To enrich rural education resources, the TCL CSOT project team has introduced calligraphy and aesthetic education courses, along with a series of calligraphy cultural activities, in rural schools. These efforts promote calligraphy culture while fostering the comprehensive development of students, serving a total of **1,000+** participants.

Children's Knowledge Popularization

The TCL CSOT project team has provided comprehensive, scientific, friendly, and practical educational resources for mobile children in Shenzhen and Hunan. These efforts aim to support their healthy development. The project has organized a total of 7 charity events, collaborated with 45 outstanding volunteers, and served **360** participants.

6

Governance and Compliance

—— Responsible Operations, Building a Evergreen "Star" Enterprise

Good governance is the foundation for the Company's sustainable development. We continuously refine our governance structure, strengthen our compliance system, and maximize the protection of stakeholder interests. We elevate sustainability to the board level to ensure that significant issues are fully recognized and managed, thereby enhancing the Company's operational resilience. Additionally, we employ advanced risk management tools and methods, adhere to ethical business practices, enforce information security, and promote the improvement of our governance standards.

This Chapter

- Corporate Governance 80
- Risk Management 81
- Business Ethics 83
- Information Security 85

Highlights

9,000+	Total Number of Participants in Annual Compliance training
4,500+ hours	Total Hours of Specialized Training Sessions
72,708	Total Number of Participants in Annual Anti-Corruption and Integrity-Related Courses
100%	ISO 27001 Information Security Management System Certification (Display Panel Production Bases)
38 sessions	Information Security Training Sessions for the Year
380,110	Total Number of Individuals Covered by Information Security Training for the Year

6.1 Corporate Governance

6.1.1 Corporate Governance Structure

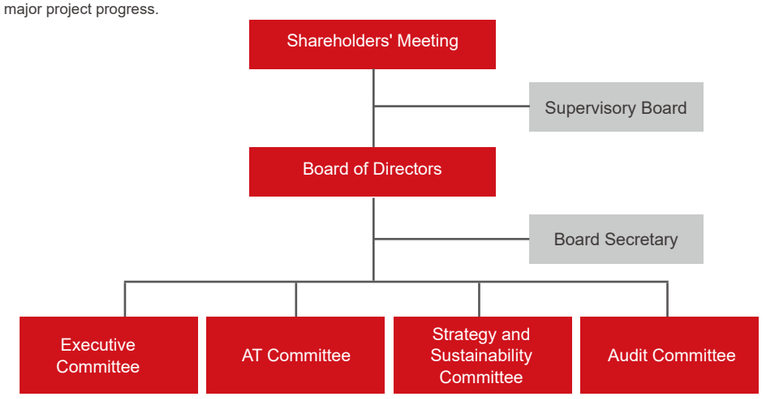
TCL CSOT adheres to a robust, transparent, and responsible governance mechanism. With an independent and diverse board composition, the Company ensures that decisions are scientific, efficient, and fair, providing a solid foundation for sustainable development.

TCL CSOT strictly adheres to the requirements of the *Company Law of the People's Republic of China* and relevant regulations, establishing a corporate governance structure composed of the Shareholders' Meeting, the Board of Directors ("the Board") and its specialized committees, and the Supervisory Board.

The Board members are committed to the responsibilities and duties entrusted by shareholders, reviewing the Company's strategic plans, governance policies, and standards to guide and drive business development.

The Supervisory Board diligently carries out its duties, conducting in-depth research within the Company, actively proposing management suggestions, and contributing to the internal governance mechanisms.

The Executive Committee is a crucial management body responsible for implementing the Board's decisions and policies. Authorized by the Board, the Executive Committee is tasked with formulating company strategies, executing and monitoring significant decisions and operational activities, and reviewing and making decisions on major project progress.



6.1.2 Board of Directors

The Company's Board of Directors stricly adheres to the provisions of the *Company Law of the People's Republic of China* and the Company's articles of association, exercising itis powers with caution and responsibity. To ensure the independence and fairness of decisions made by the Board, TCL CSOT separates the roles of Chairman and General Manager, assigning these posiions to diferent individuals.

The current Board of Directors comprises 6 members who possess knowledge in finance, technology, business management, and the electronics industry. The members also have capabilities in business management, strategic judgment, and crisis handling.

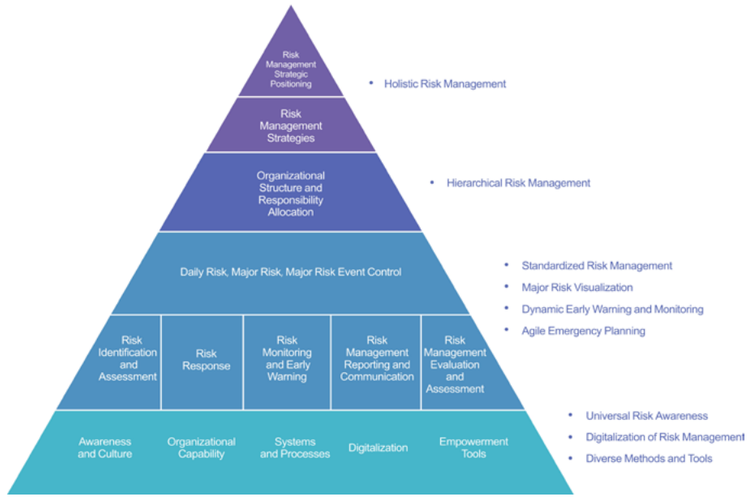
Name	Age	Type of Directors	Professional Background		
			Finance and Accounting Expertise	Technical and R&D Expertise	Experience in Electronics and Related Industries
Li Dongsheng	66	Chairman Executive Director			•
Wang Cheng	50	Executive Director			•
Zhao Jun	52	Executive Director			•
Kim Woo-shik	69	Executive Director			•
Yan Xiaolin	58	Executive Director		•	
Yang Anming	46	Executive Director	•		

6.2 Risk Management

Risk management is a crucial guarantee for TCL CSOT's stable operation and sustainable development. We have established a comprehensive risk management mechanism, actively implementing risk management practices to accurately identify and assess both internal and external risks, and formulate effective strategies to mitigate them. Additionally, We strengthen Business Continuity Management (BCM) to ensure that the Company can swiftly resume operations in the face of unexpected events, thereby creating a more resilient operational environment.

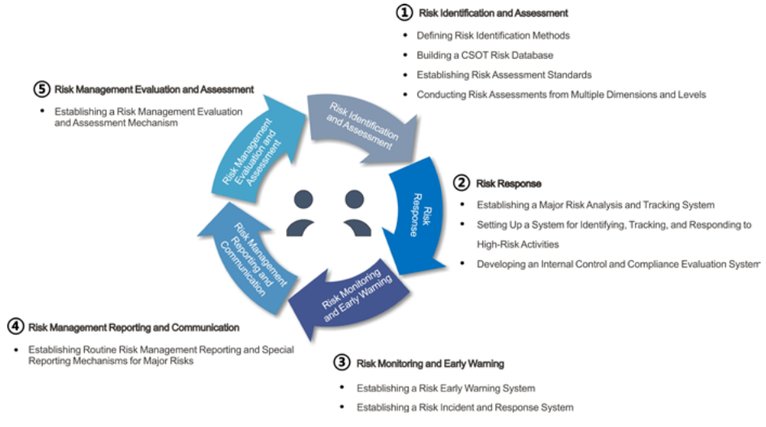
6.2.1 Risk Management System

TCL CSOT has established a dedicated risk management department and developed a risk management system with three lines of defense: business control, internal control self-assessment, and internal audit. This system enables comprehensive identification, assessment, and management of potential risks. Our risk management practices adhere to principles of comprehensiveness, significance, adaptability, classification and prioritization, and cost-effectiveness, ensuring coverage of key and major risk events across all business activities. We select overall risk management strategies based on internal and external environments, aligning with strategic planning and annual operational goals, and considering risk tolerance, risk preference, and risk categories.

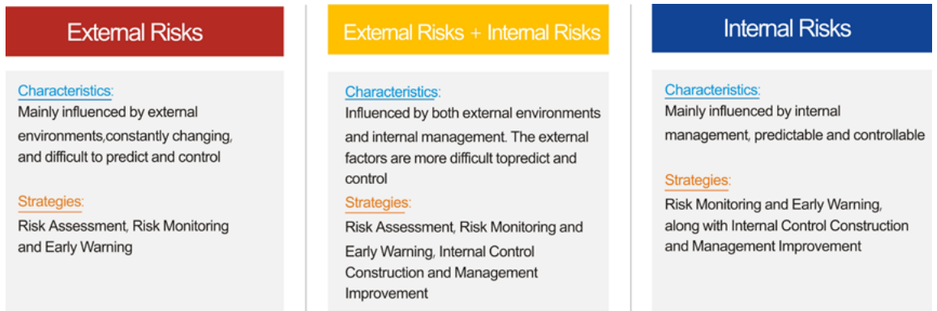


6.2.2 Risk Control Process

TCL CSOT has established a scientific and comprehensive risk management procedure, which includes risk identification and prevention before incidents occur, risk monitoring and mitigation during events, and response and emergency handing after incidents. We refer to the *COSO Risk Management Framework* and the *ISO 31000 Standard* for risk management processes to develop and publish the *CSOT Annual Risk Management Process*, creating a closed-loop risk management mechanism.



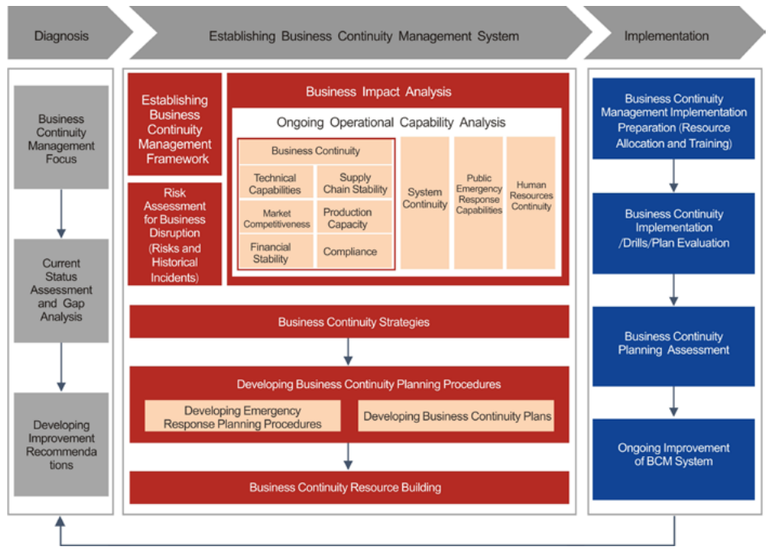
In 2023, TCL CSOT conducted a comprehensive risk assessment. By collecting internal and external information and using methods such as surveys, interviews, benchmarking, and thematic discussions, we identified the annual risk map and built a differentiated risk control system, ensuring that major risks are effectively managed.



6.2.3 Business Continuity Management

As global risks continue to rise, considering the potential production disruptions caused by various risks and disasters, TCL CSOT integrates Business Continuity Management (BCM) into daily operations to ensure uninterrupted operations and pursue sustainable business practices.

In 2023, TCL CSOT proactively initiated BCM efforts in manufacturing, supply chain, and IT areas. We developed the *Production Business Continuity Management System* and the *CSOT ISMS Business Continuity Management Standards*, which define the risk response processes and responsibilities for business continuity. We conduct regular drills and review response strategies to enhance our ability to handle disruptions and ensure business continuity and stability.



6.3 Business Ethics

TCL CSOT upholds the business ethics principles of integrity and compliance management, establishing the *CSOT Business Ethics Management System* and a comprehensive integrity management framework. The Company places a high emphasis on intellectual property protection, building a positive corporate image and promoting sustainable and healthy development.

6.3.1 Operating with Integrity

TCL CSOT adheres to the highest standards of integrity, formulating policies such as the *CSOT Integrity Management System* and the *CSOT Conflict of Interest and Gift Acceptance Management Standards* to regulate the behavior of both internal and external stakeholders.

Unimpeded Reporting: Improving Reporting Channels

TCL CSOT's *CSOT Supervision Management System* and *TCL CSOT Accountability Management Measures* clearly outline the methods for reporting and appeals. We have established various channels, including phone, WeChat Official Account, and email, to receive important reports. Whistleblowers can report directly or provide leads. We strictly enforce the confidentiality of all whistleblower information, protect whistleblower details, and prevent any retaliatory actions against whistleblowers.

Reporting Channels:
Email: csotjubao@tcl.com
Phone: (+86) 755 - 8690 5198
WeChat Official Account: TCL CSOT Audit and Supervision (TCL 华星审计监察)

Supervision and Management: Conducting Regular Internal Audits

TCL CSOT continuously improves its supervision organization, fostering a long-term mechanism of "Don't Dare To, Are Unable To, and Have No Desire To Commit Corruption". The Company conducts regular internal audits to ensure comprehensive coverage within three years, focusing on improving systems and processes, regular supervision and inspection, and ongoing monitoring of high-risk areas.

In 2023, we collected integrity questionnaires

1,272 copies

In 2023, TCL CSOT conducted an integrity index survey among all employees and partners, receiving 1,272 valid responses, including 389 valuable suggestions, providing valuable insights for the Company's integrity culture development.

Awareness Cultivation: Conduct Integrity Awareness and Education

TCL CSOT places a high priority on building an integrity culture. The Company uses the WeChat Official Account and email to disseminate integrity guidance, send reminders, and have employees sign the *Personal Integrity Commitment Letter*, continually enhancing the integrity and self-discipline awareness of employees and partners to create a strong integrity atmosphere.

Number of participants in integrity training reached

72,708

In 2023, TCL CSOT launched courses such as "TCL CSOT Anti-Corruption Promotion" and "TCL CSOT Integrity and Professional Conduct Theme Promotion".



6.3.2 Compliance Governance

We are committed to establishing and maintaining a fair, transparent, and compliant business environment globally. As our business expands internationally, we actively address the increasingly complex international business environment and stringent regulatory requirements. We place high importance on the development of compliance systems for international operations, implementing policies such as the *TCL CSOT Export Control Compliance System* and *Antitrust Compliance Guidelines* to ensure that the Company's foreign trade and market competition activities adhere to international standards and local legal requirements. **In 2023, TCL CSOT did not experience any legal disputes related to market competition or monopolistic practices.**

Through specialized compliance training programs, we continuously enhance employees' understanding of export control compliance, overseas legal compliance, and antitrust compliance, ensuring that the Company's business operations always adhere to fair competition principles. In 2023, several specialized training sessions were held on export control compliance, overseas legal compliance, and antitrust compliance.

Total Number of Participants in Compliance Training

9,000+

Total Training Hours

4,500+ hours

6.3.3 Intellectual Property Protection

TCL CSOT adheres to the principle that "Protecting Intellectual Property Is Protecting Innovation". We have established an intellectual property protection system centered on "Comprehensive Intellectual Property Protection Systems" and "Patent Lifecycle Protection and Utilization" to safeguard core technologies and business. We strictly comply with intellectual property protection laws and regulations and respect the intellectual property rights of all parties. Through policies such as the *Intellectual Property Maintenance Management Procedure* and the *Intellectual Property Risk Management Procedure*, we regulate intellectual property management. Additionally, we implement measures such as patent portfolio planning, internal intellectual property risk management, and external intellectual property risk identification to protect intellectual property and enhance our competitiveness.

Comprehensive Intellectual Property Protection System

Professional Institutions	Highly Specialized Intellectual Property Institutions Establishing a two-tier organizational structure with the "Intellectual Property Center" and the "Intellectual Property Department" and build a team of over 40 senior professionals, including PhDs and experts who have returned from overseas.	
Patent Strategy	High-Quality Patent Strategy Iterating on market and technology development trends each year and formulating patent strategies, to systematically guiding the protection of core technologies.	
System Regulations	Full-Chain Intellectual Property System Regulations Developing a patent review mechanism and a series of guidelines for patent licensing, infringement analysis, and invalidation analysis.	High-Incentive Patent Award System Establishing a series of reward systems, including a patent application reward of at least RMB 5,000 per patent, to fully ensure the motivation and quality for achieving 100% patent protection of core technological achievements.

Patent Lifecycle Protection and Utilization

TCL CSOT's patent protection and utilization for core technologies span the entire lifecycle of patents—from front-end, mid-term, to back-end—maximizing the value of patents throughout their entire lifecycle.

Front-End	Strengthening the comprehensive patent protection of core technologies from the front-end, **with over 60,000 patents in total, including more than 16,000 overseas patents**, to safeguard our innovative achievements.
Mid-End	Promoting the patent pool strategy from the mid-end to ensure industrial safety, with the goal of "reducing intellectual property risks, ensuring industrial safety, and protecting national economic interests," following the construction principles of "addressing shortcomings, building advantages, and strengthening capabilities," and establishing an effective patent defense system.
Back-End	Maintaining the core technological value of patents from the back-end, keeping a keen insight into competitors' infringement on core technology patents.

Intellectual Property Protection Training

TCL CSOT actively organizes intellectual property protection training to enhance employees' awareness of intellectual property protection and improve their ability to identify related risks. **We provide 10 to 20 intellectual property-related training sessions annually.**

6.4 Information Security

TCL CSOT recognizes the critical importance of information security for both the Company and its partners, viewing it as a key factor in ensuring operational stability, maintaining customer trust, and preserving competitiveness. To achieve our information security goals, we enhance management and protection from multiple perspectives to address the continuously evolving cybersecurity landscape.

In 2023, TCL CSOT did not experience any major information security incidents, and the high-risk information security incident handling rate was **100%**.

6.4.1 Protection System

TCL CSOT adheres to the information security policy of "Raising Awareness, Prioritizing Prevention, Implementing Layered Protection, and Continuous Improvement". We have developed regulations such as the *CSOT ISMS Information Security Management System Manual* to define classification and control requirements for information security. For third-party personnel, we implement security measures such as training and confidentiality agreements.

The Company regularly audits the effectiveness of the information security system to ensure that confidential information, such as customer data, is properly protected and to prevent internal leakage and misuse. Additionally, we strictly follow legal requirements when handling personal information to ensure compliance and protect personal privacy from being disclosed.

All display panel production bases have achieved

100% ISO 27001

Certification coverage


bsi.
Certificate of Registration
IS 643341
.making excellence a habit.

6.4.2 Management Mechanism

To ensure new employees understand information security, TCL CSOT includes relevant content in its onboarding training. Additionally, we conduct monthly information security training sessions, covering various topics such as information security management regulations, industry trends, and legal requirements.

In 2023	Carried Out Information Security Training	Number of Participants in Information Security Training
	38 sessions	**380,110**

6.4.3 Emergency Mechanism

TCL CSOT conducts annual information security risk assessments and produces information security risk assessment reports. In response to information security incidents, the Company has developed the *CSOT ISMS Information Security Incident Management Regulations* and established an emergency response mechanism to ensure rapid response and timely handling of incidents to minimize losses.

Additionally, the Company has created channels for reporting and handling information security vulnerabilities, allowing more stakeholders to participate in building information security and jointly protecting it.



Appendix 1
Key Performance Indicator Table

Indicator	Unit	2023
Greenhouse Gas Emission Management:		
Scope 1	tCO_2e	422,644
Scope 2	tCO_2e	3,937,465
Scope 3	tCO_2e	20,596,706
Energy Management:		
Total Energy Consumption	GJ	26,086,258
Total Renewable Energy Consumption	MWh	110,490
Self-Built Photovoltaic Installed Capacity	MW	123.8
Self-Built Photovoltaic Total Power Generation	MWh	100,490
Purchased Green Electricity Usage	MWh	10,000
Water Resource Management:		
Water Withdrawal	Tons	53,770,000
Water Discharge	Tons	40,790,000
Water Consumption	Tons	12,980,000
Water Recycling Rate	%	98
Pure Water Recycling Rate	%	70
Pure Water + Recycled Water Recycling Rate	%	79
Solid Waste Management:		
Total Solid Waste	Tons	8,262,169
General Solid Waste	Tons	7,375,248
Hazardous Solid Waste	Tons	886,921
Total Solid Waste Recycled	Tons	132,801
Pollutant Emission Management:		
Air Pollutant (NOx) Emissions	Tons	77
Volatile Organic Compounds (VOCs) Emissions	Tons	352
Water Pollutant (COD) Emissions	Tons	1,443
R&D and Innovation:		
Number of R&D Personnel	Persons	4,619
R&D Investment	RMB '00 million	67
R&D Investment as a Percentage of Revenue	%	9.3
Total Patent Applications	Nos	62,694
Total Patent Grants	Nos	23,399
Occupational Health and Safety:		
Safety Production Investment	RMB 0'000	5,854
Number of Fatalities Due to Work Injuries	Persons	0
Number of Recordable Work Injuries	Cases	83
Recordable Injury Rate	Cases/million work hours	0.81
Number of Workdays Lost Due to Injuries	Days	1,726
Lost Workday Rate	Days/million work hours	17
Percentage of Facilities That Have Received Employee Health and Safety Risk Assessments (*Including Only Display Panel Production Bases)	%	100
Percentage of All Employees at Company Locations Represented by Formal Corporate Management and Health and Safety Committees	%	100
Percentage of Workers Participating in Health and Safety Committees Relative to Total Workforce at All Locations	%	100
Number of Employee Health and Safety Training Sessions	Sessions	13,793
Percentage of Operations with ISO 45001 Certification (*Including Only Display Panel Production Bases)	%	100
Employment:		
Total Number of Employees by Employment Type (Regular)	Persons	28,656
Percentage of Employees with Signed Labor Contracts	%	100
Percentage of Employees Covered by Social Insurance	%	100
Gender Statistics		
Total Number of Employees by Gender (Male)	Persons	20,895
Total Number of Employees by Gender (Female)	Persons	7,761
Age Statistics		
Total Number of Employees by Age Group (Under 30)	Persons	14,930
Total Number of Employees by Age Group (30-50)	Persons	13,634
Total Number of Employees by Age Group (Over 50)	Persons	92
Education Statistics		
Total Number of Employees by Education Level (Doctorate Degree and Above)	Persons	182
Total Number of Employees by Education Level (Master's Degree)	Persons	2,638
Total Number of Employees by Education Level (Bachelor's Degree)	Persons	8,154
Total Number of Employees by Education Level (Below Bachelor's Degree)	Persons	17,682
Regional Distribution		
Total Number of Employees by Region (Domestic)	Persons	28,589
Total Number of Employees by Region (Overseas)	Persons	67
Human Rights Review and Training:		
Percentage of Facilities That Have Undergone Human Rights Reviews or Impact Assessments	%	100
Percentage of Employees Who Have Received Diversity, Discrimination/ Harassment Training	%	100

Indicator	Unit	2023
Diversity:		
Percentage of Female Employees in the Organization	%	27
Percentage of Women in Senior Management Positions (Excluding the Board of Directors)	%	12.5
Number of Employees with Disabilities	Persons	25
Number of Employees Required to Return to Work After Parental Leave	Persons	3,522
Number of Employees Who Actually Returned to Work After Parental Leave	Persons	3,522
Employee Communication: (*Excluding Guangzhou ChinaRay and Guangdong Juhua)		
Satisfaction Survey Score	Points	75
Employee Training:		
Investment in Career Training	RMB 0'000	1,016
Average Training Hours Provided to All Employees (*Excluding Guangdong Juhua)	Hours	14.4
Percentage of Employees Receiving Regular Performance and Career Development Evaluations (*Excluding Guangdong Juhua)	%	100
Percentage of Employees Who Have Received Career or Skills-Related Training	%	100
Compensation and Benefits: (*Excluding Guangdong Juhua)		
Average Number of Paid Annual Leave Days Per Employee	Days	6.6
Average Hourly Wage of Female Employees as a Percentage of the Average Hourly Wage of Male Employees	%	98
Supply Chain Management:		
Percentage of Suppliers Who Have Signed the *Sustainable Procurement Charter*/ *Supplier Code of Conduct* (*Including Only Display Panel Production Bases)	%	75
Percentage of Supplier Contracts That Include Environmental, Labor Rights, and Ethical Requirement Clauses	%	100
Percentage of Procurement Staff Trained on Sustainable Procurement	%	80
Number of New Suppliers Screened Using Environmental and Social Standards	Nos	77
Number of Suppliers Received Annual CSR Audits	Nos	85
Percentage of Suppliers from Whom Conflict Minerals Information Has Been Obtained	%	100
Public Welfare:		
Number of Public Welfare Activities	Nos	66
Number of Participants in Public Welfare Activities	Persons	459
Corporate Governance:		
Number of Shareholder Meetings Held	Nos	3
Number of Board Meetings Held	Nos	9
Business Ethics		
Proportion of Employees Covered by Compliance/Business Ethics Training	%	100
Proportion of Operational Sites That Have Undergone Internal Audits/Risk Assessments for Business Ethics	%	100
Number of Appeals and Reports from Internal and External Stakeholders	Nos	39
Information and Data Security:		
Number of Information Security Incidents	Cases	0
Proportion of Operational Sites Certified with ISO 27000 (*Including Only Display Panel Production Bases)	%	100
Number of Legal Disputes Related to Customer Privacy Infringements and Data Leaks	Cases	0

Appendix 2
GRI Content Index

- Statement of use: TCL China Star Optoelectronics Technology Co., Ltd. has prepared the content for the period from January 1, 2023, to December 31, 2023, with reference to the *GRI Standards*
- GRI 1 used: *GRI 1: Foundation 2021*
- Applicable GRI Sector Standards: None

GRI Standard	Disclosure	Location
GRI 2: General Disclosures 2021 - The organization and its reporting practices	2-1 Organizational details	1.1 Fifteen Years of Endeavor
	2-2 Entities included in the organization's sustainability reporting	Report Guide
	2-3 Reporting period, frequency and contact point	Report Guide
	2-5 External assurance	Independent Assurance Report
GRI 2: General Disclosures 2021 - Activities and workers	2-6 Activities, value chain and other business relationships	1.1 Fifteen Years of Endeavor
		4.3 Responsible Supply Chain
	2-7 Employees	5.1 Labor and Human Rights
GRI 2: General Disclosures 2021 - Governance	2-9 Governance structure and composition	6.1 Corporate Governance
	2-11 Chair of the highest governance body	6.1 Corporate Governance
	2-12 Role of the highest governance body in overseeing the management of impacts	2.2 Sustainability Governance
	2-13 Delegation of responsibility for managing impacts	2.2 Sustainability Governance
	2-14 Role of the highest governance body in sustainability reporting	2.2 Sustainability Governance
	2-15 Conflicts of interest	6.1 Corporate Governance
	2-16 Communication of critical concerns	2.3 Stakeholder Engagement
GRI 2: General Disclosures 2021 - Strategy, policies and practices	2-22 Statement on sustainable development strategy	Message from the Chairman
		Message from the CEO and Chairman of Strategy and Sustainability Committee
	2-23 Policy commitments	5.1 Labor and Human Rights
	2-24 Embedding policy commitments	2.2 Sustainability Governance
	2-25 Processes to remediate negative impacts	6.2 Risk Management
	2-26 Mechanisms for seeking advice and raising concerns	5.1.2 Harmonious and Inclusive Workplace
		6.3 Business Ethics
	2-27 Compliance with laws and regulations	3.5 Pollution Prevention
		5.2 Occupational Health and Safety
GRI 2: General Disclosures 2021 - Stakeholder engagement	2-29 Approach to stakeholder engagement	2.3 Stakeholder Engagement
GRI 3: Material Topics 2021	3-1 Process to determine material topics	2.4 Materiality Assessment
	3-2 List of material topics	2.4 Materiality Assessment
	3-3 Management of material topics	2.4 Materiality Assessment

GRI Standard	Disclosure	Location
GRI 201: Economic Performance 2016	201-1 Direct economic value generated and distributed	1.1 Fifteen Years of Endeavor
	201-2 Financial implications and other risks and opportunities due to climate change	3.1.1 Climate Risk Management
	201-3 Defined benefit plan obligations and other retirement plans	5.3.2 Compensation and Benefits
GRI 203: Indirect Economic Impacts 2016	203-1 Infrastructure investments and services supported	3.6 Biodiversity
	203-2 Significant indirect economic impacts	4.3 Responsible Supply Chain
		5.3.2 Compensation and Benefits
GRI 205: Anti-corruption 2016	205-1 Operations assessed for risks related to corruption	6.3 Business Ethics
	205-2 Communication and training about anti-corruption policies and procedures	6.3 Business Ethics
	205-3 Confirmed incidents of corruption and actions taken	6.3 Business Ethics
GRI 206: Anti-competitive Behavior 2016	206-1 Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	6.3 Business Ethics
GRI 301: Materials 2016	301-2 Recycled input materials used	3.2 Green Product
	301-3 Reclaimed products and their packaging materials	3.2 Green Product
GRI 302: Energy 2016	302-1 Energy consumption within the organization	3.3 Energy Management
	302-2 Energy consumption outside of the organization	3.3 Energy Management
	302-3 Energy intensity	3.3 Energy Management
	302-4 Reduction of energy consumption	3.3 Energy Management
	302-5 Reductions in energy requirements of products and services	3.2 Green Product
GRI 303: Water and Effluents 2018	303-1 Interactions with water as a shared resource	3.4 Water Resource Management
	303-2 Management of water discharge-related impacts	3.4 Water Resource Management
	303-3 Water withdrawal	3.4 Water Resource Management
	303-4 Water discharge	3.4 Water Resource Management
	303-5 Water consumption	3.4 Water Resource Management
GRI 304: Biodiversity 2016	304-1 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	3.6 Biodiversity
	304-3 Habitats protected or restored	3.6 Biodiversity
GRI 305: Emissions 2016	305-1 Direct (Scope 1) GHG emissions	3.1 Responding to Climate Change
	305-2 Energy indirect (Scope 2) GHG emissions	3.1 Responding to Climate Change
	305-3 Other indirect (Scope 3) GHG emissions	3.1 Responding to Climate Change
	305-4 GHG emissions intensity	3.1 Responding to Climate Change
	305-5 Reduction of GHG emissions	3.3 Energy Management
	305-7 Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	3.5 Pollution Prevention
GRI 306: Waste 2020	306-1 Waste generation and significant waste-related impacts	3.5 Pollution Prevention
	306-2 Management of significant waste-related impacts	3.5 Pollution Prevention
	306-3 Waste generated	3.5 Pollution Prevention
	306-4 Waste diverted from disposal	3.5 Pollution Prevention
	306-5 Waste directed to disposal	3.5 Pollution Prevention
GRI 308: Supplier Environmental Assessment 2016	308-1 New suppliers that were screened using environmental criteria	4.3 Responsible Supply Chain
	308-2 Negative environmental impacts in the supply chain and actions taken	4.3 Responsible Supply Chain
GRI 401: Employment 2016	401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	5.3 Employee Development and Care
	401-3 Parental leave	Appendix 1: Key Performance Indicator Table
GRI 403: Occupational Health and Safety 2018	403-1 Occupational health and safety management system	5.2 Occupational Health and Safety
	403-2 Hazard identification, risk assessment, and incident investigation	5.2 Occupational Health and Safety
	403-3 Occupational health services	5.2 Occupational Health and Safety
	403-4 Worker participation, consultation, and communication on occupational health and safety	5.2 Occupational Health and Safety
	403-5 Worker training on occupational health and safety	5.2 Occupational Health and Safety
	403-6 Promotion of worker health	5.2 Occupational Health and Safety
	403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	5.2 Occupational Health and Safety
	403-8 Workers covered by an occupational health and safety management system	5.2 Occupational Health and Safety
	403-9 Work-related injuries	5.2 Occupational Health and Safety
	403-10 Work-related ill health	5.2 Occupational Health and Safety
GRI 404: Training and Education 2016	404-1 Average hours of training per year per employee	5.3 Employee Development and Care
	404-2 Programs for upgrading employee skills and transition assistance programs	5.3 Employee Development and Care
	404-3 Percentage of employees receiving regular performance and career development reviews	5.3 Employee Development and Care
GRI 405: Diversity and Equal Opportunity 2016	405-1 Diversity of governance bodies and employees	5.1 Labor and Human Rights
	405-2 Ratio of basic salary and remuneration of women to men	5.3 Employee Development and Care
GRI 406: Non-discrimination 2016	406-1 Incidents of discrimination and corrective actions taken	5.1 Labor and Human Rights
GRI 407: Freedom of Association and Collective Bargaining 2016	407-1 Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	5.1 Labor and Human Rights
GRI 408: Child Labor 2016	408-1 Operations and suppliers at significant risk for incidents of child labor	5.1 Labor and Human Rights
GRI 409: Forced or Compulsory Labor 2016	409-1 Operations and suppliers at significant risk for incidents of forced or compulsory labor	5.1 Labor and Human Rights
GRI 413: Local Communities 2016	413-1 Operations with local community engagement, impact assessments, and development programs	5.4 Community Engagement
	413-2 Operations with significant actual and potential negative impacts on local communities	5.4 Community Engagement
GRI 414: Supplier Social Assessment 2016	414-1 New suppliers that were screened using social criteria	4.3 Responsible Supply Chain
	414-2 Negative social impacts in the supply chain and actions taken	4.3 Responsible Supply Chain
GRI 416: Customer Health and Safety 2016	416-1 Assessment of the health and safety impacts of product and service categories	4.2 Product Responsibility
	416-2 Incidents of non-compliance concerning the health and safety impacts of products and services	4.2 Product Responsibility
GRI 418: Customer Privacy 2016	418-1 Substantiated complaints concerning breaches of customer privacy and losses of customer data	6.4 Information Security

Appendix 3
Independent Assurance Report

TÜVRheinland®
Precisely Right.

Independent Assurance Statement

Introduction

TÜV Rheinland (Shanghai) Co., Ltd., member of TÜV Rheinland Group, Germany (hereinafter "TÜV Rheinland", "We") has been entrusted by the management of TCL China Star Optoelectronics Technology Co., Ltd. (hereinafter "CSOT", "the Company") to conduct independent assurance of CSOT 2023 Sustainability Report (hereinafter "the Report"). All contractual contents for this assurance engagement rest entirely within the responsibility of CSOT. Our task was to give a fair and adequate judgment on the Report.
The intended users of this assurance statement are stakeholders who have relevance to CSOT's overall sustainability performance and impacts of its business activities during year 2023 (1 January 2023 ~ 31 December 2023).
TÜV Rheinland is a global service provider of Corporate Social Responsibility (CSR) & Sustainability Services in over 65 countries, having qualified professionals in the field of Corporate Sustainability Assurance, Environment, Social and Stakeholder Engagement. We have maintained complete impartiality and independence during the assurance engagement, and we were not involved in the preparation of the Report contents.

Assurance Standard

TÜV Rheinland undertook the assurance work in accordance with the AA1000 Assurance Standard v3 (AA1000AS v3) Moderate level of assurance.

Scope & Type of Assurance

Our assurance engagement was carried out in accordance with the AA1000AS v3, Type 1, Moderate level on CSOT's sustainability performance information and data disclosed in the Report. The following assurance criteria were used in performing the assurance work:

- With reference to GRI Sustainability Reporting Standards (GRI Standards)
- The United Nations Sustainable Development Goals (UN SDGs)
- Adherence to the AA1000 AccountAbility Principles *of Inclusivity, Materiality, Responsiveness, and Impact*

Assurance Methodology

Our assurance activities included:

- Reviewing the company's management practices and processes, to evaluate sustainability management system, including corporate governance, compliance management, risk management, stakeholder communication, material issue analysis and key performance.
- Conducting interviews with company's senior management and managers responsible for gathering and analyzing information on sustainability performance.
- Reviewing and examining sustainability management practices and performance information and data to test the accuracy of such information and data based on a sample basis and applied analytical procedures.
- Reporting assurance observations to management provides an opportunity for the company to take corrective actions before the assurance process is completed.
- Collecting documentary evidence and assessing management representations to support adherence to the AccountAbility Principles.

TÜVRheinland®
Precisely Right.

Limitations

TÜV Rheinland performed the assurance based on the scope of defined engagement agreement, and on a moderate level assurance under the AA1000AS for engagement. Information and performance data subject to assurance is limited to the contents of the Report.
Procedures performed in a moderate assurance vary in nature from, and are less in extent, than high level assurance. Our assurance work did not cover financial report and its financial data and other information not related to sustainability.

Conclusions

Based on our methodology and activities performed within the scope of this assurance, we can reach a conclusion that no instances or information came to our attention that would be to the contrary of the statement made as below:

- CSOT 2023 Sustainability Report and its contents adhere to the AA1000 AccountAbility Principles.
- CSOT has implemented management processes, involving smart energy management system, human resource management system, and procurement and supply chain management system, etc., to collect and aggregate key performance data related to material issues within the reporting boundary, while the company identifies, evaluates, defines and manages material issues.
- The sustainability information and performance indicators disclosed in this report have been evaluated and supported by documentary evidence which truly reflect CSOT's sustainability management practices.

TÜV Rheinland shall not bear any liability or responsibility to a third party for perception and decision on CSOT based on this Assurance Statement.

Adherence to the AA1000 AccountAbility Principles

Inclusivity

The key stakeholders identified by CSOT include shareholders and investors, governments and regulators, customers, suppliers and cooperative partners, employees, communities and the media. Supporting evidence demonstrates that the company conducted internal and external stakeholder surveys on ESG issues in 2023 to collect and analyze their opinions on ESG issues.

Materiality

Considering the company's business characteristics, industry best practices, government regulatory requirements, and international sustainability trends, and the results of the stakeholder questionnaire, CSOT analyzed and prioritized the importance of ESG issues from the two dimensions of "attention to stakeholders" and "impact on the company's sustainable development". As shown in the material issues matrix disclosed in the report, high-materiality issues include, but are not limited to, product liability, occupational health and safety, pollution prevention, corporate governance, green products, business ethics and responsible supply chains, etc. These materiality issues were reviewed and approved by the Strategy and Sustainable Development Committee.

Responsiveness

CSOT conducts routine communication with key stakeholders on ESG issues of concern to them. These communication channels and methods mainly include information disclosure, government visiting and communications, customer meetings, employee training, supplier audits and training, industry cooperation and public welfare projects, etc.
This report discloses data on key performance indicators that stakeholders are interested in, including greenhouse gas (GHG) emissions, energy management, water resources, waste disposal, pollutant emissions, employee employment, occupational health and safety and supplier management, etc. Supporting evidence shows that the company released a carbon neutrality white paper on its official website in 2023.

Impact

TÜVRheinland®
Precisely Right.

CSOT has established and implemented the "Three Lines of Defense of Risk Management System" and established a risk database to focus on risks in the fields of operation, environment and society, carbon neutrality, business ethics and compliance, and prevent and reduce the above risks through the implementation of closed-loop risk management processes. We recommend that CSOT conduct an environmental and social impact analysis on the company's operations and business relationships, and establish appropriate processes to measure, evaluate and manage these impacts.

Daniel Pan
Corporate Sustainability Service Technical Manager
TÜV Rheinland (Shanghai) Co., Ltd
Shanghai, China, 25 June 2024

AA1000
Licensed Report
000-555/V3-1FAO0

TCL 华星

Feedback

Dear Readers:

Thank you for reading the TCL CSOT 2023 Sustainability Report. If you have any questions or suggestions about the Report, please feel free to contact us to provide feedback, helping us further enhance TCL CSOT's sustainability efforts and the quality of our reporting.

Contact Number: 0755-86908853

Email: csot.ESG1@tcl.com

Mailing Address: 9-2 Tangming Avenue, Guangming District, Shenzhen, Guangdong Province, China

Postal Code: 518107