



# **TRANSFAR CHEMICALS GROUP**

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**2023 SUSTAINABILITY REPORT**



# About Transfar Chemicals

At Transfar Chemicals, we are committed to technological innovation with two core focuses on functional chemistry and new materials. Our mission is to make innovative chemical technologies accessible to everyone, every family, and every organization, promoting the use of innovative products and services to enhance all aspects of human life. We offer competitive, safe, and dependable products, solutions, and services to traditional light industries like textiles, papermaking, plastics, and construction. With our profound understanding and strategic approach to chemical technology, we actively pursue the development of new energy, new materials, and other advanced applications that align with future trends. Our business extends to more than 100 countries and regions across the globe. As a technology-oriented enterprise, we focus on developing cutting-edge chemical solutions that address our customers' specific needs and pain points. Additionally, we leverage the core common technology modules developed during this process to benefit other industries.



Textile chemicals



Chemical coning oil



Paper chemicals



Plastic chemicals



Architectural coatings



Daily washing products



Synthetic rubber



Leather chemicals



Water treatment chemicals



Polyester resin



Deep cultivation of technology, research and development



Sustainable green development

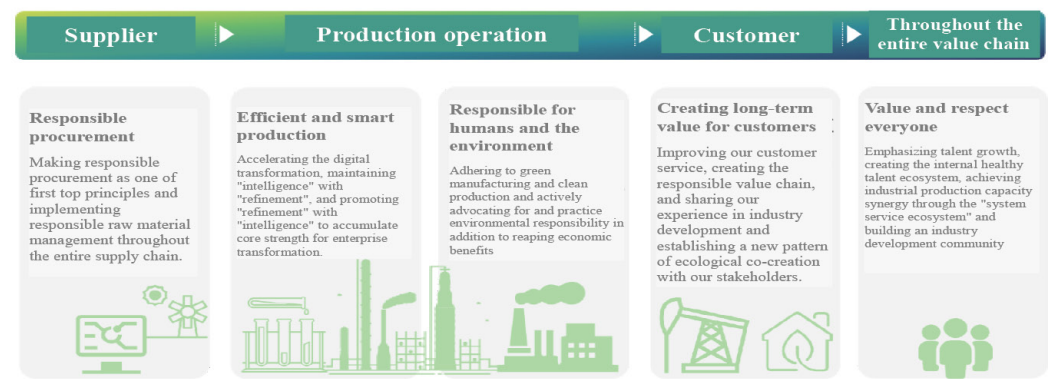


Innovative product services

Industry Application Coverage



Transfar Chemicals is dedicated to complying with industrial development orientation and social development trends, pursuing a sustainable future through technological progress and model innovation. Our commitment to sustainable development covers all aspects of the value chain and our own operations.



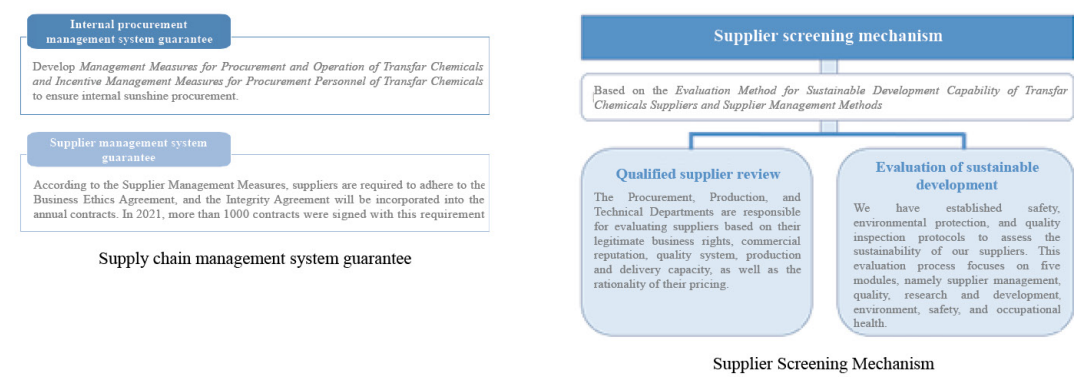
Our commitment to sustainable development covers all aspects of the value chain and our own operations.

Responsible Sourcing

As a global enterprise, responsible sourcing has always been one of Transfar Chemicals' first principles. We have implemented responsible raw material management throughout the entire supply chain. At Transfar Chemical Factory, certified raw materials are our first choice in production activities. We also strive to increase the proportion of certified raw materials as much as possible and actively encourage suppliers to use sustainable raw materials and production methods through cooperation to fulfill green responsibilities at the source. We actively carry out exchanges and cooperation with suppliers, promote healthy development with a transparent mechanism, jointly explore the global market, and continuously improve the competitiveness and sustainable development capabilities of the company and the supply chain.

Build a sustainable supply chain management system

We anticipate collaborating with our partners in the supply chain to establish a value chain that is transparent, responsible, and sustainable. This ensures that our products and services meet environmental and social sustainability requirements from the source, ultimately achieving sustainable development.



Sustainable development management of key suppliers:

Every year, we assess and categorize the risk level of our suppliers and identify key suppliers that have significant impact.

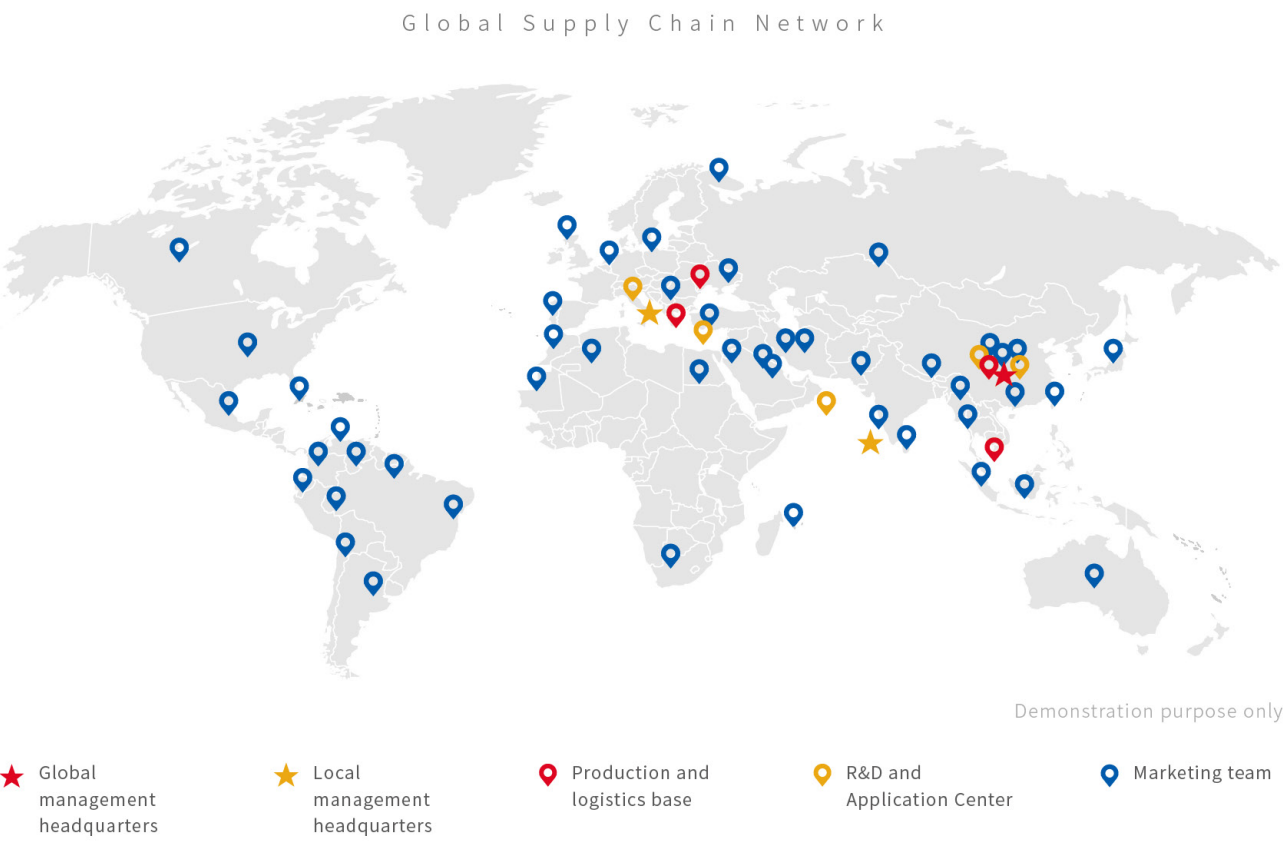
1.Comprehensive CSR Survey: Conduct an evaluation of the performance of all newly on boarded suppliers based on their adherence to worker's rights and interests, minimizing environmental impact, ensuring worker safety and health, operating with integrity, and complying with relevant laws and regulations. If a supplier does not meet our CSR access standard, the supplier will not be considered a qualified supplier.

2.Commitment signed: Every new major supplier that we introduce is required to sign a "Supplier CSR Commitment Letter". This letter requires them to pledge their commitment to operating with integrity, ensuring equal employment opportunities, providing safe and healthy working conditions for their workers, ensuring equal employment opportunities, and treating their workers with the respect and dignity they deserve.

3.Regular audit: We perform regular CSR audits on our key suppliers using a combination of document review, on-site inspection, and employee interviews. These audits are aimed at assisting suppliers in enhancing their management performance regarding environmental sustainability, labor practices, and ethical business conduct. If any issues are found during the audit, we require the supplier to address and rectify them within a specified time frame. If the identified problem is severe, we actively encourage the supplier to improve its management system and processes.

Global supply chain network

We operate 12 production bases across various countries and regions including China, Europe, and Southeast Asia. Additionally, our supply chain network spans across more than 100 countries worldwide. During the reporting period, we aimed to establish a global supply chain pattern and established bases in key regions in Southeast Asia, with plans for factory and warehouse construction in East Asia, the Middle East, South America, and other regions to enhance our global supply capabilities. Moreover, we are committed to building a global procurement digital platform that prioritizes customer needs, leveraging big data and artificial intelligence technologies to enhance procurement operations and management efficiency. This platform provides comprehensive support for enterprise operations and decision-making, offering online visualization of the entire procurement business and transparent procurement information.





# Efficient and intelligent production

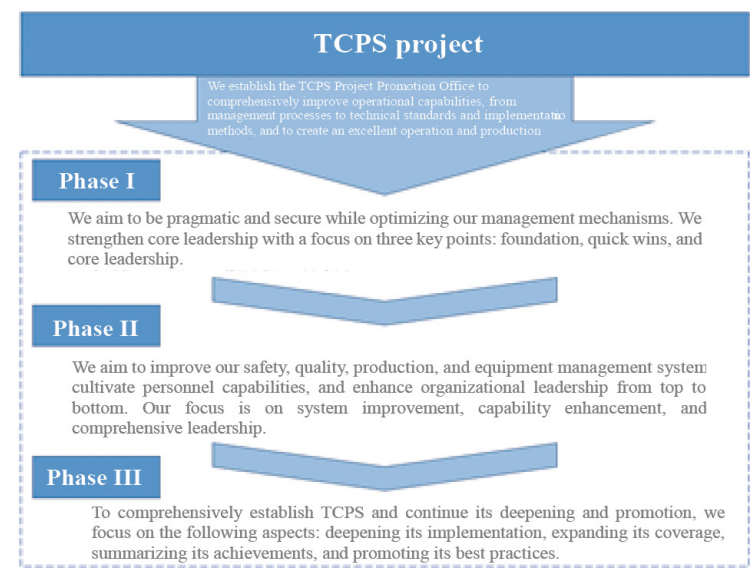
At all times, we strive for excellence by continuously refining our operational and management abilities, enhancing the quality of our products, and upholding a high standard of business services to drive enterprise development. We stay in sync with the digital revolution, accelerating our digital transformation while maintaining a balance of "intelligence" and "refinement". This approach helps us accumulate the essential capabilities necessary for transforming our enterprise.

## Operational Excellence Strategy

In the current reporting period, we initiated the implementation of the Excellent Operation Management System (TCPS) project to shift from a "following" to a "leading" position in our industry. This project aims to establish an efficient management system that drives our company's operations, while also enhancing our awareness and capabilities in operational processes, safety management, quality management, and cultural concepts. Furthermore, we have developed a globally competitive talent team and promoted a shift in our operational management approach from "lean" to "excellent".



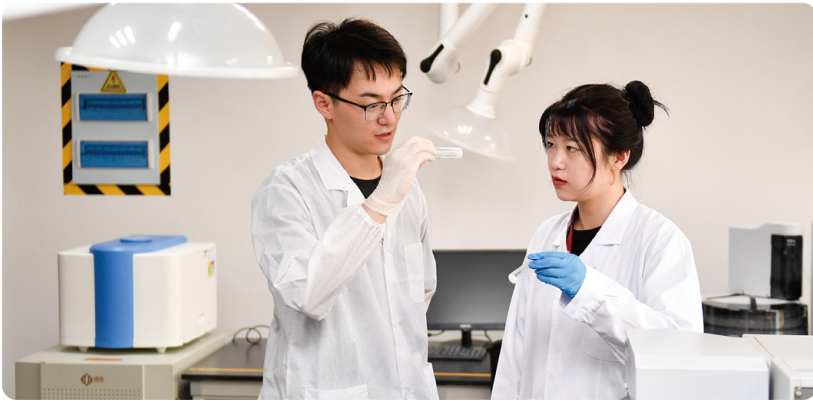
### Operational Excellence System



The three-phase construction of the excellent operation project

# Whole process quality management

Our commitment to meeting customer needs is reflected in our integration of quality standards into enterprise process management. We prioritize the improvement of quality awareness across the entire value chain, from employees to supply chain partners, to optimize demand management, marketing, research and development, supply chain, and service quality. Our continuous improvement approach enhances customer satisfaction and strengthens our competitive edge.



- Internationalization of management system**
  - We have introduced over 20 professional management systems in various fields and continually enhance our business management capabilities to align the company's system management with international standards.
- Diversified management mechanisms**
  - We continuously promote various improvement methods, such as excellent performance, Six Sigma, lean, and operational excellence, with the aim of enhancing the quality management performance of the organization.
- Management process information**
  - We have initiated the development of process information to adapt to the evolving quality management standards. Through the system, we monitor the entire process of "R&D change issuance - process control - evaluation of quality inspection stability" online.

## Quality management system construction

**Case** Our company was awarded the highest honor at the international "Quality Olympiad", achieving a new level of excellence in lean management

In 2021, our QC team at Transfar Chemicals' Taishan facility won the Gold Award at the 46th International Convention on Quality Control Circles (ICQCC) for their project "Increasing the Yield of PA Products". This achievement marks our first international award in the field of quality management. The project centered around the PDCA cycle model, optimizing the process, equipment, and procedures to improve the yield of PA products. Through these efforts, we increased product yield from 97.47% to 98.72%, reducing the labor intensity of production employees. Our efforts produced significant economic benefits, including cost savings from improved product yield, reduced discharge of waste, and reduced labor costs. Ultimately, the project led to an annual cost reduction of 1.0143 million yuan.



Transfar Quality Management Team Won The International Quality Olympiad Gold Medal

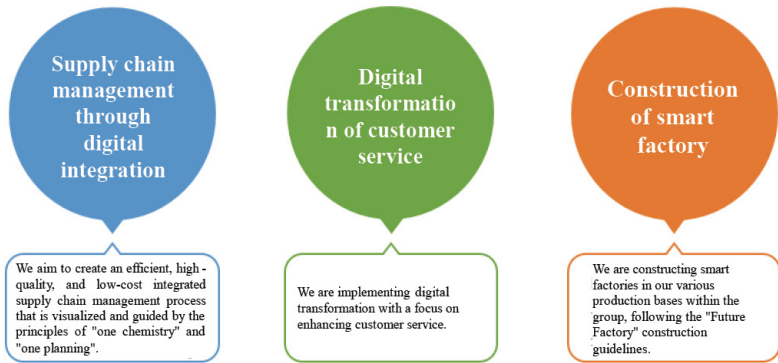


Results of digital transformation

We have aligned ourselves with the Group's strategic decision to promote digital transformation, successfully implementing end-to-end supply chain digitalization, digital customer service, and digital smart factory establishment. Furthermore, we have been spearheading digital exploration among industrial chain participants, leading to a demonstration effect on the industry and progress towards intelligent manufacturing.



"AGV" Automated Guided Vehicle



Digital Transformation Change Practice

Highlight performance:  
Our digital transformation initiatives have yielded significant improvements across multiple areas. We have managed to reduce our delivery cycle by 33%, increase production efficiency by 25%, decrease quality defects by 20%, reduce the number of operators required by 10%, and lower comprehensive energy consumption per unit of product by 6.5%.



Case We have established a digital supply chain system to ensure stable and efficient delivery

Amidst the ongoing impact of COVID-19 and shifting policies and markets for raw materials, we have continued to evolve our supply chain strategies in 2022. We are now focused on creating a customer-centric digital supply chain platform that is efficient, streamlined and prioritizing an exceptional user experience. Our goal is to establish a core system for managing our digital supply chain that is driven by customer demand. Our supply chain system can be further enhanced through the use of our supplier ecological collaboration platform which enables stable supply and efficient delivery by utilizing trend prediction and strategic stocking. Moreover, our supply chain control tower achieves planning coordination and unified production capacity scheduling for 12 global manufacturing bases, resulting in increased flexibility, toughness, agility, and certainty.



Global Digital Supply Chain

Case We have established a digital smart factory and elevated the sophistication of our smart manufacturing capabilities

Our goal is to boost the industry's competitiveness and establish a leading example of smart factories in the field of fine chemicals. To achieve this, we will drive the construction of digital smart factories, drawing on the strengths of digital factories and guided by future-oriented factory planning. Our unwavering dedication to integrating cutting-edge technologies and advanced equipment, constructing digital module scenarios, and strengthening our data governance capabilities, enable us to achieve lean production, refine our production management, and make intelligent production decisions. These endeavors ultimately result in enhanced efficiency and benefits for our entire smart factory.



Intelligent Manufacturing Digital Platform

Responsible for human beings and the environment

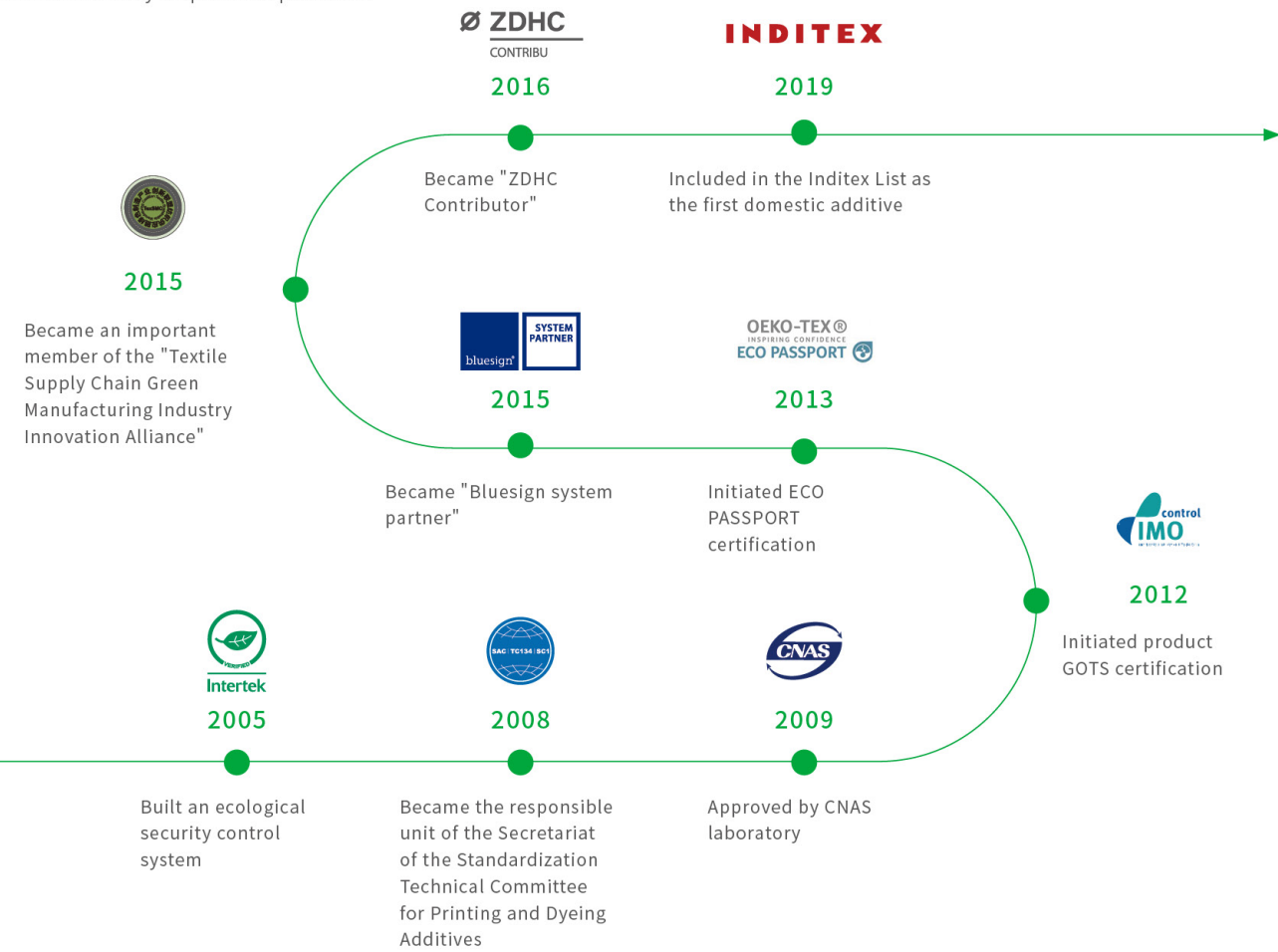
Our approach to sustainable development is centered on the principles of "resource conservation and environmental friendliness". We prioritize green manufacturing and clean production, collaborating closely with our partners to drive the industry's green transformation. In addition to reaping economic benefits, we actively advocate for and practice environmental responsibility, working towards our country's "double carbon" goal.

Environmental management

We continuously measure ourselves against global benchmarks and strive to enhance our environmental management system. As part of our commitment to environmental responsibility, we regularly engage third-party audit firms to assess our system, and proactively implement improvement plans to strengthen our environmental management practices. As an industry leader, we have achieved several notable certifications, including the internationally recognized Oeko-Tex® Standard 100 textile ecological certification. Additionally, we have successfully obtained the EU GOTS organic cotton certification, ECO-Passport certification, blue label certification, and green leaf label certification, underscoring our commitment to sustainable and environmentally responsible practices.



Environmental Friendly Manufacturing Plant



Transfar Chemical Environmental Management Certification Calendar



# Action for environmental protection

Our dedication to fulfilling the country's expectations for low-carbon and environmentally sustainable practices within the manufacturing industry is unwavering. We persistently improve our green management practices throughout the entire product life cycle, while simultaneously innovating our green supply chain information platform and examining the potential for green factories. Our ultimate objective is to set the "green benchmark" in the industry and encourage industrial transformation and upgrading through eco-friendly development.

## Double carbon action

Our commitment to helping the country attain its "carbon peaking and carbon neutrality" objective prompted the establishment of a dedicated "double carbon" working group. We partnered with the Energy Evaluation Center of Zhejiang University to compile our carbon emission data and formulate the required strategies to achieve our double carbon goal. We are promoting low-carbon transformation in our operations, as well as within our upstream and downstream sectors through technological innovations, raw material procurement, supply chain management, and industrial chain coordination. Simultaneously, we are strengthening our low-carbon service capabilities.



Work With ZJU to Enhance Carbon Footprint

### Green chemistry technology

We have eliminated the use of toxic and harmful substances in the design, manufacturing, and application of our chemical products. We also promote research and development of new energy-saving and environmentally friendly technologies, equipment, and products to our customers, effectively improving production and reducing emissions.

### Green material scheme

We develop, replace, and upgrade materials based on structural properties and customer needs. We prioritize the use of green and environmentally-friendly solutions, such as biodegradable materials, lightweight materials, and water-based coatings, to minimize greenhouse gas emissions in the process of material production, processing, and use.

### Green supply chain system

We strive to achieve resource efficiency, low-carbon energy, clean processes, and waste recycling from various aspects such as raw material supply, production processes, logistics, sales, end-use, and resource recycling. This has helped us form a complete green supply chain system.

### Green industry chain collaboration

We have scientifically developed a schedule, roadmap, and project proposal for the "Dual Carbon" project. We are collaborating with Zhejiang University to assess the full lifecycle carbon footprint of industrial production and downstream applications. We have also joined the "30-60 China Fashion Brand Carbon Neutrality Acceleration Plan" among the first batch, committing to accelerating climate innovation activities and completing the carbon footprint assessment to help achieve the "Dual Carbon" project.

## "Double Carbon" Action in the Whole Industry Chain

Highlight performance:

Throughout the reporting period, we developed 32 low-carbon application research projects, exported 9 typical fabric system environmental protection solutions, engaged in 7 collaborative low-carbon research projects with universities, and identified over 30 low-carbon solutions.

Additionally, we constructed a photovoltaic power station on the rooftops of our office building and select workshops, with the aim of generating 3 million kilowatt-hours of electricity in 2022. This accounted for approximately 10% of the combined annual electricity consumption of our two factories.



## Case Solar Roof Top Project

To promote green production, we prioritize reducing energy consumption. Furthermore, we strive to maximize the utilization of local green energy sources.

In 2020, we accomplished the 'Solar Rooftop Project' at our Ede headquarters in the Netherlands. We installed 850 solar panels on the production site building's rooftop, which provides approximately 16% of the site's energy consumption. The energy produced is locally sourced and equivalent to the power used by 85 Dutch households. This is a significant milestone as TANATEX recognizes the importance of utilizing locally generated green energy.

On top of that, Tanatex Rayoung site installed 432 sets of solar panels in 2023, which supported us reduce approximately 30% of energy use and enhanced Transfar global carbon footprint. The execution of this project is expected to be finalized in 2023.



Tanatex Rayoung Site Solar Panel Project

## Case We have upgraded our transportation management model to establish a low-carbon supply chain.

In order to reduce supply chain emissions, we apply the low-carbon concept to warehousing and logistics. At the Dajiangdong base, we have implemented an RGV conveying line for automatic transportation from the manufacturing end to the storage end. Additionally, in the distribution link, we utilize a transportation management and tracking system to monitor vehicle trajectory and position in real time. We also recycle packaging barrels, transportation equipment, and utilize green trucks and optimize vehicle loading rate to create an accurate and efficient transportation management model. These efforts not only reduce carbon emissions in the entire logistics chain but also enhance our operations with environmental consciousness, and accelerate the development of sustainable supply chains.



Holistic Low Carbon Supply Chain Solution

## Helping to protect the environment

We strive to enhance our environmental protection efforts beyond just low-carbon actions. Leveraging our own professional and technical expertise, we collaborate with upstream and downstream partners in the industrial chain as well as customers to implement environmental protection practices. Our initiatives encompass reducing resource consumption, regulating the discharge of hazardous wastes, and enhancing production efficiency to achieve sustainable green development.



Hand in hand to help the environment



Waste gas management	<ul style="list-style-type: none"> <li>● <b>Facility renovation:</b> Transform the original diesel fired thermal oil boiler into a natural gas boiler, equipped with low nitrogen burners. The emission concentration of nitrogen oxide decreases by more than 60%; no particulate matter and sulfur dioxide pollutants are detected after the renovation.</li> <li>● <b>Technological improvement:</b> The end-of-life waste gas is treated through an RT0 thermal treatment device, ensuring that the end-of-life emission index is below 40mg/m<sup>3</sup>; the emission concentration of waste gas in some sewage stations has decreased by over 80% after treatment process transformation.</li> </ul>
Solid waste management	<ul style="list-style-type: none"> <li>● <b>Classification management:</b> Classify, collect, and dispose of solid waste.</li> <li>● <b>Full- process control:</b> Implement full- process control in the production, transfer, storage, and disposal of solid waste.</li> </ul>
Hazardous waste management	<ul style="list-style-type: none"> <li>● <b>Compliance disposal:</b> Conduct classified collection and standardized storage at the source, and entrust qualified units for timely compliance disposal and ledger management.</li> <li>● <b>Regular tracking:</b> Conduct regular hazard investigation and disposal information tracking, as well a compliance evaluation and tracking of hazardous waste disposal units.</li> <li>● <b>Emergency drills:</b> Organize special emergency drills to ensure effective emergency response management.</li> </ul>

Internal Green Practices



Highlight performance:

We are committed to tackling industry-wide challenges and helping customers achieve sustainable development. By promoting green development, we aim to drive industrial transformation and upgrade. Our efforts have led to a significant increase in the success rate of the entire polyester dyeing process, from 60% to over 90%. We have also achieved water savings of 34% per ton of cloth, contributing to the reduction of resource consumption and supporting sustainable green development.

The Daijiangdong Base boasts a comprehensive energy consumption of 14.91 kg standard coal per unit product and 0.28 tons of standard coal per 10,000 yuan of industrial added value, significantly lower than the average energy consumption per 10,000 yuan of added value of chemical reagents and additives. With an impressive utilization rate of 85.61%, it sets a new standard for green manufacturing in the fine chemicals industry and sets an example for others in the textile printing and dyeing auxiliaries sector.

Create long-term value for customers

We recognize our customers as one of the most important assets for the company's growth. Through improving our customer service, creating a responsible value chain, and sharing our experience in industry development, we aim to establish a new model of ecological co-creation with our stakeholders. This enables us to achieve mutual benefit and win-win outcomes for all parties involved.

Provide industry-leading sustainable development solutions



Global R&D Network

In 2021, we prioritized the industry and users' needs, explore extensively, and improve our strategic roadmap for technological innovation. We continue to innovate in technology, develop new products, and iterate programs according to the needs of the times and users. Our aim is to strive for key core technologies.

We believe in integrating our forward-thinking industry insights, advanced technology, innovative solutions, and full life cycle services from technology research and development to product presentation. We take a deep dive into various customer business scenarios, resulting in high industry recognition.

Highlight performance:

Throughout the reported period, we submitted 41 patent applications, comprising of 33 invention patents and 8 utility model patents. During the reporting period, we were awarded 2 science and technology progress awards at the provincial and ministerial level.

As of 2021, we possess 6 high-tech enterprises at the national level, 1 enterprise technology center at the national level, 1 standard laboratory at the national level, 1 key enterprise research institute in Zhejiang Province, 2 R&D centers at the provincial level, 1 R&D center at the municipal level, and 1 technology center at the municipal level.

Case Conserving water = Preserving life

With the launch of the TANADYE intelligent water saving system we are able to help our customers save up to 40% water, 40% energy usage and 30% of processing time making it possible for them to reach their sustainability goals.

However, we additionally wanted to make a direct impact on the current water crisis. As a result, we teamed up with Water.org, an international non-profit organization that provides access to safe water and sanitation to people around the world in places where water is scarce. A majority of such places is home to The



Partner With Water.org To Uphold Living Environment

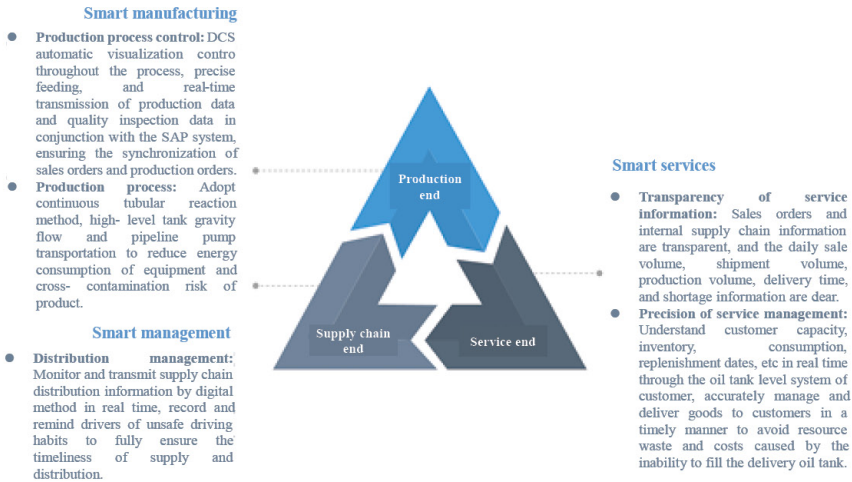


booming textile industry in the Far East and South America. Water.org gives out loans for water and sanitation solutions. People living in poverty use these loans to put a tap or toilet in their homes. This gives them the ability to shift their time and energy towards work or school, which was, previously spent to go and collect water. Especially girls and women are impacted by this change. Whenever a family repays their loan, this provides another family the opportunity to get a loan and receive access to water and sanitation. So far, our donation has changed the lives of 292 people around the world. We aim to inspire others to do the same, because saving water = saving lives.



Pioneering a new era of intelligent ecology

We have established a new intelligent ecology in the fine chemicals industry by prioritizing customer needs and undergoing intelligent transformation and upgrading. Through the implementation of intelligent management, intelligent services, and intelligent manufacturing, we have taken the lead in leveraging cutting-edge scientific and technological advancements to promote healthy and sustainable development in the industry.



Pioneering a new intelligent ecology of the industrial chain

Highlight performance:  
We have successfully reduced production management costs by 25%, decreased energy consumption per 10,000 yuan of output value by 10%, and boosted labor productivity by 25% by implementing a new intelligent ecosystem. This successful application of intelligent manufacturing can be shared with and expanded to the industry's upstream and downstream, exploring new pathways for industry empowerment through intelligent manufacturing.

Provide our customers with the best possible experience

We prioritize our customers with a "customer-centric" service attitude and continuously enhance our customer service system. We establish and refine our customer visit process system, provide specialized service ability improvement training, and analyze our services comprehensively with customer satisfaction as the primary indicator. Our commitment is to provide customers with more personalized and exceptional experience services.

**Customer Service "1101" Commitment**

Reach within 1 minute, form a solution within 10 minutes, and make a quick response within 1 hour

On Site Technical Customer Service To Constantly React Customer Technical Problems

**Customer service system guarantee**

Protect rights and interests of customers

**Implement strict customer information confidentiality system:**

- All customer information included in the CRM system is managed by dedicated personnel.
- There shall be data traces for relevant staff to check the customer information.
- The confidentiality clauses for customer information and trade secrets are clearly stipulated in the agreement.

Optimize customer experience

**Optimize return management and complaint management system:**

- Link handling of customer complaint directly to internal performance and drive internal improvement.
- Develop the closed-loop rolling tracking mechanism and quality improvement promotion mechanism for the entire process of analysis of the causes of quality anomalies/complaints, implementation of corrective measures, and confirmation of the effectiveness.

Guarantee the quality of customer service



# Value and respect everyone

## Prioritize individuals

Motivated and empowered employees are critical to our success. We establish connections across various businesses and industries to foster relationships with our partners and stakeholders. Our goal is to enhance the quality of life for all through the adoption of Transfar's solutions and responsible business practices.

Transfar Chemicals is committed to building a sustainable career platform that enables employees to achieve personal growth and happiness through hard work. We strive to create a fair, just, simple, and positive corporate atmosphere, empowering our employees to realize their full potential.

## Employment Philosophy

As a global enterprise, we have employees from over 30 countries and regions. We embrace and respect the diversity and differences of our workforce, comply with international laws and social standards, and surpass these standards in many aspects. Our goal is to provide an open and free environment where everyone feels comfortable expressing their ideas and suggestions, thereby enabling the team and the company to achieve greater success.



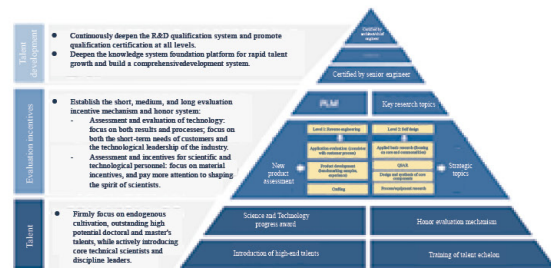
Localization To Excel Regional Team Example - India

## Occupational safety

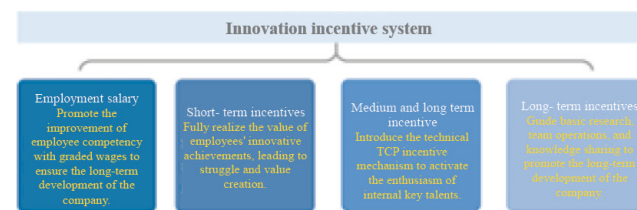
We prioritize the health and safety of our employees, and it is an integral part of our strategy. We are committed to ensuring the safety and well-being of our employees and the surrounding community. We offer comprehensive occupational and emergency medical services, including occupational disease prevention, emergency medical treatment, and health promotion programs. Our goal is to provide a safe working environment for our employees and contractors on a global scale while ensuring the safety of the local community.

## Career Development

We have developed an innovative talent incentive system that matches short, medium, and long-term goals. We continuously improve our talent cultivation and retention mechanisms, and implement various measures to enhance our scientific research talent pool. These efforts lay the foundation for building our company's innovative think tank.



An innovative system for training talent.



A three-pronged innovation incentive system.

## Moving forward alongside the industry

We are dedicated to being a top-performing enterprise, continuously surpassing technical barriers and providing various intelligent solutions for the industry. Through active involvement in industry exchanges and the establishment of standards, we are committed to advancing the mutual development of the industry.

Highlight performance:

In the reporting period, we led the development of three national standards and contributed to the development of two others. Additionally, we took charge of five industry standards and participated in the creation of seven more.

### Case We collaborate in organizing the Printing and Dyeing Innovation Technology Exchange Conference to advance the industry's high-quality development

During the reporting period, we collaborated with Zhejiang Printing and Dyeing Industry Association to host the 2021 Chuanhua Cup Printing and Dyeing Innovation Technology Exchange Conference. The conference featured a unique blend of sharing sessions, interactive small meetings, and on-site visits, showcasing innovative printing and dyeing technologies, research and development achievements, automated and intelligent printing and dyeing equipment, advanced printing and dyeing wastewater treatment technologies, energy-saving printing and dyeing processes, and new auxiliaries and their applications. The conference highlighted the latest industry technologies, including printing and dyeing quality online control systems, and aimed to promote the high-quality development of the printing and dyeing industry in Zhejiang Province.



2021 Chuanhua Cup Printing And Dyeing Innovation Technology Exchange Conference

### Case We actively participated in launching the Innovative Product Award Ceremony, where we shared our experiences in the development of green technology

During the reporting period, we collaborated with the China Textile Federation to hold the "Hundreds of Products Release · Hundreds of Docking——'Cultivation and Promotion of Top Ten Textile Innovation Products in 2021'" Award Ceremony and Hundreds of Brands Accurate Docking Meeting with Shengze enterprises. Our aim was to promote upstream and downstream exchanges and cooperation in the textile industry. At the meeting, we shared solutions for promoting low-carbon development by upgrading the research and development of functional fabrics. We also presented our latest functional and environmentally-friendly additives in the special product display area, and exchanged technical experiences with the industry on our green development initiatives.



Awards Ceremony

## **TRANSFAR CHEMICALS GROUP**

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