

2022 Corporate Social Responsibility Report



China Southern Airlines Co., Ltd.  
**Corporate Social Responsibility Report**  
**2022**

CHINA SOUTHERN AIRLINES



**China Southern Airlines Co., Ltd.**

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# Forge Ahead on a New Journey and Work Energetically for the Future

In 2022, the Party's 20th National Congress was successfully held, charting the course and drawing up an ambitious blueprint for comprehensively building a modern socialist country and promoting national rejuvenation. China Southern adheres to the guidance of Xi Jinping's Thought on Socialism with Chinese Characteristics for a New Era, implements the spirit of the 20 National Congress of the Communist Party of China, and thoroughly implements the work arrangements of the State-owned Assets Supervision and Administration Commission and the Civil Aviation Administration. China Southern always holds firm confidence, maintains concentration, faces difficulties headlong, pursues progress while maintaining stability and does a good job in all aspects. With high-quality development as the main line, China Southern continues reform and innovation, plans green development, and strives to create comprehensive value of economy, environment and society, celebrating the 20<sup>th</sup> victory of the CPC with excellent results.

## Highlights of 2022

Safe flight time

1.56 million hours

The ratio of normal flight segment to planned flight segment

95.45%

Ton-km CO<sub>2</sub> emissions

8.72 tons / 10,000 ton-km

600,000 flights carried out safely

The overall satisfaction of passengers

4.688 points

100% electrification of new or updated vehicles in key regional airports

air safety for

343 consecutive months

The overall satisfaction of passengers up

5.9% year on year

The new approach "Meal on demand" saved

2.431 million meals

Flight safety for continuous

278 months

The net recommendation value

83.55%

Maintenance hazardous waste treatment rate reached

100%

Corporate liability event civil aircraft incident rate of 10,000 hours

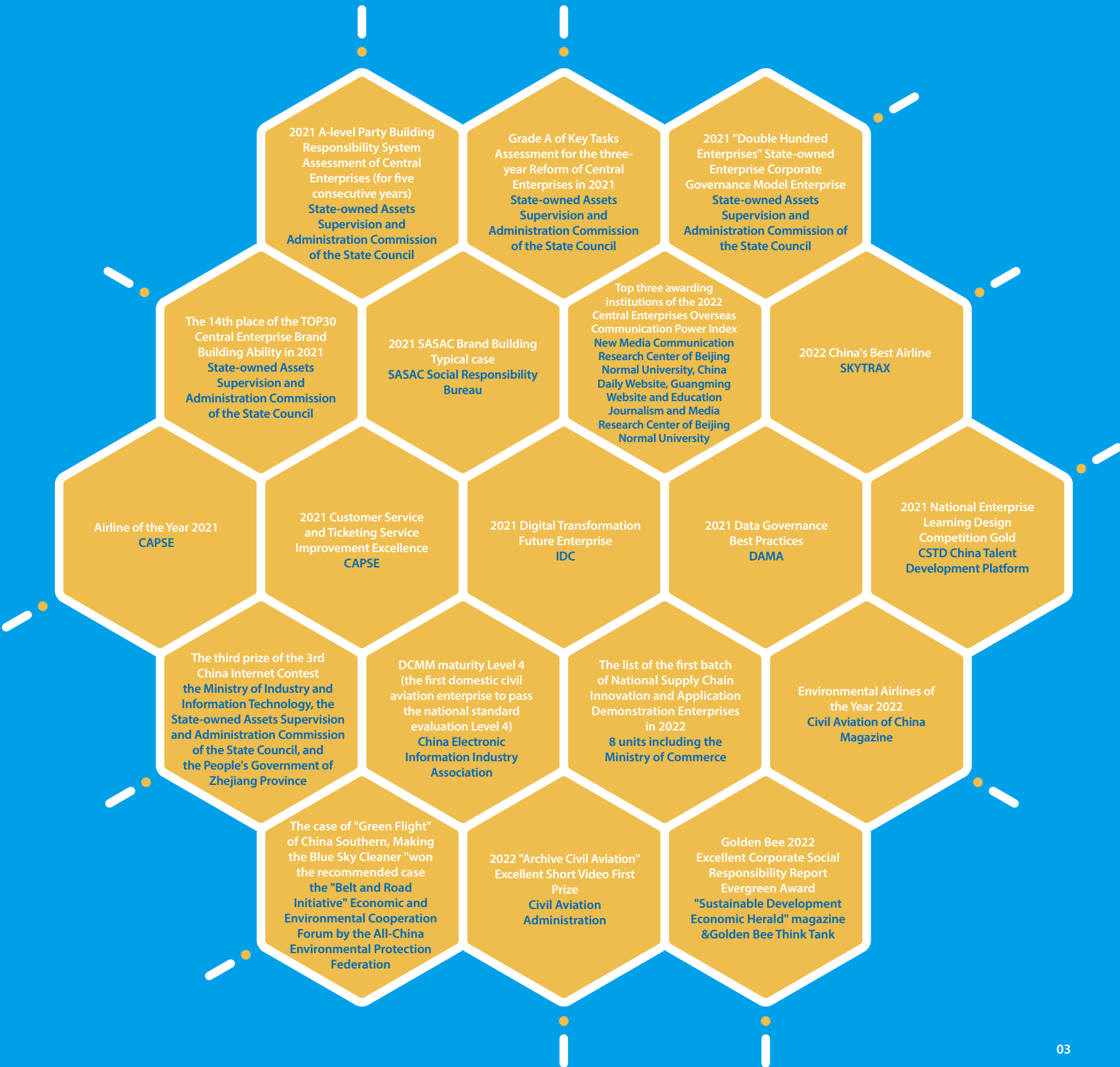
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The net recommendation value up

8.99 percentage points

The wastewater treatment rate of aviation food production reached

100%







## Letter from the Chairman

The year 2022 was extraordinary and difficult. In the face of extreme difficulties and severe challenges, China Southern conscientiously implemented the decisions and arrangements of the central and higher authorities, resolutely shouldered the responsibility of the central enterprises, pushed ahead and faced difficulties, and won three battles. All work has made new progress and achieved results, and the enterprise's management level, business ability, competitiveness, brand image, and party building have all reached a new level. First, we have won the war of safety production and security, and the safety level continues to maintain a leading position in China's civil aviation industry.

Second, we have won the war of active and quick response in operation, and the production and operation have won the general trend. The flight availability rate has been among the top among the major domestic airlines for seven consecutive years, and the service indicators have been among the top domestic airlines. Third, we have won the battle for high-quality development, accelerated the implementation of strategic tasks, and successfully concluded the three-year reform campaign. We have maintained the "A" level in the assessment of the Party building work of central enterprises for five consecutive years.

**The security situation remained stable.** Seriously study and implement the important instructions of Xi Jinping, the General Secretary, on civil aviation safety work, effectively respond to the impact of industrial flight accidents, ensure the successful convening of the 20<sup>th</sup> National Congress of the Communist Party of China, adhere to the overall strategy of "Two Priorities and One Prevention", ensure "Two Absolute Safety", and safely transport 1.56 million hours of flight throughout the year, ensuring 278 months of flight safety and 343 months of air defense safety.

**The business response has achieved good results.** The supply chain of the service industry is stable, and all efforts have been made to restore routes and flights. The total annual transportation turnover, passenger transport volume and cargo and mail transport volume reached 16.4 billion ton-kilometers, 62.64 million person-times and 1.33 million tons respectively. With its own stable growth to serve the steady growth of the economy, it has formulated and implemented the operational response plan and the stable growth work plan, and strove to seize revenue, reduce costs, and revitalize resources, gradually forming a leading advantage in operation.

**The service brand continued to improve.** Continue to carry out special actions to improve the flight availability. The annual flight availability rate was 95.45%, 0.47 percentage points higher than the industry average; Create "Five Dimensional" service, promote the implementation of "Affinity and Refinement" concept, improve the one-stop full-process service platform of "China Southern E-line", and open special passenger service counters and channels. Decisively take measures to return and alternate when passengers are in an emergency, and the film "Ordinary Hero" adapted from the incident of China Southern and other units helping the boy with broken arm in Xinjiang was successfully released. In 2022, China Southern's passenger satisfaction increased by 5.9% year on year, winning the Skytrax "China's Best Airlines" award for the first time, ranking the first brand in the aviation service industry of the Ministry of Industry and Information Technology's China Brand Power Research for 12 consecutive years, and ranking the 14th in the benchmarking of brand building of central enterprises.

### Major strategies were further advanced.

Serve the construction of the Greater Bay Area of Guangdong, Hong Kong and Macao and the leading demonstration area of Shenzhen, strengthen and expand the Guangzhou hub, launch the "Bay Area Link" product, and promote the four integration of "Network, Market, Product and Service" in the Greater Bay Area. Serve the construction of Xiong'an New Area and the coordinated development of Beijing-Tianjin-Hebei, build a high-quality Beijing hub, and take the lead in optimizing the timing of Daxing Airport. Serve the "the Belt and Road Initiative" construction, build a gateway hub in western Urumqi, and optimize the eastern western route. Serve the construction of Hainan Free Trade Port, and increase the number of routes from Hainan to East China, Southwest China and Central South China.

### Breakthroughs have been made in deepening reform.

The three-year reform of state-owned enterprises ended successfully, the completion rate of filing tasks was 100%, 74 contracts were signed under the tenure system and contract system, the special rectification of "Institutionalization" was carried out in 45 secondary units, and the locomotive reform was further advanced. In the 2021 annual assessment of the three-year reform of state-owned enterprises, China Southern was rated as Grade A, and in the special assessment of "Double Hundred Enterprises", China Southern logistics ranked first and was rated as "benchmark".

### Rural revitalization continued to advance.

Deepen the characteristic assistance model of "Aviation Leading, Industry Promoting, Education Consolidating, Care and Assistance, and Sunshine Poverty alleviation", and promote the effective connection between poverty alleviation and rural revitalization. 69 temporary and supporting cadres were selected to take charge of the supporting work. China Southern invested 72.795 million yuan in the targeted counties and 350 million yuan in investment through investment promotion, rated the highest in the targeted assistance assessment of the central unit for four consecutive years.

### Green flight has achieved remarkable results.

Fully implement the seven major actions of carbon neutrality, complete the first phase of the aircraft weight management system, achieve the goal

of plastic restriction and the new and updated electrification of in-field vehicles at key airports. Through the implementation of lightweight dining cars and other measures, nearly 260 tons of fuel were saved by weight reduction, and passengers' "Dining on Demand" saved more than 7.351 million meals. In 2022, China Southern's fuel consumption per ton-kilometer and carbon emissions per ton-kilometer were 2.7% lower than the previous year.

**The care for staff is practical and meticulous.** Set up a compensation package policy for flight attendants and safety officers, distribute double subsidies to front-line flight attendants, optimize the policy on hourly fee of pilots, and invest 43.11 million yuan to condole staff. Deeply care for the mental health of employees and the double-flying families. Carry out 274,000 person-times of heart-to-heart talk, carry out more than 1,800 person-times of consultation through the "Kapok Good Mood" studio, and launch 32 sessions of "Kapok Heart Companion" online counseling.

The year 2023 is the first year to fully implement the spirit of the 20<sup>th</sup> CPC National Congress, and also the key year for China Southern to promote high-quality development, and speed up its progress to the world class. China Southern will fully implement the spirit of the 20th National Congress of the Communist Party of China (CPC), work hard to promote the high-quality development of China Southern, strive to be at the forefront of the new journey towards world-class, and make new and greater contributions to the comprehensive construction of a socialist modern country and the comprehensive promotion of the great rejuvenation of the Chinese nation!

Ma Xulun  
Chairman  
China Southern Airlines Co., Ltd.

# About Us

## Company Profile

By the end of 2022  
China Southern Airlines operates

1,327 routes

104 new domestic  
routes have been opened

The total transport turnover is

16.4 billion tons  
kilometers

The passenger transport capacity is

62.64 million

The freight volume is

1.33 million tons

China Southern is the main air transportation company controlled by China Southern Airlines Group, with its headquarters located in Guangzhou. The company was established in 1995, listed on the Hong Kong Stock Exchange and the New York Stock Exchange in 1997, and listed on the Shanghai Stock Exchange in 2003. China Southern has 21 branches (including branches in Taiwan and Macao), 21 domestic sales departments and 53 overseas sales departments. The annual passenger traffic of China Southern reaches 152 million, ranking first among Chinese airlines for 44 years in a row, ranking first in Asia and leading in the world, and ranking top ten in the world in terms of cargo transportation.

In recent years, China Southern has made every effort to build a "Dual Hub" between Guangzhou and Beijing, and is committed to building two comprehensive international aviation hubs by opening and optimizing the route network. In Guangzhou, China Southern has been steadily building the "Canton Route" for 10 years, serving the "The Belt and Road Initiative" and the Guangdong-Hong Kong-Macao Greater Bay Area. The Guangzhou Hub has become the first gateway from mainland China to Oceania and Southeast Asia. Guangzhou forms a "Four-Hour Air Traffic Circle" with major cities in China and Southeast Asia, and a "12-Hour Air Traffic Circle" with major cities around the world. In Beijing, as the largest main base airline at Beijing Daxing International Airport, China Southern Group has more than 40 percent of the time resources. China Southern operates Asia's largest hangar span, Asia's largest operations control center and aviation food production base. By 2025, China Southern is expected to deploy more than 200 aircraft at Beijing Daxing International Airport, with more than 900 daily departures and landings, and work with all parties to build Daxing International Airport into a new benchmark of world-class aviation hubs and a convenient and efficient new gateway.

A total of

894

airliners

879

cargo planes

15



### 2022 Fleet structure

#### Airliners

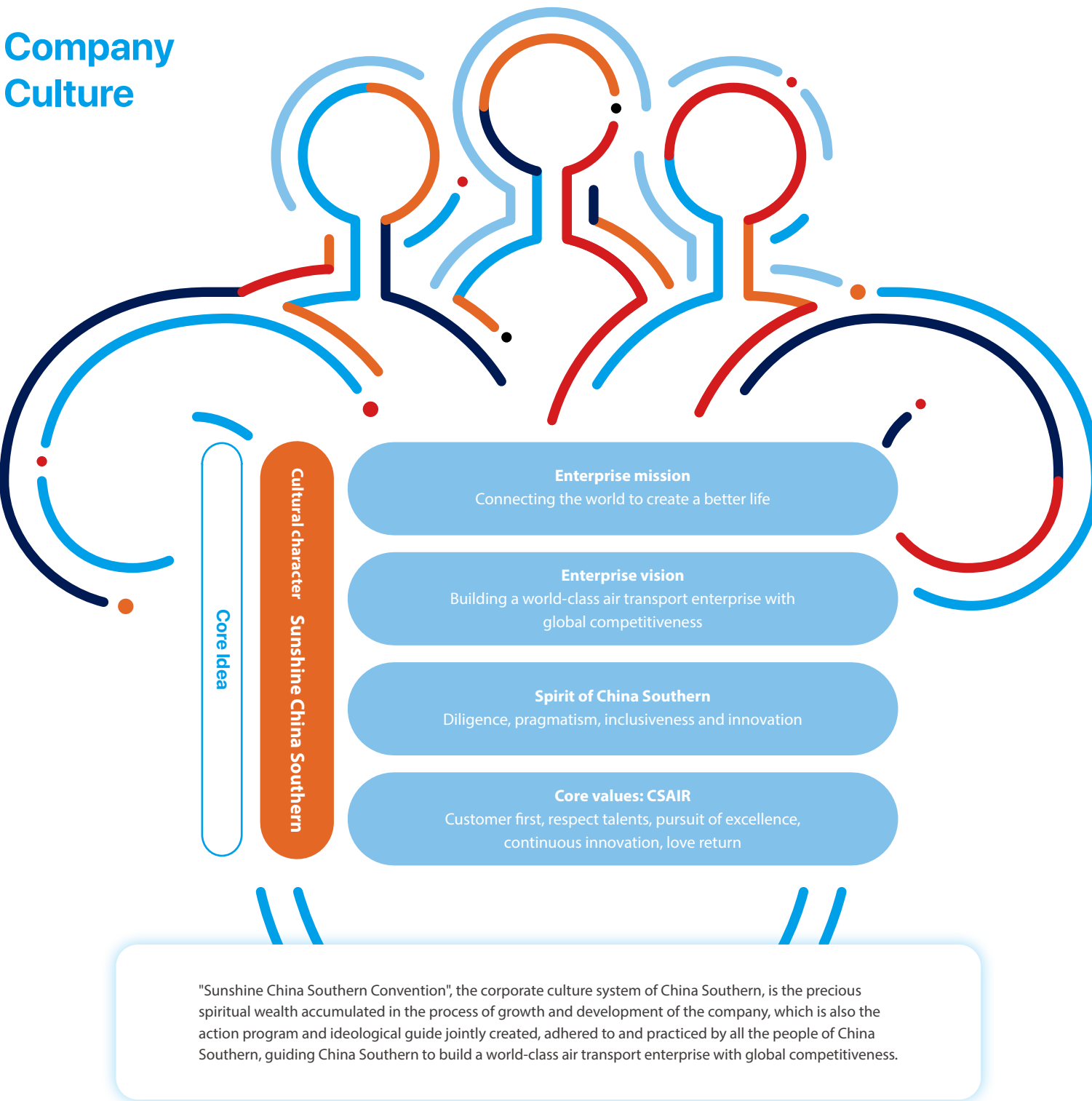
A380 series	2
A350 series	16
A330 series	40
A320 series	344
B787series	39
B777 series	15
B737 series	397
EMB190 series	6
ARJ21 series	20

#### Cargo Planes

B777 series	15
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Note: Five A380 aircraft have been transferred and delivered to the buyer in 2022, and all of them are out of operation. The nationality registration certificates of two of them were cancelled in January 2023, so they are still counted in the fleet size on December 31, 2022.

## Company Culture

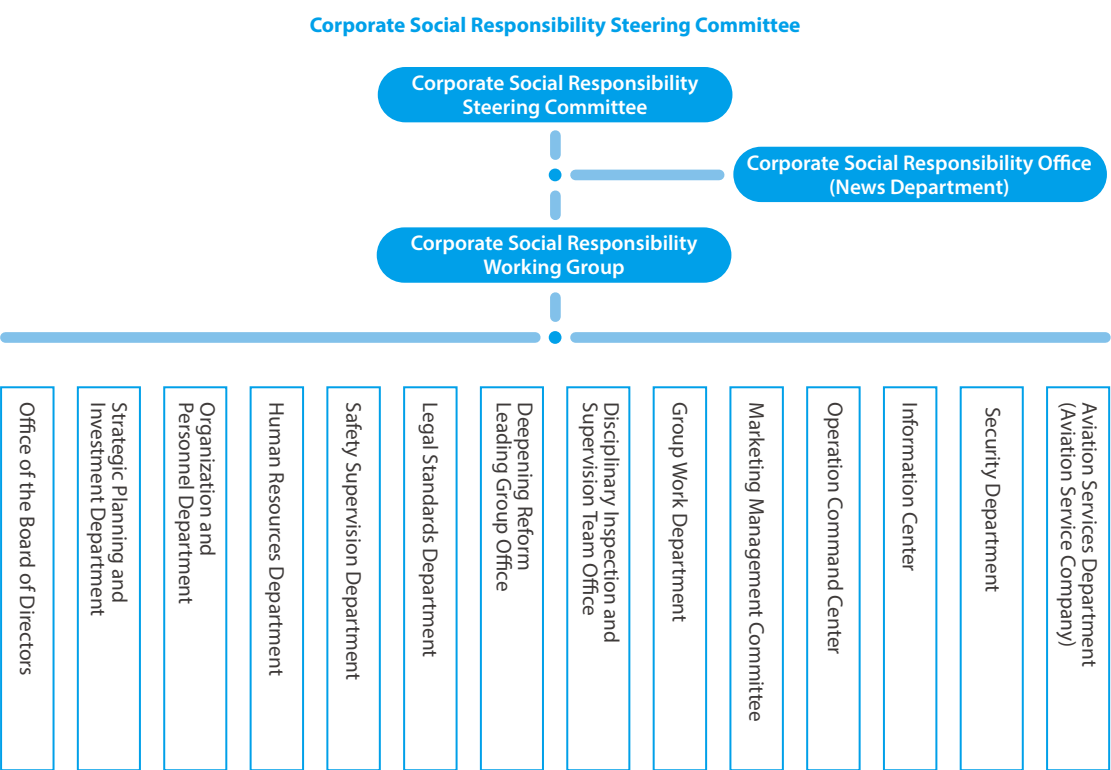




# Board Statement

The Board is the highest responsible body for environmental, Social and governance (ESG) matters. It oversees ESG matters with the support of the Social Responsibility Steering Committee and is involved in the formulation and driving of the company's ESG strategy. Through regular communication meetings, the board of directors listens to the work report of ESG, constantly improves the resolutions of the board of directors and the list of supervision, defines the responsible units, timely feedback the concerns of external directors and other stakeholders, and conducts special reports on key issues such as operation, strategy, budget and authorization.

China Southern Group has actively implemented the Working Rules of the Board of Directors of Central Enterprises (Trial), established a supervisory committee at the group level, formulated the rules of procedure of the supervisory committee, in combination with international regulatory trends and mandatory disclosure requirements, specified the management responsibilities for ESG work in the work rules of the Strategy and Investment Committee, jointly studied the operating rules of the ESG committee, and formulated the decision-making list of the special committees of the board of directors at the two levels, further improving the closed-loop management of board decision-making.



China Southern Group has systematically sorted out ESG regulatory policies, made excellent market cases and international authoritative ratings, proposed ESG optimization and improvement suggestions to the company, established a long-term working mechanism for continuous improvement of ESG, standardized ESG rating system, improved ESG information disclosure content, adjusted centralized management, and integrated annual share reports and social responsibility report of China Southern Airlines. Currently, ESG related responsibilities has been added to the rules of procedure of the Strategy and Investment Committee, such as reviewing the company's ESG system construction plan and annual social responsibility report, and making recommendations to the Board of directors to further clarify the division of responsibilities and authority of ESG. The Strategic Planning and Investment Department is responsible for coordinating the preparation of the company's social responsibility report, and the Office of the Board of Directors is responsible for regularly communicating and implementing the requirements of domestic and foreign listing regulators, internal compliance guidance, ESG management coordination and the company's annual social responsibility report disclosure.

Based on the development requirements of the Civil Aviation Administration, corporate strategy and the United Nations 2030 Sustainable Development Goals, China Southern identifies the important areas that are most closely related to the company's business and can make significant contributions to the company, and sets ESG targets for relevant topics.

### For vehicle management

By 2025, the electric ratio of newly introduced vehicles and equipment inside and outside the site will reach 100%;

By 2030, 100% of the vehicles on the site will be electric; By 2035, vehicles will be fully electrified.

### For non-hazardous waste management

From January 1, 2023, the supply of disposable non-degradable plastic straws, mixing rods, meals/cups, and packaging bags on international passenger flights will be terminated.

By 2024, the use of non-degradable plastic tape, disposable non-degradable plastic rain cloth, winding film and other goods packaging supplies will be significantly reduced.

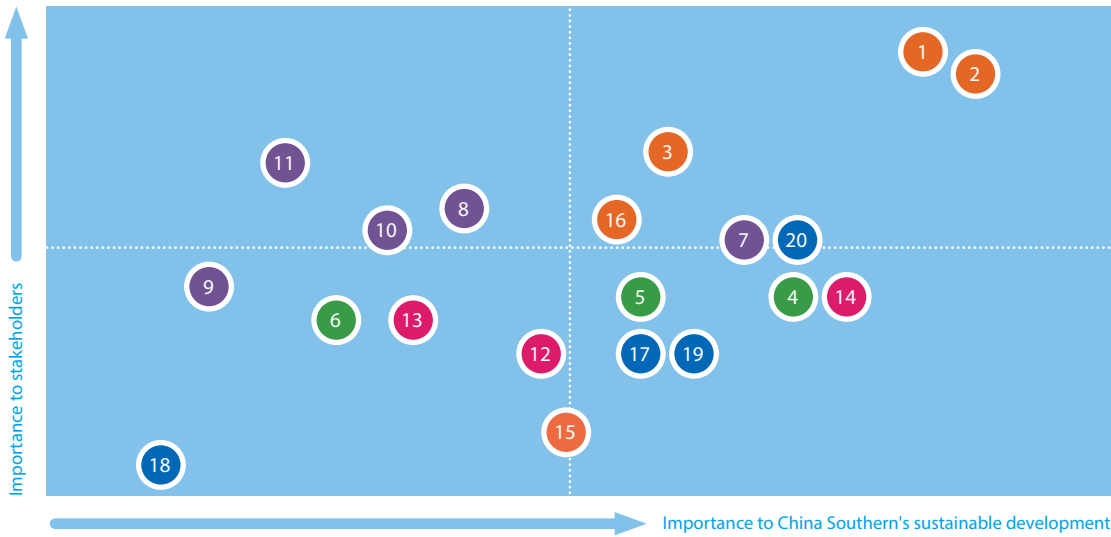
The Board of Directors will regularly evaluate and review the implementation and completion of the ESG related objectives, and make recommendations for improvement of the Company's ESG performance to ensure that the policy has been accurately and consistently implemented.

During the reporting period, the Board of Directors reviewed the progress and achievements of the 2022 ESG, which was considered and approved by the Board of Directors.

# Analysis of Substantive Issues

In order to assess the degree of concern and expectation of stakeholders on environment, society and governance related issues of China Southern, the company identifies and selects 20 substantive issues in key areas such as environment, service, employees, society and operation based on internal and external environment, corporate development strategy, stakeholder investigation and communication, etc., which are determined, deliberated and supervised by the Board of Directors.

Substantive Topics of China Southern		
1. Ensuring safe flight	8. Passenger privacy protection	15. Overseas responsibility fulfillment practice
2. Passenger health and safety	9. Convenient business handling	16. Rural revitalization
3. Occupational health and safety of employees	10. Improvement of passenger experience	17. Anti-corruption
4. Coping with climate change	11. Protection of passengers' rights and interests	18. Supplier management
5. Waste treatment	12. Employee education and training	19. Innovative development
6. Sustainable use of resources	13. Diversity and equality of opportunity	20. Legal compliance
7. Flight punctuality rate increased	14. Employee compensation and welfare	



China Southern substantive issues importance analysis matrix

20  
substantive issues in key areas

# Communication with Stakeholders

China Southern fully takes into account the expectations and demands of all stakeholders, communicates with stakeholders in multiple methods and deep levels, effectively protects the right to know, participation and supervision of all stakeholders, and works with stakeholders to promote sustainable development.



Stakeholders	Expectation and Demand	communication Channels and Methods
Investors	Participate in corporate governance Protect shareholders' rights and interests Control risk Return on investment Important information disclosure	Board of directors General meeting of shareholders Board of supervisors Periodic disclosure of reports and interim announcements
Government	Abide by the law and pay taxes according to law Implement the national strategy and deepen reform Maintain and increase the value of state assets Safe flight Promote employment Improve people's livelihood	Daily report and special report Research and visit Project cooperation, work meeting Statistical statement
Environment	Energy conservation and emission reduction, coping with climate change Protect the ecology and reduce pollution Reduce noise	Carry out green flight to save energy and reduce emissions Promote ground environmental protection Apply noise reduction measures Public disclosure of environmental information
Customer	Continuous safe and quality service Respond quickly to customer comments or complaints Protect customer privacy	Information disclosure Safety management system Customer relationship management, online services
Employee	Safeguard employees' rights and interests Establish communication channels Strengthen staff training Continue to improve employee compensation and benefits Employee care An open, transparent and healthy manpower policy	Staff representative meeting Diversified employee training Reform of salary system Employee integrated management Employee activity
Supplier	Honest management Common development Open, fair and impartial procurement	Transparent procurement Training, technical exchange meeting Daily communication
Financial Institution	Enhance solvency Reduce business risk	Strengthen compliance management Upgrade the level of operation
Community	Help targeted assistance Carry out voluntary service Community communication	Carry out targeted assistance Charity activities Information disclosure Public communication
Media	Establish information distribution channels Timely delivery of the voice of China Southern	Press conference Journalist symposium
Peer	Fair competition and friendly cooperation Information communication and exchange Healthy and harmonious industry development	Strengthen cooperation Exchange learning, forum meetings



## Communication with Stakeholders

### Case The "extraordinary" behind ordinary heroes

In September 2022, the film "Ordinary Hero" was released. It was adapted from the real story of China Southern and other units that successfully rescued the "broken-arm boy" in Hotan, Xinjiang. It was determined by the Central Propaganda Department as a tribute film to the 20<sup>th</sup> CPC National Congress. China Southern deeply participated and fully supported the filming work of the crew in Hotan, Urumqi and Qingdao bases in Xinjiang. During the National Day in 2022, China Southern launched 20 theme planes in the key routes of Beijing, Shanghai, Guangzhou, Shenzhen and Xinjiang, and organized two theme flights in Guangzhou and Xinjiang, with many passengers actively participating and interacting.

In addition, China Southern also linked with the central and major mainstream media platforms to carry out all-round and stereoscopic reports on the movie previews and the great love spirit displayed by China Southern in the process of life rescue relay. More than 1,400 media platforms across the Internet followed the report, and news articles were reproduced more than 36,000 times.



### Case "Pearl on the palm" series of aviation science popularization research

With children and teenagers as the target customer, the Handheld Pearl Project is committed to making use of internal and external education resources to create the characteristic aviation science popularization and research products of China Southern. In 2022, more than 130 events were held, with 4,100 participants. During the summer vacation in 2022, under the leadership of the trade union of the Flight Corps, each branch successively organized eight aviation research and learning activities of "Happy Family Day". 112 employees' children and their parents experienced daily life first aid, dynamic simulation module, evacuation slide and other projects, and got a deep understanding of their parents' work. The activity video "Into Dad's Boeing 777 Office" was published by Learning Power, Xinhuanet, etc., with a reading of more than 600,000.



### Case A series of activities on the public open day of "the backbone of a big country, forging ahead in a new era"

In order to build a bridge to communicate with the public, China Southern, relying on its own characteristic resources, carried out a series of activities on the public open day of "the Backbone of a Big Country, and Forge ahead in a New era", and held a special exhibition of archives and documents based on the China Southern Development History Museum, the first exhibition hall of aviation enterprises in China, to show the public the important measures and fruitful achievements of China Southern' reform and development to meet the people's travel needs; "Could Security Open Day", "Dual Carbon Leading Green Flight" and other activities were held to popularize aviation safety knowledge for passengers as well as the concept of energy conservation and carbon reduction.

In addition, China Southern also took the public open day as an opportunity to actively invite different groups such as local governments, enterprises and institutions and communities to visit China Southern to comprehensively display its development and innovation achievements in the new era through reading sharing sessions, visits and exchanges, and live broadcasts of China Southern, and strengthen communication with stakeholders.

### Honor The video "Wind Comes from the South", produced and selected by China Southern, telling the development history of China Southern, won the first prize in the 2022 "Archive Civil Aviation" excellent short video collection and exhibition activity of the Civil Aviation Administration





# Deepen Reform and Innovation to Promote High-Quality Development

Guided by Xi Jinping's thought on socialism with Chinese Characteristics for a new era, China Southern Group has vigorously promoted reform and innovation, made comprehensive efforts and made breakthroughs in multiple points in the decisive year of implementing the three-year action of state-owned enterprise reform, starting from perfecting the corporate governance framework, improving the flexible and efficient market-oriented operation mechanism, and forcefully promoting the digital transformation to ignite the "New Engine" of high-quality development through reform and innovation.

## Deepen the Reform of State-Owned Enterprises

In 2022, China Southern Group continued to implement the three-year action requirements of state-owned enterprise reform, improved the modern enterprise system with Chinese characteristics, focused on quality and efficiency, deepened the reform of the organizational management system, further stimulated the vitality of the organization, cadres and employees, promoted the modernization of the governance system and governance capacity, and accelerated the construction of a world-class enterprise.

### Advance corporate governance reform

China Southern group has thoroughly implemented the three-year action of state-owned enterprise reform, consistently carried out "Two Principles", strictly implemented the "4+1+4" series of new governance rules, implemented the Working Rules of the Board of Directors of Central Enterprises (Trial), established a supervision committee at the group level, promoted the establishment of ESG committee of joint-stock company, and established 100% of the board of directors of subsidiary enterprises within the scope of construction. The standardization and effectiveness of the board of directors have been improved.



### Press ahead with three institutional reforms

The company further promoted the tenure system and contractual management, and expanded the scope of reform. China Southern Group brought more than 30 second-level units that were not sub-enterprises into the management scope, and the coverage rate of signing contracts exceeded 90%. With the implementation of "One Enterprise, One Policy" and "One person, One form" differential assessment, quantitative indicators accounted for more than 90%. The company has continuously improved the incentive mechanism, promoted the market-based accounting system, and fully implemented mid-term and long-term incentive tools such as employee stock ownership and post dividend in our subsidiaries, which have inspired more than 800 people in total.



## Build an Innovation Engine

China Southern always innovates. It speeds up transformation and upgrading, continues to improve digital empowerment and technological innovation capabilities, and carries out all-round changes in innovation mechanisms, talent development, technological innovation and other aspects, so as to escort safe flight with technological innovation.

### Case Digital feedback platform



In 2022, the Party Committee of the Cabin Department actively explored and specially built the party building brand of "through train for the people", expanded the channels for employees to express their appeal from offline and online, and promoted the solution of employees' emergencies and anxieties.



China Southern established the Maintenance and Science Committee and the Compliance and Process Management Committee of the technology branch to strengthen the top-level design, established the organizational structure model of science and technology innovation management of "Science and Technology Committee - Review panel of Science and Technology Committee - Department of Science and Technology Information Technology - innovation platform", optimized the organizational system. The company compiled the "14th Five-Year Plan" Special Plan on Scientific and Technological Innovation and Digital Construction and the "Action Plan for the Design of Smart China Southern", realized the organic connection between long-term planning and annual key work, clarified the direction and way of scientific and technological innovation, and achieved key breakthroughs. The Project Management Committee of China Southern Group was established to strengthen research, planning, and overall promotion of project management, establish and improve the company's project management system and mechanism, issue system manuals such as company level project management regulations, and continuously improve the project management system to stimulate innovation and efficiency.



China Southern continues to build four scientific and technological innovation platforms, which adopt the mode of "Talent + Project" to provide funds, management, external resources and other support for the project, and accelerate the cultivation of the company's scientific and creative talents, launched the second phase of "Cloud T" digital talent training program, covering a total of 120 students from 44 units, designed personalized training courses for business managers, middle management cadres, business backbones and other employees interested in digital, and continued to build a digital talent echelon.



China Southern continues to promote digital transformation, adds a new "Intelligent Maintenance" function in Civil Aviation Maintenance Engineering and Technology Center, carries out remote safety monitoring with AR technology, promotes the implementation of electronic maintenance record system, pioneers the use of block chain and face recognition technology in the industry to develop a paperless electronic signature system, promotes the optimization and reconstruction of business processes and helps the digital construction of locomotive reform.





# Promote Rural Revitalization and Work Together for Common Prosperity

The year 2022 is the year of the 20<sup>th</sup> CPC National Congress, and the year of deepening efforts to consolidate and expand the achievements in poverty alleviation and rural revitalization. According to the requirements of the Notice on the Targeted Assistance Work in 2022 issued by State-owned Assets Supervision and Administration Commission (SASAC), China Southern continued to deepen its characteristic assistance mode, improved the assistance management mechanism, improved the quality and ability of assisting cadres, carried out the targeted assistance work in Moyu and Pishan County of Xinjiang in an all-round way, coordinated the matching assistance work across the country, gave full play to the characteristics and strengths of China Southern, and supported local culture, industry, talent and other areas of multi-point development, highlighting the "Rural Revitalization, China Southern's Responsibility."

## Improve the Help Mechanism

China Southern actively responded to the national strategic plan of comprehensively promoting rural revitalization work, continuously deepened its characteristic assistance mode, formulated and published the 2022 China Southern Group Targeted Assistance Work Plan, further improved the top-level design of assistance, optimized the management mechanism of assistance, and improved the overall management efficiency.

### Strengthen work supervision

The leaders of China Southern led teams to the designated counties for three times to carry out work research, exchanged in-depth views with the leaders of the designated counties on ideas and projects, visited the poor households and the work teams stationed in villages. In this year, the members of the leading Party group of China Southern and the leaders of secondary institutions went to the designated areas for investigation for 3 times, and held symposiums for 5 times.

### Establish process management

China Southern Promoted the other 10 units to establish a stable and efficient project process based on the model of co-building rural revitalization of China Southern. Party committees in all units carried out the main responsibility, identified the person in charge of specific projects, ensured that projects were repeatedly reviewed, strictly checked and responsibilities were implemented at every level, and effectively improved project efficiency.

### Improve the management of cadres

In accordance with the requirements of the Organization Department of the CPC Central Committee and the Xinjiang Uygur Autonomous Region, 17 comrades were selected to be stationed in villages in Pishan County to complete the rotation of cadres this year. As of December 31, 2022, China Southern's village work team members reached 44. Currently, China Southern also carried out training courses for helping cadres in poverty alleviation to inject fresh blood into the cadre team.

In 2022, China Southern undertook the task of helping

**2** designated counties and  
**30** matching villages

and selected  
**69** cadres to take charge of the work

directly investing  
**74.2145** million yuan  
in helping funds, including **60.05** million  
yuan paid funds and **14.1645** million yuan  
unpaid funds

## Carry out All-round Assistance

Guided by practical problems, China Southern's Rural Revitalization assistance program provides all-round assistance to designated villages and counties from the aspects of culture, industry, talent, organization and consumption. China Southern is committed to deeply investigating local needs and accurately carrying out rural assistance work with the characteristics of China Southern.

### Cultural assistance

China Southern carried out the action of "Rural Revitalization--China Southern Volunteers at 100 Schools", and mobilized volunteers of China Southern to help schools carry out music, dance, art, science and other volunteer teaching activities, so as to improve the development level of students' quality education. The company donated 9 million yuan to the construction of the "China Southern Pearl" Teaching Building of the Fourth Middle School in Guma Town, Pishan County, with enrollment capacity expanded by 500, the construction of 140 meters of "China Southern Pearl Cultural Corridor" in front of the Central kindergarten and primary school in Pisina Township, Pishan County, the renovation of the second Primary school in Pishan County, and the construction and operation of the China Southern Pearl University for the Elderly in Bashlangan Township. A number of measures have been taken to help promote the local education development.

### Case "Blue Envelope" Letter Support Activity



Beihe Town of Leizhou City, Guangdong province is one of the support places of the Rural revitalization Work team of China Southern. Most of the local youth labor force work outside the city, with most of the left-behind children. In order to care for the mental health of children and help to solve the growth puzzle of left-behind children, the work team in the village of China Southern carries out the "Blue Envelope" letter support activity, recruiting volunteers to carry out letter interaction with the children in the way of peer companionship, provided social support for children, set examples of hard work at school, paid attention to the puzzles and problems they face in the process of growing up, and guide them to grow up healthily and happily. As of December 2022, volunteers have exchanged more than 600 letters with 46 rural school children.



“

"A letter is a way of expressing emotions. You can tell me anything you have in mind. I would like to hear it."

"I am very glad to hear from you. I would like to talk from my heart."

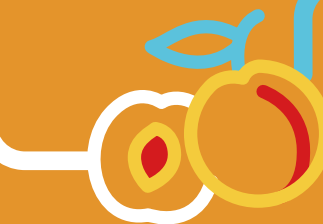
-- Dialogue between volunteers and rural children

### Honor

The case of "Blue Envelope" activity was selected as an excellent case of the Southern + "Thousands of Enterprises Help Thousands of Towns, Ten Thousand Enterprises Prosper Ten Thousand Villages" activity

### Industry assistance

China Southern excavated the special agricultural products resources in designated counties to help develop the "Star Apricot" industry in Bashlangan Township. There are 2,470 mu of "Star Apricot" in the township, and the per capita income is expected to reach 1600 yuan. The company helped steadily expand the output and orders of clothing products of Moyu poverty alleviation Industrial Park, increased the "Order-style" clothing procurement, absorbed people's employment, and helped local people to increase income and get rich.



There are  
**2,470**  
mu of "star apricot" in the township

### Talent assistance

China Southern and Pishan County People's Government jointly organized a training course for e-commerce talents, organizing more than 220 students to participate in the training. The work team in the village organized 600 local people to participate in sheep breeding, forest fruit training, beauty salon and other professional training, organized 18 rural cadres from designated counties and townships to attend the head empowerment training and other work in Xinjiang Branch of China Southern to cultivate and reserve talents for the development of local grass-roots organizations and industries.



### Organization assistance



In the designated two townships, a series of Party building activities of "Making Achievements in a New Era and Welcoming 20 Major Events" were carried out, and 193 times of intensive study and various presentations were organized. China Southern carried out the Party Day activities of "I do practical things for the people", and carried out the work of collecting and helping for many times, solving 197 requests of the people's emergencies and worries, benefiting 398 people. A total of 85 activists and 28 party members were recruited in the two townships throughout the year, and 33 reserve forces were cultivated at the village level.

### Case Lingnan lychee appeared in the Pearl Lounge of China Southern



Lingnan is rich in lychee, but lychee farmers often lack sales channels, resulting in Conghua lychee "kept in boudoir", not well known to the public. China Southern actively responds to the national Rural revitalization strategy. In Pearl Lounge of China Southern, many famous lychee variety such as "Liuxigui Flavor and Qiangang Glutinous Rice Paste" are available at 23 airports, including Shenzhen, Shantou, Dalian and Zhengzhou, so that passengers can taste and purchase them on the spot. At the same time, "with lychee as the medium", China Southern integrates lychee elements into the daily special services of the lounge, holding various activities such as customized exclusive painting plate, carefully concocting drinks such as "Red Lychee beauty" and "Lychee coffee" for passengers. While delivering the "friendly and refined" service of China Southern, it also helps Conghua lychee publicity, helps expand sales channels, and contributes to the rural revitalization.





# 1

## GOVERNANCE Write a New Chapter of Development

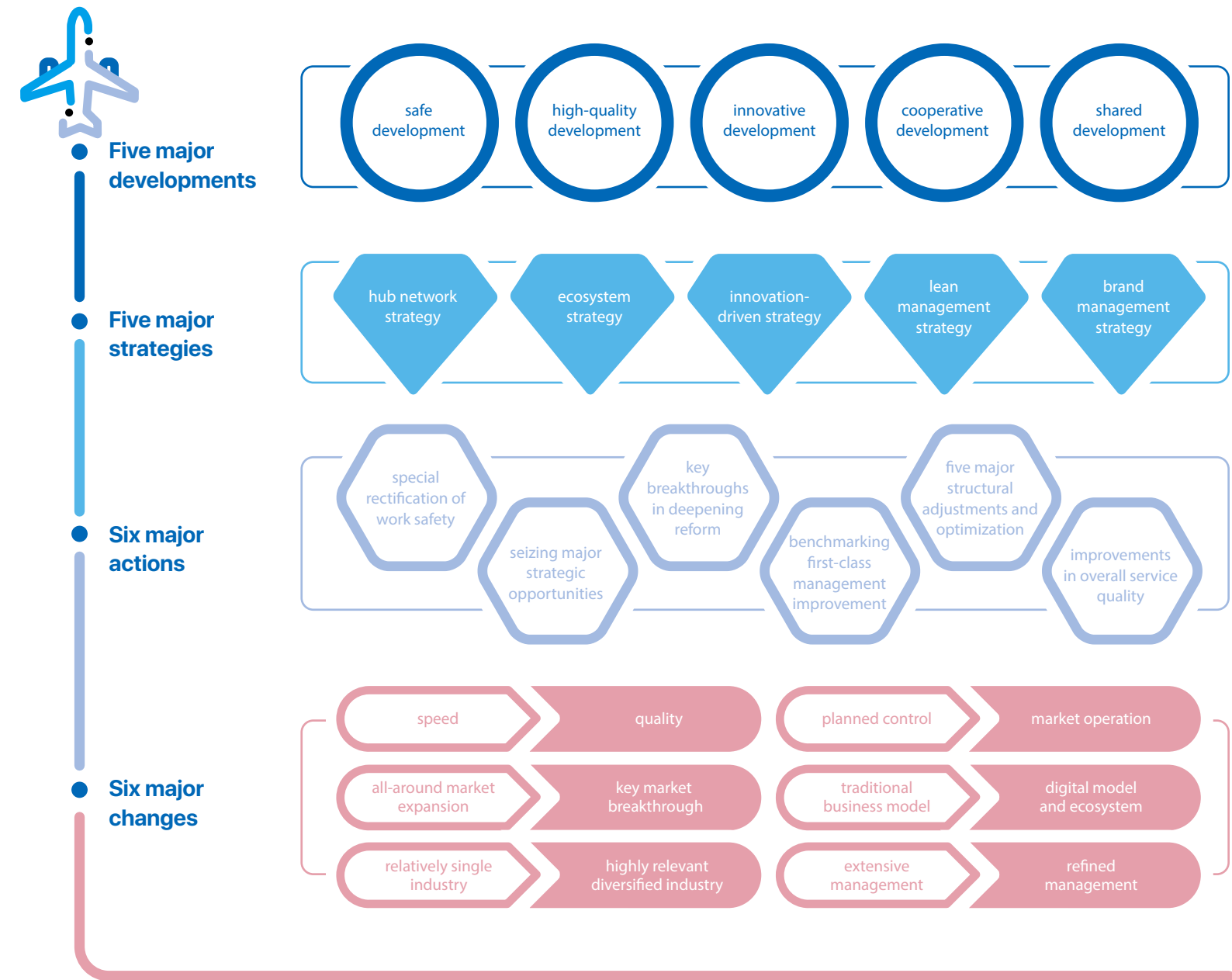
China Southern adheres to the "5566" overall idea of high-quality development, continuously promotes the modernization of corporate governance system and governance capacity, adheres to the law and compliance operation, strengthens the overall leadership of the Party, and promotes the high-quality development of the company with efficient governance.

Respond to the UN 2030 Sustainable Development Goals



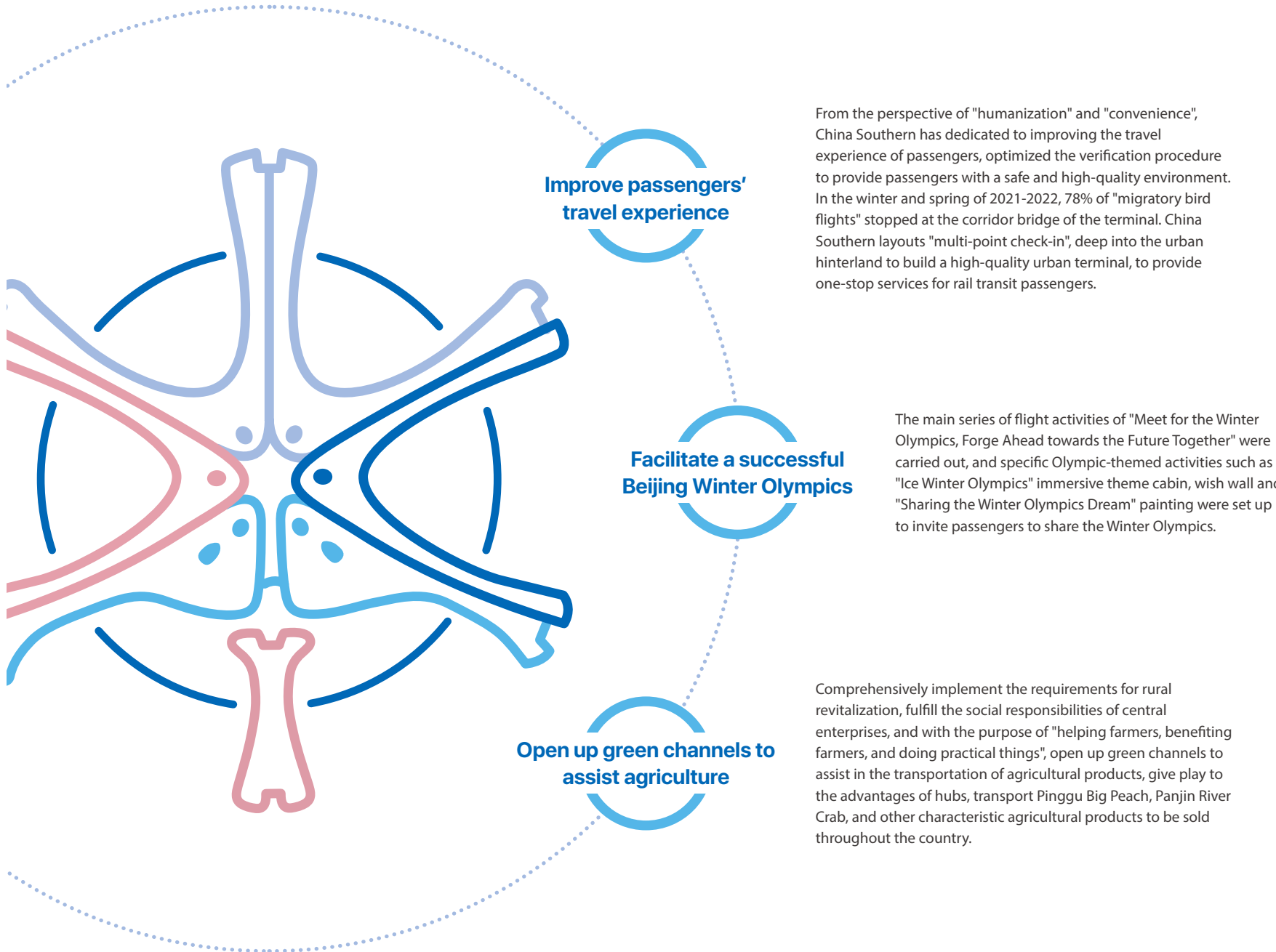
# Adhere to the Development Strategy

China Southern adheres to strategic guidance, takes high-quality development as the main line, anchors the goal of building a world-class enterprise, adheres to five major developments, implements five major strategies, promotes six major actions, realizes six major changes, and actively promotes the implementation of strategic planning, providing strong support for China Southern to build a world-class air transport industry with global competitiveness.



# Daxing China Southern at Daxing in Full Swing

Three years ago, China Southern Airlines officially entered the era of "Dual Hub" between Guangzhou and Beijing, and has been committed to comprehensively improving the operation quality of Daxing Airport. In 2022, China Southern continued to deepen the brand building of "Daxing China Southern at Daxing in Full Swing" Beijing Hub, accelerated the construction of safe and efficient production operation and service system, improved air cargo capacity, and created a new service development pattern.





# Improve Corporate Governance

China Southern adheres to strengthening the unity of the Party's leadership and corporate governance, takes building a first-class governance system for central enterprises and enhancing the value of the capital market of China Southern as its mission, constantly improves the corporate governance system such as the company's Articles of Association, and revises the rules of procedure for the Group's shareholders' meeting in accordance with the Guidelines on the Shareholders' Meeting of Central Enterprises with Diversified Equity Holdings (Trial). The "Working Rules for the Board of Directors of Central Enterprises (Trial)" has been implemented, and a supervisory committee has been set up at the group level and its rules of procedure have been formulated. The company has improved the resolutions of the Board of directors and the item list to be supervised, clarified the responsible units, and continued to improve the standardization and effectiveness of the board of Directors' operation.

The Board of Directors of the Company consists of

7 directors

including

3 executive directors and

4 independent non-executive directors

## Strategy and Investment Committee

The main responsibility of the Strategy and Investment Committee is to study and make recommendations on the company's long-term development strategy and major investment decisions.

## Audit and Risk Management Committee

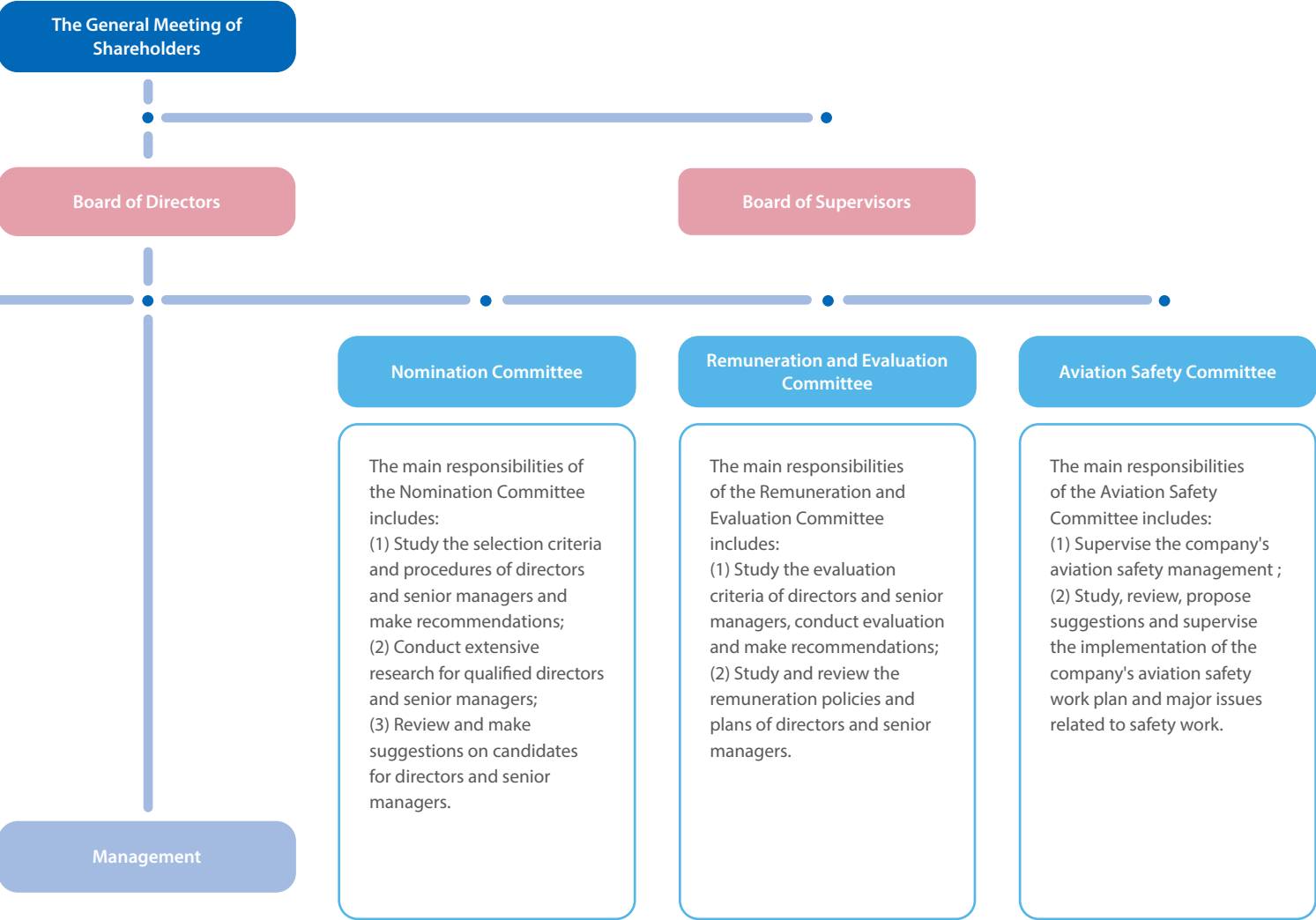
The main responsibilities of the Audit and Risk Committee includes:  
(1) Propose to hire or replace the external audit organization;  
(2) Supervise the company's internal audit system and its implementation;  
(3) Be responsible for the communication between internal audit and external audit;  
(4) Review the company's financial information and its disclosure;  
(5) Review the company's internal control and risk management system.

the board of directors held

12 meetings

and deliberated

54 proposals



## Information Disclosure and Investor Relationship Management

China Southern actively improved the information feedback and transmission mechanism of the capital market, conducted in-depth exchanges with shareholders and potential investors on hot issues such as business performance, strategic planning and social responsibility to enhance investors' confidence. The company strengthened the management of information disclosure, starting with the optimization and improvement of the working system and process of information disclosure, improved the normal learning mechanism, the compliance memorandum mechanism of important matters, and the sand table deduction mechanism, realized "zero errors" in the annual information disclosure, and fully guaranteed the transparency of operation.

Obtained **A-level** information disclosure evaluation from Shanghai Stock Exchange for

9 consecutive years

# Operate in a Compliant and Stable Manner

## Compliance with Laws and Regulations

China Southern insisted on operating in compliance with laws and regulations, continuously strengthens risk control, sticks to the bottom line of clean operation, strengthens intellectual property protection, and escorts the steady and sustainable development of the company with compliance operation.

### Improve the compliance management mechanism

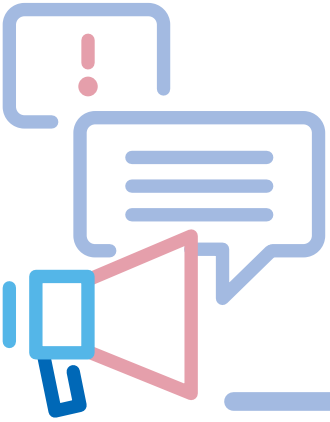
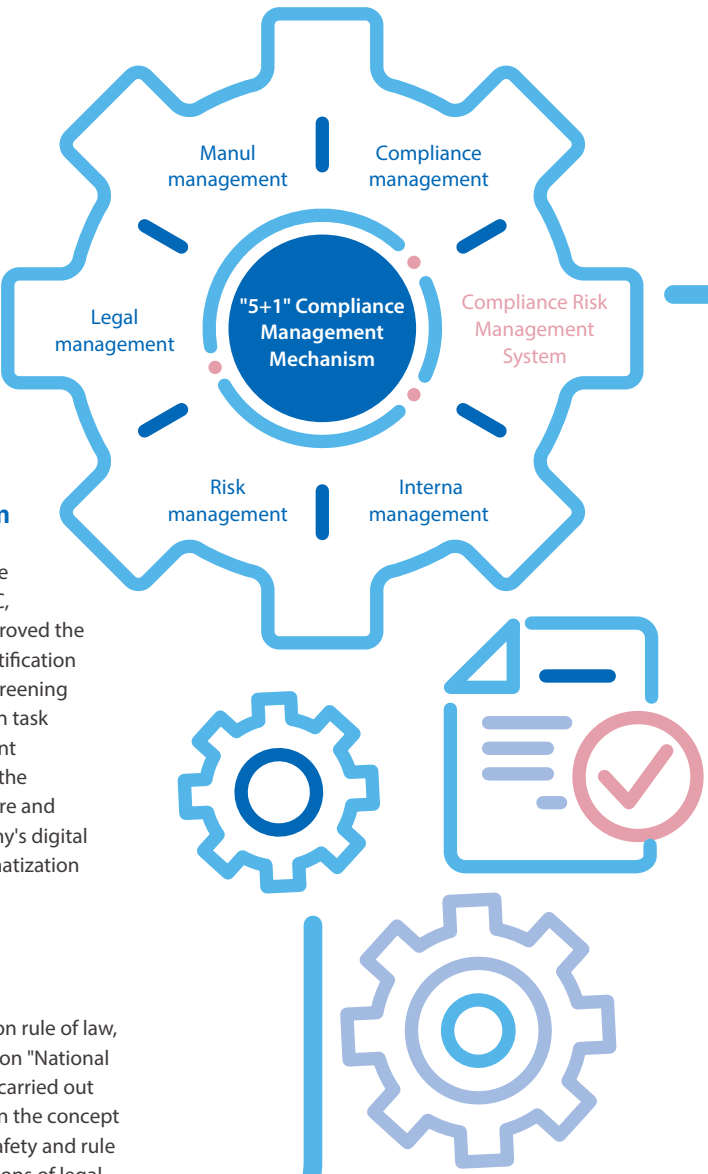
China Southern carries out the construction of the rule of law, adheres to the overall leadership in the governance of enterprises according to law, combines the characteristics of the aviation industry and the management experience of the company. This allows for manual management to serve as an important starting point in the construction of the compliance management system, building the "5+1" compliance management mechanism based on manual management to continuously improve the level of operation and management according to the law.

### Establish a compliance management system

China Southern has carried out the important work of the "Compliance Management Strengthening Year" of SASAC, upgraded the compliance risk management system, improved the functions of the compliance inspection, tracking and rectification module, established the compliance risk and violation screening index database that generates the compliance inspection task list and promotes the intelligent compliance management checklist. Concurrently, the company actively promoted the construction of Smart China Southern Enterprise Structure and Compliance Center, kept up with the pace of the company's digital transformation strategy, and further improves the informatization and digitalization of compliance management.

### Carry out legal practice training

China Southern continued to carry out special publicity on rule of law, including a series of activities such as law publicity tasks on "National Security Day" and law publicity on "Work Safety Month", carried out legal standard training programs that serve to strengthen the concept of safety and compliance operation, and improved the safety and rule of law awareness of all staff. In 2022, it organized 48 sessions of legal standard training, that attracted more than 27,000 people.



## Risk Management

### Case Legal Standard Training

Legal standard training came in the form of online and offline lectures, with the company's strategy and key work as lynchpin, focusing on contract management, compliance management, risk control management, manual management, statutory self-examination, overseas legal risk prevention, safe operation standards and other businesses, provides legal standard business training for the majority of cadres and employees, and continuously improves the ability of managers and employees. n accordance with the law. In 2022, 48 sessions of the legal standard training were organized, with more than 27,000 participants.



### Continue to improve the risk control system

China Southern connects the construction of risk control system with the corporate governance structure, and makes it clear that the Board of Directors is responsible for establishing and improving the company's risk control management system and mechanism, and the chairman performs the responsibilities of the first person responsible for internal control, forming and strengthening three lines of defense for risk control. A risk quantitative monitoring index system was established to reflect the characteristics of the aviation industry and the company's 70 key risk monitoring indicators were established, of which 25 key indicators have set early warning threshold range.

### Strengthen management and control of major risks

China Southern organizes the annual risk identification and assessment of China Southern Group, determines annual major risks, defines risk responsibility departments, formulates risk response measures item by item, forms quarterly risk monitoring reports, divides macro-level risks into specific processes, studies risks in key foreign fields, institutionalizes relevant risks, and improves the ability of business personnel to prevent major foreign-related risks.

### Scientific and technological means to prevent risks

China Southern has cooperated with Civil Aviation University to build a fatigue Biomathematic model with independent intellectual property rights, organized the construction and approval of fatigue risk management system (FRMS), preliminarily built FRMS policy document system and FRMS information system, collected more than 500 groups of flight crew fatigue data, and conducted training for relevant operation personnel, providing basic guarantee for the safety and compliance operation of international long-haul routes.

## Anti-Corruption

### Intensify anti-corruption efforts

China Southern continues to focus on corruption in the field of procurement, digging deep into investigations and provides a legal function to correct violations of the law in the field of procurement, formulates and implements the Measures for the Supervision of the Procurement Work of China Southern Air Holding Company Limited., establishes the "blacklist" system and standardizes the bidding process, jointly signs the Integrity Cooperation Agreement with suppliers, reaching an agreement on integrity publicity, information disclosure, investigation and audit, and providing reporting channels. Currently, the company deepens the special rectification of "Relying on Enterprises for Personal Benefit", strengthens the risk prevention and control of the integrity of overseas institutions, and promptly straightens out the management system and mechanism of the overseas institutions of China Southern Group. China Southern carries out regular warning education, promotes the construction of clean culture, formulates Several Measures to Strengthen the Construction of clean Culture in China Southern Group, and creates the atmosphere of clean culture in the enterprise.



### Rectify the "four bad styles" and create new working style

China Southern closely focused on "Festival Corruption", resolutely investigated and punished illegal consumption, illegal receipt and delivery of gifts and encroachment on the interests of employees. The company rectified the use of corporate vehicles, issued the Guidance on Fault Tolerance and Exemption Work of Discipline Inspection and Supervision Institutions of China Southern Group according to the requirements of "Three Distinctions" to standardize the implementation of fault tolerance and exemption from liability, and encourage cadres to take personal and professional responsibility.

### Improve the discipline inspection and supervision training system

China Southern has thoroughly implemented the Working Regulations of the CPC Commission for Discipline Inspection and the Working Rules for Accredited Institutions of Discipline Inspection Organs, standardized the decision-making mechanism of second-level discipline inspection organs and the division of responsibilities of persons in charge, and comprehensively promoted the legalization of the functions, powers, procedures and responsibilities of the discipline inspection organs. The company has established and improved discipline inspection and supervision cadre training system, and conducted all staff training in different batches to improve discipline and law literacy and performance ability.



Problem reporting clue disposal rate is

100%

## Intellectual Property Protection

### Optimize the intellectual property management system

Intellectual property is an important part of the company's intangible assets and an important embodiment of the company's innovation achievements, and strengthening intellectual property management is an important guarantee for the high-quality development of China Southern. To this end, the Strategic Planning and Investment division established a company-level project team in cooperation with relevant units within the company to comprehensively optimize the intellectual property management system of China Southern Airlines Group from the aspects of improving the management system, strengthening high-quality creation, promoting efficient use, improving protection capabilities and strengthening implementation guarantees. On the basis of full internal and external research of the company, the project team adjusted the structure of the property rights management system of China Southern based on the Civil Code; According to the principle of hierarchical and hierarchical management, put forward suggestions on organizational division of labor and the relationship between responsibilities and rights; It clarifies the principle of paid licensed use of intellectual property as an intangible asset and the principle of attribution of intellectual property acquired by employees on the job.

### Strengthen risk prevention and control of intellectual property rights

Aiming at trademark and patent management, China Southern established risk prevention and control strategies, formulated relevant usage rules and management processes, and completed the revision of Trademark Management and Patent management sub-volumes of the intellectual property Management Manual of China Southern. The company also identified existing software copyright use risks and formulated rules for the production, use and protection of software copyright.

## Strengthen Party Building

In 2022, in the face of extreme difficulties and severe challenges, China Southern adhered to Xi Jinping's guiding ideology of socialism with Chinese characteristics for a new era, with the spirit of the 20<sup>th</sup> CPC National Congress, conscientiously implemented the decisions and arrangements of the CPC Central Committee and the higher authorities, consolidated and expanded the achievements of the implementation of the spirit of the Party's construction work conference in state-owned enterprises and the achievements of Party history learning and education, and further promoted the institutionalization, standardization and concretization of the "Six Characteristics" of party building, namely, political, leading, normative, integrated, innovative and cohesive. China Southern has maintained "A" level in the responsibility system assessment of the Party building work of the central enterprises, and the overall evaluation index of the recruitment and employment has reached a new high.

### 1 Give full play to the leading force in Party building

A symposium was held to implement the spirit of the important instructions of General Secretary, Xi Jinping on civil aviation safety, to further improve aviation safety and promote high-quality development. China Southern carried out the theme activity of "Making Contributions to the New Era and Welcoming the 20<sup>th</sup> CPC National Congress", held a meeting at the first time to convey the spirit of the 20<sup>th</sup> CPC National Congress, formulated the implementation plan for the study and publicity of the 20<sup>th</sup> CPC National Congress, and held the special training courses for the study of the 20<sup>th</sup> CPC National Congress. Party organizations at all levels have studied and participated in more than 3,800 lectures, extensively studied and discussed in the form of "three meetings and one lesson", theme party day, reading class and other forms. Youth League organizations at all levels have extensively carried out 478 theme education practice activities of "Welcoming the 20<sup>th</sup> National Congress, Always Following the Party, and Striving for a New Journey", and earnestly implemented the spirit of the 20<sup>th</sup> National Congress of the Party.

### 2 Continue to consolidate the foundation for Party building

In the process of improving corporate governance, strengthen the leadership of the Party and fully implement the "4+1+4" decision-making system, and improve the "three priority and one importance" decision-making mechanism; Further improve the rules of procedure of the governing bodies of the subsidiaries and business operation units, print and distribute the list of responsibilities and tasks of the grass-roots party committees and party (general) branches, and ensure that the party organizations at all levels have a clear functional orientation and perform their duties accurately and scientifically; Continue to improve the standard system of the party building system and optimize the "One Enterprise, One Policy" and One Enterprise, One Evaluation" party building evaluation mechanism; Implement the pioneering action of party members, flexibly use the mechanisms of grid management, temporary party branches, and party organization responsibility fields to improve the organization system. Build a characteristic party building brand, supervise and promote the key tasks of the party building in the air crew, summarize the experience of the solidification mechanism, and promote the grass-roots party building brand.

### 3 Strengthen the building of mass organizations

China Southern optimized the "Smart Youth League Building" system, continuously supervised all units to carry out organizational learning, and all members of the Youth League branches have completed studies on the three topics of "History of the Party's Youth Movement", "Spirit of the 100<sup>th</sup> Anniversary Meeting" and "Great Achievements in the New Era". The company has carried out employee care activities, "Send Warm", "Send Cool", "May Day", Mid Autumn Festival, National Day condolence activities, etc., and distributed condolence goods and living materials totaling 43.106 million yuan.

### 4 Build a high-quality professional cadre and talent team

Strictly control the political standards for the selection and employment of personnel, clarify the evaluation dimension of political quality, while improving the system of knowing their staff. Improve the working mechanism of "Two Banks and Three Shifts" and continue to improve the proportion of young cadres. Deepen the reform of the cadre and personnel system, highlight the effective combination of the principle of the Party managing cadres and the role of the market mechanism, establish the criteria of "being able to go up" for competitive recruitment, unblock the channels of "being able to go down", optimize the comprehensive assessment and evaluation system, highlight the performance orientation, strengthen the adjustment of the personnel with the last grade work performance and the application of the incompetent withdrawal. Strictly strengthen the supervision of cadres through the supervision of the selected individuals and appointment of cadres to carry out regular management and supervision. Optimize the talent work system and mechanism, implement the "Talent+Project" mechanism, implement the "Targeted talent Introduction" through "China Southern Talent" global recruitment process, and strive to build a "Three High, two Excellent and One Leading" talent team. Vigorously strengthen the construction of the "Three Chiefs" team, activate the grass-roots organizations.

### 5 Strengthen Party conduct and clean governance Building

China Southern has continuously strengthened political supervision, carried out regular supervision on the implementation of major decisions and arrangements of the central government, aviation safety, and continued to implement specific measures to strengthen the supervision of the "top leaders" and leading groups. The company will consistently implement the eight-point Guideline of the Central Committee, put an end to hedonism and extravagance, give priority to formalism and bureaucracy, and continue to lighten burdens on the community. Currently, the company adheres to "Do not Dare to Corrupt, Cannot Corrupt and Do Not Want to Corrupt" mechanism through an investigation procedure of cases that manages reform and treatment through cases as it holds fast to a culture of integrity in all forms. China Southern continued to deepen inspections and rectification work by the Central Committee to ensure the full coverage of inspections by the Leading Party Groups, and issued the Implementation Measures for Strengthening Inspections and Rectification and Applying the Results of Inspections to ensure effective results.

### 6 Publicize ideological and political affairs

China Southern has continued to offer opportunities to all staff and management in theoretical study and deepened theoretical popularization, promoted the institutionalization and standardization of heart-to-heart talk, and sincerely solved the requests of the people's emergencies and worries, planned the theme publicity of "This Decade of China Southern", produced the special issue of "Salute to the Party's 20<sup>th</sup> Congress", and carried out the themed flight activities of "Always sided with the party, Kapok welcomes the 20th National Congress" (Kapok as symbol of China Southern). China Southern Airlines Daily has launched a series of in-depth reports on the "Extraordinary Decade" that highlighted the performance of China Southern since the 18<sup>th</sup> National Congress of the Communist Party of China, such as Party building, safety, strategy, reform, service and responsibility.



# 2

## SAFETY Pilot a Safe New Journey

Safety is the foundation of all work in the civil aviation industry. China Southern holds fast to the idea of "People First, Life First", constantly strengthens aviation safety management, effectively protects the life, health and safety of employees and passengers. Flight safety is given the highest priority as it serves as the best brand of an airline, piloting a safe journey.

Respond to the UN 2030 Sustainable Development Goals





# Strengthen Safety Management

## Construction of Safety System

China Southern has implemented the General Secretary, Xi Jinping's instruction and requirements of "Fundamentally Eliminating the Potential Risk of Accidents", strengthened safety responsibilities, prevented and controlled safety risks, managed potential safety hazards, improved the safety system, built a solid safety defense line, and steadily promoted safety production work. In 2022, China Southern did not have any safety operation accidents and corporate liability aircraft incident, taking practical actions to ensure the absolute safety of aviation operations and the absolute safety of people's lives.

### Ensure safety with system concept

China Southern firmly establishes the concept of "People First, Life First", actively cooperates with authoritative scientific research institutions in the industry such as Civil Aviation Science and Technology Research Institute of China. In view of the long production and operation chain, multiple links and large fleet size, China Southern stayed committed to the problem-oriented and the concept of system management to manage safety issues, and pushes forward the construction of the seven major safety systems. The closed-loop management mechanism of "actively identifying potential risks, screening hidden perils, thus finding problems and proposing measures" to standardize safety management in a more systematic manner. Coordinated efforts were made to monitor the people, issues, organizations and systems to fundamentally enhance safety management capabilities.

### Security phased achievements of the seven systems



Safety Responsibility System

China Southern implements the requirements of "Three Controls and Three Must-Dos" and "All Staff Safe Operation Responsibility System" stipulated in the new version of the Law on Work Safety, highlights leadership responsibilities and comprehensive staff, improves the ability of leading cadres and professional teams to perform their respective responsibilities and communication on safety responsibilities as part of key breakthroughs in tasks such as safety responsibility listing, safety responsibility assessment and cadre performance evaluation. Safety responsibility listing has been digitalized step by step.



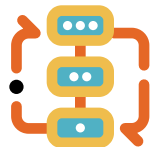
Rules and Regulations Manual System

Systematically manage the preparation, approval, release, training, application, supervision and inspection chain of rules and regulations manual to ensure that all safety management activities are included in the manual, providing specific work related rules to follow; Establish and implement rules and regulations manual sorting mechanism, clarify the relationship between different levels of rules and regulations manual system undertaking, and promote statutory self-examination; Establish an expert committee of operation standards to continuously evaluate the compliance of the company's operation standards with the Bureau's regulations.



Training System

Straighten out the functional positioning of professional training and safety training in all systems of China Southern, organically combine with capacity building, which runs through the whole process of career management; Continue to organize and implement all facets of safety qualification and promotion training, including CRM training, four professional system management cadre training, etc; Carry out Qualification and capability checks in various professional systems, including 3,828 checks in the flight system and 10,970 checks in the maintenance system; Explore the construction of flight instructors and inspectors; Establish a safety data-driven training mechanism, and smooth the data communication channels between safety and training departments.



Process Control system

Systematically sort out process control means, including regular safety inspection, cabin sound monitoring, remote monitoring, flight data analysis, safety hidden danger screening and management, safety audit, safety management system audit, safety performance management, etc.; Through continuous monitoring of the production operation process and safety management process, control process risks, ensure process safety, and verify the effectiveness of safety management measures.



Risk Control System

Implement security risk control at different levels, establish mechanisms to manage all potential hazards in a dynamic manner; Improve the dual prevention mechanisms of multi-level management and control of potential risks and the investigation and treatment of hidden risks; Implement inventoried management of potential problems, risks and institutional measures; Strengthen the connection between ESMS system and ORCS system; Establish a cross-system joint prevention and control mechanism for security risks.



Safety Culture System

Adhere to the mass line of safety work, establish the correct safety orientation, continue to carry out the "Three Awes" education, establish and improve the safe talk mechanism, carry out the safety production mass activities on a regular basis, and collect more than 20,000 staff suggestions; Improve the physical safety and mental health assessment and counseling mechanisms for all staff.



Science and Technology Innovation System

Introduce key technologies and encourage safety research; Connect the business capabilities of seven security systems, and start the construction of security center (business center); Improve the safety management information system platform function; Implement personal flight data visualization; Carry out research and application CRM and TEM; Strengthen the application of security big data risk analysis; Launch the construction of a safety research institute and create a platform for innovation and integration of industry, university and research institute.







Building a responsibility system to promote safety

Formulate the work plan of the safety responsibility system, focusing on the key tasks of safety responsibility listing, safety responsibility assessment, cadre performance evaluation, safety accountability mechanism, etc.; Jointly develop the construction of safety responsibility map module, and provide multi-level and multi-dimensional query services of hierarchical safety responsibility map covering companies, second-level units and third-level institutions; Relying on the ESMS system and the E-home information module of China Southern, accurately inform the personnel on duty of their safety responsibilities, and promotes the full coverage of responsibilities.

Carry out safety audits to ensure safety

The security audit of China Southern mainly includes internal security audit, IOSA and ISAGO security audit, cooperative airline company safety audit and agent safety audit. As for internal security audit, a total of 9 branches and subsidiaries as well as 11 headquarters were audited in 2022, and 175 non-conformance items were found, all of which were tracked and rectified. China Southern received its 9th IOSA review in December 2022. China Southern was registered for ISAGO safety audits in 2016, and planned to receive on-site audit at its headquarters and Beijing Daxing Airport in 2023. Safety audit of cooperative airlines shall be conducted at least once every two years and the agent safety audit shall be supervised through the daily inspection.

Strengthen Safety Supervision

Carry out special assessment of safety risks

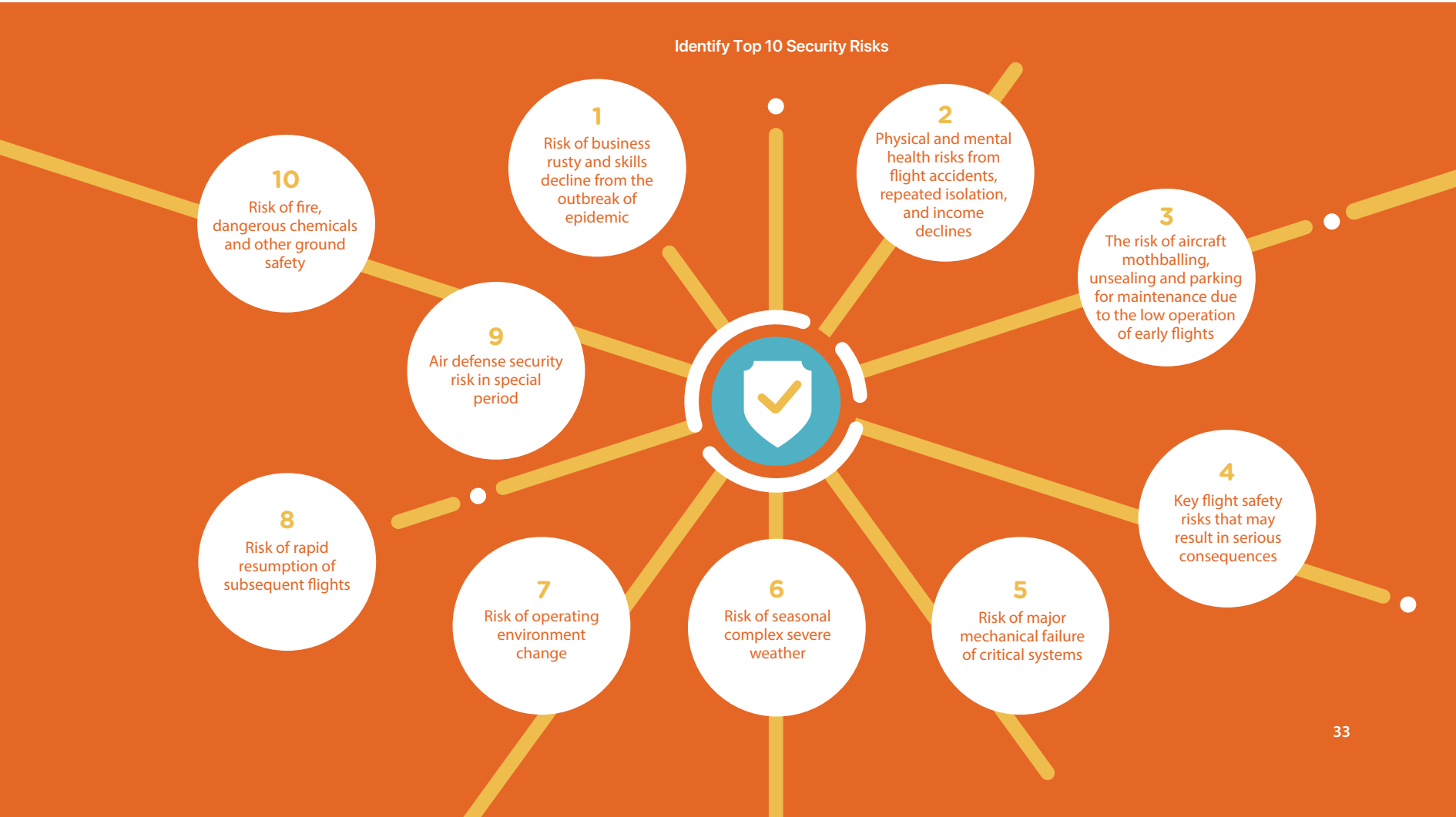
Carry out special risk assessment on 14 units including Xinjiang branch, Northern China branch, Shenzhen branch and Hainan branch to accurately frame the overall safety situation; Take three "Looking back" measures to rectify non-compliance practices including violations in standard operating procedures (SOP), not following manual work cards in construction and ground agent safety supervision, as well as three special measures for hazardous chemicals and fire safety, "Five Prevention" and aircraft scratch and collision.

Promote the application of safety performance management

Issue the Work Plan for In-depth Promotion of Safety Performance Management of China Southern Airlines Group, sort out and evaluate the existing monitoring indicators, establish a company-level performance indicator system based on core risk, promote the deep integration of safety performance management and various safety business chains, improve the accuracy and practicability of indicators, and realize Mutual verification between monitoring indicators and risk prevention and control measures to improve process control ability.

Forestall and defuse major security risks

Systematically sort out the current ten security risks through in-depth research, formulate targeted prevention measures, refine and specify the institutional measures, penetrate into the management process, and implement the operation of front-line personnel. By focusing on the two lists of stage prominent risks, dynamically manage hidden risks and institutional measures, push forward the security threshold and ensure that security risks are always under control.





# Construction of Work Style and Discipline

China Southern faithfully implements the work requirements of the Civil Aviation Administration outline in the Notice on the Issuance of the 2022 Civil Aviation Safety Style Construction and Publicity and Education Work Plan, continuously improves the style construction system, comprehensively uses various technical means such as cabin sound monitoring and remote monitoring to develop a long-term mechanism for identifying work style problems and implementing quantitative management.



# Promote Safety Culture

China Southern has carried out safety activities such as "I offer sincere words for safety", "I found defects in the manual", "I have words for the chief division" and "Safety Forum" as well as Work Safety Month activities and work safety travel activities with the theme of "Abiding by the Work Safety Law and Be the First Responsible Person". The company has used the safety management fund to reward employees who actively perform their duties, vigorously promoted the safety culture and mindset.

Hold **4** training sessions to enhance the ability of cadres in four major systems of safety management

with more than **160** participants

Hold **232** safety speeches tour

organize **718** learning activities such as "Safety Lecture", "Safety Open Class" and "Safety Micro Class"

with **37,074** participants

## Case

### Comprehensively promote the voluntary reporting platform under the brand of "I-CARE"



China Southern I-CARE (voluntary report on aviation safety) collects issues, suggestions and opinions related to aviation safety from all employees of China Southern, and steadily proposes possible solutions. Through continuous exploration and joint efforts in releasing process standards, optimizing and upgrading systems, setting performance indicators, strengthening comment analysis, increasing reward mechanism, developing unique brands, the I-CARE voluntary report platform sets up an internal mechanisms including brand promotion, report collection, analysis and processing, and return visit and research. It has greatly enriched the ways and means for front-line employees to participate in corporate safety governance, and provided strong support for the company's safe and sustainable development. Since the system was launched in June 2020, nearly 10,000 new users have been added, with nearly 3,000 monthly active users, and nearly 60,000 voluntary aviation safety reports have been collected, realizing the development and innovation of the concept of voluntary reporting in the context of China.



China Southern Guangzhou Industry-Education Integration Training Base



# Consolidate Aviation Safety

China Southern always adheres to the principle of putting people first and life first, adheres to "safety first", and clarifies the overall safety management strategy of "Aiming at the Long-Term, focusing on the Implementation, and Preventing Risks". The company has been making continuous efforts from the aspects of ideological and behavioral safety of employees, constantly improving the safety awareness and skill of flight crew, and strengthening the capacity building in operation control, maintenance and digital application, thus laying a solid foundation for aviation safety work.



## Aircrew Management

China Southern attaches great importance to aircrew safety management, continuously improves pilot training methods and systems, strengthens the improvement of flight crew theoretical knowledge and operational skills, safeguarding flight safety.

### Carry out skills training

China Southern has conducted flight lecture sessions, safety lecture sessions, small classes organized by the Chief Pilot Office, and the special training of "Eight Should, One Shouldn't", organized 145 sessions of CRM training. A total of 4,600 people of professional teams such as flight operation, maintenance, engineering, operational control and in-flight cabin have participated in the training to consolidate and enhance their core skills and capabilities.



### Case Take Effective Measures Quickly to Ensure Safety and Stability During the Special Period

After the "3.21" flight accident, Civil Aviation of China has entered a special period and must take special measures. China Southern has studied and implemented the spirit of important instructions of general secretary, Xi Jinping, conscientiously implemented the 15 measures and requirements of the State Council's work safety video conference and the "Emergency Notice on Strengthening Aviation Safety Work" issued by the Civil Aviation Administration, and quickly formulated 31 detailed measures and 13 hard measures to ensure flight safety. Before and after the 20<sup>th</sup> National Congress of the Communist Party of China, a special action plan was issued to "Prevent Risks, Ensure Safety, and Welcome the 20<sup>th</sup> National Congress", and 54 hard measures were formulated. China Southern has timely promoted safety inspection and safety rectification in key areas based on the implementation of hard measures to ensure that measures are effectively implemented.

### Improve the assessment system

Improve the management system of test personnel and type instructors, clarify the division of responsibilities among flight corps, Xiangyi Company and training center, and employ 57 upgraded training (B3) type instructors and 130 flight ground theory instructors; Formulate measures for the management of test personnel, strengthen the management of inspection quality, carry out continuous training and standardized training of test personnel, and implement quantitative assessment and comprehensive assessment of test personnel.

### Improve evidence-based training

Make full use of flight quality monitoring), combined with the route operation safety assessment (LOSA), and comprehensively use unsafe incident investigation, training inspection and evaluation, flight feedback and other means; Through big data analysis of the flight process, not only identify common problems, but also identify individual problems, precise policies, so as to realize targeted improvement, targeted training, and resolve the risks existing in the flight process in training.

### Control the key links

China Southern has standardized pre-flight preparation procedures, imposes team preparation requirements to help the crew members quickly establish situational awareness, and improved pre-preparation quality. The pilot instructors are selected by the Fleets Division who regularly participates in the dispatch and departure clearance, including complex weather decision-making, air support, fault handling, etc. The company has improved the emergency response manual, carried out desktop and live rehearsals to improve staffs ability to respond to emergencies.





## Operation Control

China Southern has continuously improved its abilities to control operational risks, strengthened the security of aircraft maintenance, and promoted the capacity building of digitalization and intelligent application, thus laying a solid foundation for aviation safety.

### Operational Command Security



### Improve the emergency management system

China Southern continued to revise emergency backup plans, develop the construction of emergency platforms, organized special teams to revise emergency response manuals, and conducted desktop and live rehearsal to improve the ability to respond to emergencies.

### Conduct a Risk Assessment

China Southern completed 42 risk assessment of "Three New Routes" and other special risk assessment, identified 35 danger sources, and dynamically maintained 108 danger sources in storage.

### Publish Risk Alerts

Key warnings were issued on 51 risks, including typical cases, operation of small and medium-sized special airports, adjustment of Beijing-Guangzhou corridor, Russia-Ukraine conflict, and fire safety. In response to severe weather, China Southern issued 208 warnings of typhoons, thunderstorms, snow and ice, and successfully ensured the flight safety of more than 10 sub-regional snow and ice processes, more than 30 systematic thunderstorms, and 8 typhoon weather processes.

### Digital Driven Security



### Integrate security data resources

Based on the seven security systems as the basic framework of business capacity construction, a business middle-desk, security center in the security field is built. By integrating the security management business chain, data islands are opened up and unified, and standardized middle-desk capabilities are exported to the whole company in the form of micro-services, so as to meet the needs of company-level security management, based on risk control, providing support for safety management in various professional fields.

### Optimize the safety management system

Continuously optimize and upgrade the ESMS safety management system, establish safety management quality control chain, realize closed-loop management of the whole process of safety information, and improve the efficiency of safety management; Optimize and improve the LOSA system to improve the overall evaluation of the flight technology and management capabilities of the crew.

### Realize data visualization

Through the risk analysis of domestic and international key transport airports and 3D animation display, front-line personnel can personally perceive airport risks. The visual panel of safety information and flight data provides the basis for safety management personnel to make accurate policies.

## Maintenance Safety



### Optimize the allocation of maintenance resources.

By coordinating system resources, China Southern completed the rush repair work of 16 hailstorm aircraft in 152 days, which created China Southern speed and set the benchmark in the industry. The company coordinated manpower allocation and promoted localized management of external terminals. 14 maintenance representatives have been dispatched to nine major terminals including Chengdu to ensure safe and smooth operation of external terminals.

### Refine mechanical fault control

Establish the "List of Important Components of China Southern Fleet", the "Base-System-Company" three-level decision mechanism for critical system failures, the process control and on-site management mechanism for important failures, and the air-ground joint prevention and control mechanism.

### Stimulate the potential of engineering innovation

Upgrade the aircraft remote diagnosis system and launch the new multi-functional "Sky-Eye" platform to enhance the quality of aircraft health management; Build a full-frame decoding platform to realize automatic decoding; Promote the engineering-based response platform (ER) to improve the time-sensitive engineering response speed.

#### Honor:

China Southern is the only airline in the air transport industry that has participated in and advanced to the top 10 in China since the third China Internet Competition with the "Aircraft Maintenance Command Workshop Solution for Complex Terminal Scenarios", and earned the third place in the competition of 1,942 industrial enterprise teams.

### Case China Southern's First promotes the "New Intelligent Maintenance Method Based on AR" in the world



On September 21, 2022, China Southern launched the "New Way of Intelligent Maintenance Based on AR" in Guangzhou. Through the use of its customized AR glasses, combined with the support of China Southern's cloud maintenance system, AR work card, AI algorithm and intelligent voice, the new approach offers smooth integration and interaction ability, natural cloud native ability and strong environmental perception ability, giving aviation maintenance workers and managers a new vision of work and data, allowing workers to organically integrate with the digital world, maximum concentrate on the work process, avoid frequent interruptions. Safety and efficiency are greatly guaranteed.



## THE POWER OF ROLE MODEL

### Enjoy Safe Flight

## Maintenance "Old Master" Zhang Qiu hao



Mr. Zhang is a legend as the aircraft safety guardian of the aircraft maintenance facilities of China Southern Guizhou Branch. As the section chief of the production workshop, he has grown from a new aircraft recruit to a highly respected "old master" in the forty years of managing aircraft maintenance issues. "Patient" and "rigorous" are the keywords of his colleagues' evaluation of the long-served expert. Correct statements such as "the operator can not be more careful, and the flight operation safety margin can be larger." This is Zhang Qiu hao's one secret to maintaining "zero errors" for safety operation for so many years.

Mr. Zhang has engaged in machine wheel assembly work after transfer from the first line of maintenance post. The aeration of aircraft wheels is a very common finishing work after the assembly of aircraft wheels, and it is also one of his daily work routines. Managing the strict pressure standard of

the wheel and the high pressure of the nitrogen cylinders used to inflate the wheel, this seemingly simple task requires a great deal of meticulous caution. However, he never takes things lightly because they are simple, from the fastening of the gas pipe joint, to the inspection of pressure relief valves nitrogen bottle switch and pressure. This encapsulates the reliable connection between the gas joint and the equipment to be filled, the steps and precautions for opening the nitrogen bottle, the safe position of the operator during the inflation process, the wheel pressure inspection and tool count when the inflation is completed, etc. Zhang Qiu hao strictly follows the word-for-word "wheel assembly process" specifications, to ensure that each operation is safe and compliant, so much so that he is often called "walking textbook". Currently, Zhang Qiu hao has got a very "remarkable" skill and takes 20 minutes to successfully complete the aircraft engine ignition wire replacemen. He has set a record for the company's shortest time record for this effort.

“

"If you choose to work in aircraft maintenance, you must be serious and rigorous and revere life; If you choose maintenance and engineering, you must face the battle, be fearless of danger, and be able to unleash your full abilities."

-- Zhang Qiu hao

## Take Good Care of Passengers' Health

China Southern establishes the safety culture concept of "Happy Work, safe and Happy", The staff of China Southern are committed to providing good service for the passengers, gaining the satisfaction of the passengers, and ensuring the safety of the passengers as a conscious pursuit.

### Food Safety

Foreign body prevention and control shall be carried out, foreign body self-examination data of each link shall be included into safety management performance monitoring, and indicators of "ForeignBbody Discovery Rate" and "Four Hazards" shall be added to improve the monitoring of safety performance indicator system. In response to complaints about food hygiene services, adhering to the principle of "Making Out Solutions from the Analysis of Problems", measures such as "Multiple Review" of foreign body selection, reverse inspection mechanism of foreign body, and establishment of regular foreign body analysis reports are adopted for ensuring food safety.

### Cabin Safety

Constantly optimize the cabin service management process, explore new risk management modes such as risk radar and VR TT multi-person cooperative fire fighting training program:

✓ **Normal management means**--Give the chief purser the right to change the service process when encountering turbulence, reduce the impact on passengers and avoid the risk of injury caused by turbulence.

✓ **Risk Radar**--Based on modules such as "organizational risk", "turbulence warning" and "risk warning" and combined with quantitative statistical analysis, provide targeted, dynamic and intelligent reminders for "Ten Risks" in cabin operation, and provide personalized "case base and solution base" to help flight attendants with potential in-flight emergencies.

✓ **VR TT multi-person cooperative firefighting training project**--The training enables flight attendants to form muscle memory in the process of firefighting training, so as to better improve flight attendants' emergency response to cope with the potential cabin fires and guarantee the safety of life and property of passengers.





## Care for Employees' Health

China Southern formulated the Guidance on Strengthening the work of heart-to-heart Conversation among Employees. By providing true personal care and psychological counseling to employees, China Southern maintains the overall stability of the staff and encourages them to devote themselves to their work with a strong sense of responsibility and with a whole heart and soul.

Carry out more than

**1,800**

person-times of individual counseling for psychological assistance

Launch

**32**

sessions of online group psychological counseling of "Kapok Heart Companion"

Hold the

**8**

th session of "Kapok Heart Lecture"

Note: The statistical scope excludes Xiamen Airlines and non-holding subsidiaries of China Southern Airlines

Safety • Pilot a Safe New Journey

### Caring for all employees

Invite experts from Class A rated hospitals to popularize medical knowledge and make home visits; Explore and build the party building brand of "Through Train for the People"; Manage cadres with the system of "First Question as Final Answer"; opened up information research module on China Southern's "Cloud Kapok" online; "Zero Distance" online programs to serve all needed staff members, focusing on "small things" to do practical things.

### Care and condole employees

Visit front-line duty personnel, purchase love bags, and establish a psychological care working mechanism for front-line employees; Continue to pay attention to the ideological and psychological conditions of employees, and carry out heart-to-heart talks with a total of 274,300 person-times in the light of major changes in the situation and key period, caring employees with sincerity. Through the "Kapok Good Mood" studio, more than 1,800 person-times of individual consultation were carried out, 32 sessions of "Kapok Heart Companionship" online group assistance were held, and eight sessions of "Kapok Heart Lecture" were held, with an audience of nearly 90,000 person-times.

### Promote the emergency rescue volunteer plan

Organize volunteers to complete 14 emergency rescue training and recruit 465 volunteers. In the past three years, 1,341 primary rescuers have been trained, and the prevalence rate of emergency rescue in Guangzhou is 8%, which effectively improves employees' self-rescue and mutual rescue ability, so that employees can work with peace of mind and live a happy life.

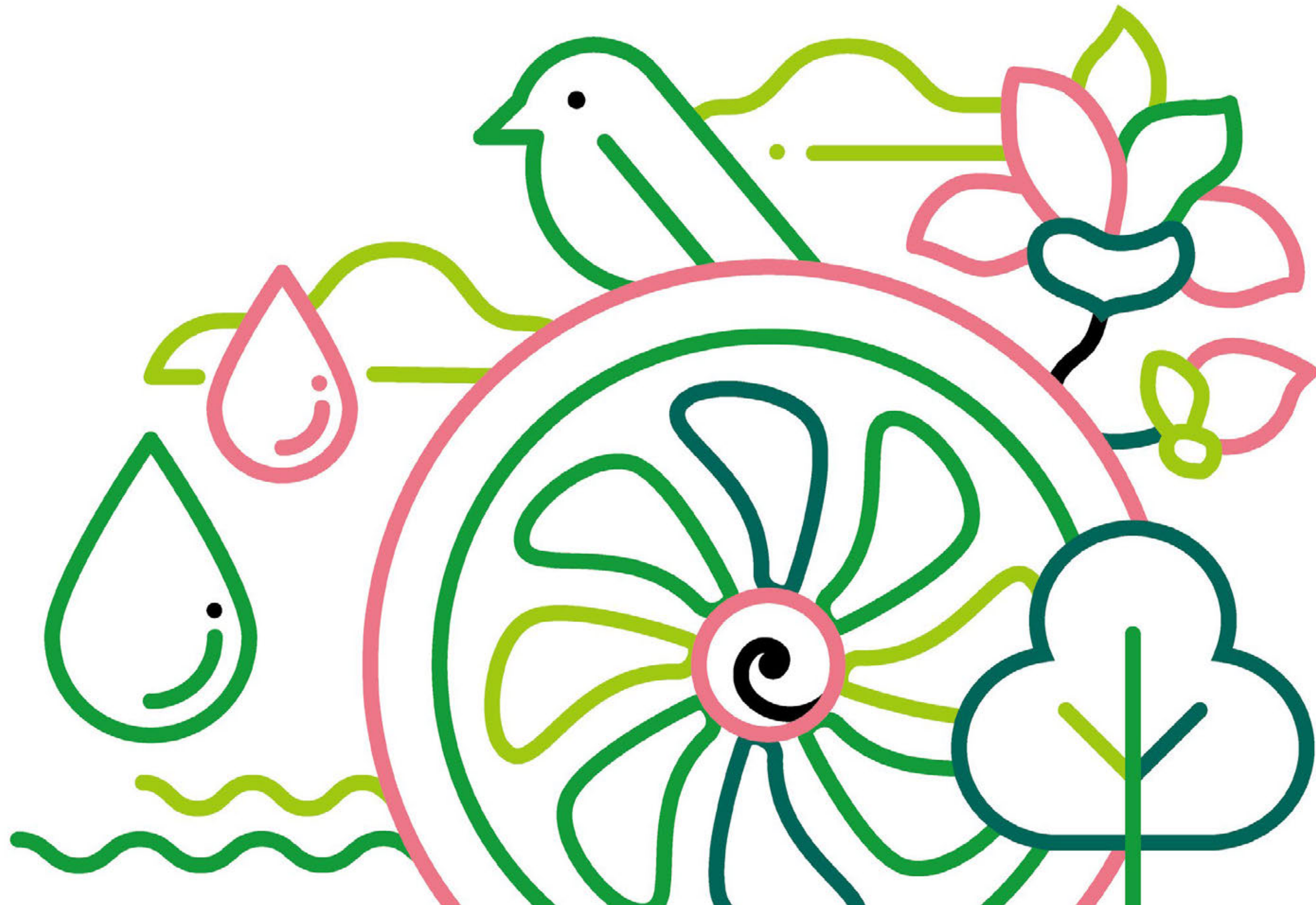


# 3

## LOW CARBON Inject New Green Vitality

China Southern adheres to the concept of "Green, Harmonious and Innovative" and promotes the implementation of the carbon peak action plan in an orderly manner. The company reduced the level of income ton-kilometer fuel consumption, carried out energy-saving renovation of existing buildings, explored contract energy management models to reduce ground energy consumption and carbon emissions, paid attention to the commercial application of domestic sustainable bio-fuels, strengthened carbon asset management, deepened collaborative efforts in areas such as the "Green Flight" brand, and promoted the level of green development to the industry-leading level.

Respond to the UN 2030 Sustainable Development Goals



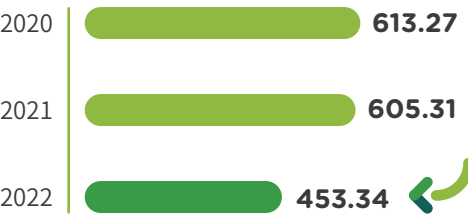


# Manage Environmental Impact

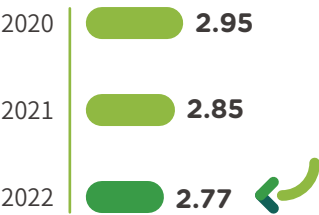
China Southern strictly abode by the regulations and systems such as the Supervision and Management Measures for Energy Conservation and Ecological Environment Protection of Central Enterprises, the Assessment Rules for Energy Conservation and Ecological Environment Protection of Central Enterprises, and planned to manage the impact of resource use and energy consumption on the environment, formulated the Notice on the Supervision and Management Measures for Energy Conservation and Ecological Environment Protection of China Southern Airlines Group, and prepared and printed the Emergency Management Plan for Environmental Emergencies of

China Southern Airlines Group, Updated and improved the Management Measures for Monitoring, Reporting and Verification of Carbon Dioxide Emission Data from Flight Activities and the Special Plan for Emergency Response to Environmental Emergencies manual, and further refined the Assessment Rules for Energy Conservation and Ecological Environment Protection of Central Enterprises" (GZFS JG [2022] No. 56). At the same time, in view of the work of plastic restriction, the Notice on Printing and Distributing the Administrative Standard for Prohibiting and Limiting Disposable Plastic Products of China Southern Airlines Group (Fourth Edition) was issued.

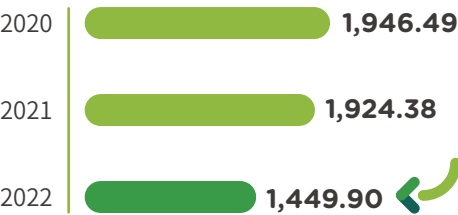
Aviation fuel consumption (10,000 tons)



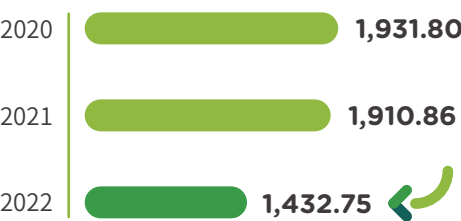
Fuel consumption per ton/km (Tons/10,000 ton-kilometers)



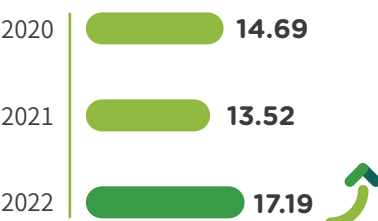
CO<sub>2</sub> emissions(10,000 tons)



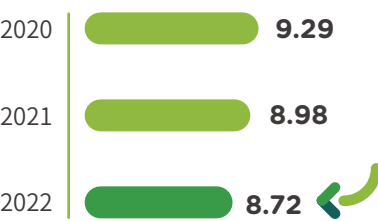
Category I : CO<sub>2</sub> emission(10,000 tons)



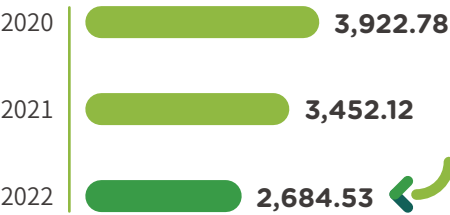
Category II : CO<sub>2</sub> emissions(10,000 tons)



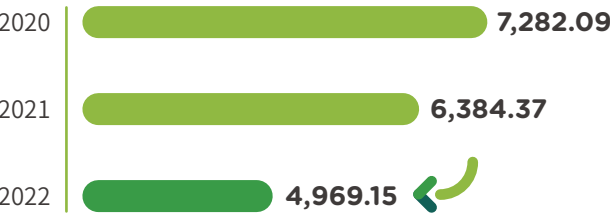
Ton-kilometer carbon dioxide emissions (Tons/10,000 ton-kilometers)



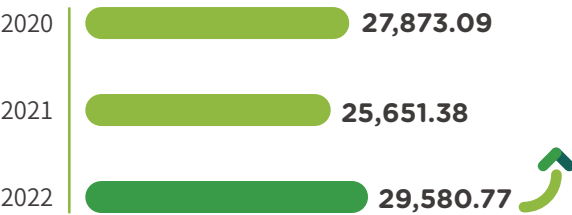
Gasoline (ton)



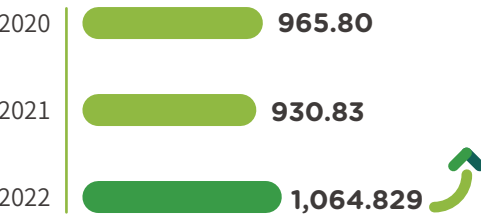
Diesel oil (ton)



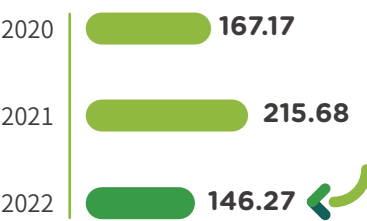
Electricity (10,000 kWh)



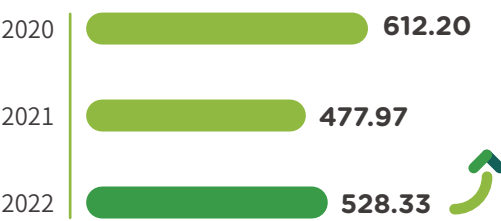
Natural gas (10,000 cubic meters)



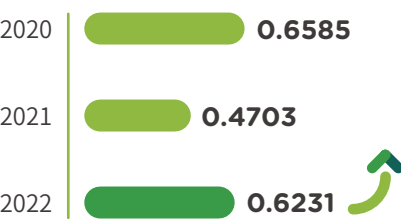
Liquid gas (ton)



Total water consumption (10,000 tons)



Water consumption intensity (m<sup>3</sup>/10,000 yuan)





# Coping with Climate Change

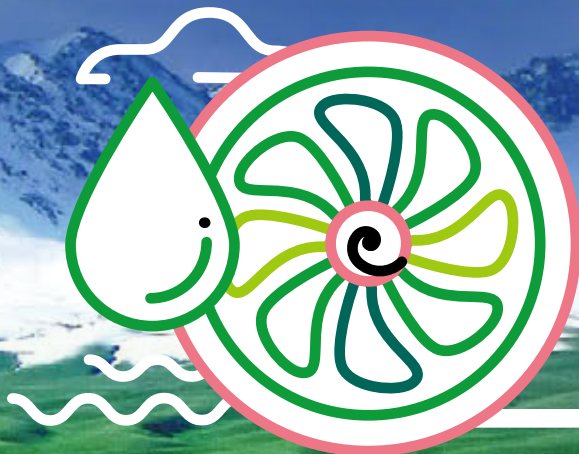
China Southern actively advocates the concept of "Green, Harmonious and Innovative", and constantly tries to explore new solutions for green development. A new green development model from the air to the ground, from the field to the field, from operation to management, comes into being, which is based on aircraft energy saving and carbon reduction, ground energy consumption reduction, and passenger green behavior.

## Green Full Journey Service

China Southern has integrated green development into the whole process of production and operation. Starting from the links of air, ground and passengers, the company continued to optimize the green and low-carbon measures such as flight fuel saving, ground consumption reduction and passenger emission reduction, strengthened the research and development and innovation of environmental protection and energy conservation technology, promoted the utilization of recyclable resources, tried all out to practice the green full-journey service.

## Deeply Participate in Carbon Trading

China Southern plans to carry out carbon asset management, deeply participates in carbon emission rights, carbon trading and other market mechanisms, and expands carbon inventory, carbon asset custody, carbon finance, certifies voluntary emission reduction project development and other businesses. The "Green Flight--Passenger Carbon Offset" service product was launched. Passengers can redeem the certified emission reductions through voluntary donation of mileage to offset the carbon emissions generated during the flight process, and achieve "carbon neutral" flight. The company successfully built a platform for passengers to contribute their personal strength to reduce greenhouse effect, and realize their low carbon lifestyle.



### In the air

#### Reduce aircraft weight

- The airborne coffee mechanism optimization project removed about 1,500 airborne coffee machines, reduced the weight of the aircraft by at least 15 tons, and saved an estimated 1,400 tons of fuel every year (based on the standard of 2019). Combined with the optimized maintenance cost, the company has saved more than 15 million yuan every year since 2022.
- Through the temporary removal of A330 lounge project, the empty weight was reduced by 18 tons, and the project income was over 40 million yuan.
- In 2022, China Southern implemented weight reduction through the implementation of lightweight dining cars and other measures, saving nearly 260 tons of fuel.
- Precise water addition project was carried out, reasonably reducing water addition based on factors as airline routes and passenger load.

#### Optimize aircraft performance

- A new wing tip conversion program was implemented to effectively reduce fuel consumption by improving the aerodynamic performance of the aircraft. In 2022, 20 aircraft have been refitted, and according to the evaluation of China Southern's aircraft types and operations, the installation of the new wing tip can reduce the corresponding carbon dioxide emissions per aircraft per year.

20 aircraft have been refitted

#### Improve aviation fuel efficiency control

- Revise and improve Flight System Operation Efficiency Assessment Plan, refine and decompose fuel saving indicators, carry out monthly operation assessment and evaluation, focus on key groups and routes, and carry out targeted improvement. In 2022, the flight system has an average cruising altitude of 29,336 feet, 99.54% single-shot slip implementation rate, 91.20% flapper reliability rate, and 92.76% fuel-saving reliability. All fuel-saving indexes have been further improved.

92.76 % fuel-saving reliability

#### Digital fuel-saving of the whole process

- With the concept of "managing every drop of oil well and making good use of every drop of oil", promote the digital fuel-saving work in the whole process:
- Establish the assessment index model of ton-kilometer fuel consumption, formulate the application guidelines for fuel saving, uniformly optimize the caliber of fuel saving indicators, and strengthen the positive incentive effect of evaluation and assessment.
  - Improve the APU electronic model algorithm with breakthrough in the technical issues in the industry, expand the space for fuel saving after flight, and develop the continuous climb/descent logical model to provide data support for optimizing the flight profile and fuel saving.
  - Set up the engine washing project team, locate the aircraft with large performance degradation, achieve accurate washing and reduce fuel consumption.

#### Route optimization

- According to the adjustment of airspace in the data period, analyze the potential of route optimization and develop the company's route optimization plan. By the end of 2022, 419 airline routes have been optimized, and the actual flight mileage has been reduced by more than 776,000 kilometers.
- Build an air route optimization strategy based on the cost of air route overflight, and optimize the international air route selection mechanism.
- Research and develop the cost management for air route overflight, sort out the air route costs of countries involved in Southeast Asia/Australia/New Zealand, Japan/South Korea/North America, and Europe quarterly, and formulate the air route optimization plan.

#### Optimize "Jet Fuel E-Cloud"

- The flight instruction refueling and EFB fuel bill electronic signature function have created a new mode of flight refueling. Through the real-time connection between China Southern Aviation Oil e Cloud and the intelligent aviation oil system of China Aviation Oil, the planned fuel quantity information of the aircraft is conveyed to the refueling personnel in advance, and the refueling truck is in place in advance and refuels in advance, so as to improve the efficiency of flight refueling.



## On the ground

### Introduce new energy vehicles

- Introduce the application of new energy vehicles, accelerate the elimination of old and old vehicles and equipment inside and outside the airport, carry out tail gas treatment for ground fuel vehicles that meet the transformation standards. For newly introduced vehicles, 100% of the vehicles in key regional airports will be electric.

100%

of the vehicles in key regional airports will be electric

### Build energy conservation

With the goal of reducing building energy consumption, plan and analyze the energy-saving transformation of existing buildings and the energy-saving transformation of new buildings of the company, plan the energy-saving transformation mode of contract energy management and suggest to realize the energy-saving transformation of buildings in three steps:

- China Southern Headquarters Building and other typical buildings were selected as the pilot of energy-saving renovation that would serve to demonstrate these exciting new energy savings concepts.
- Carry out energy-saving transformation of office buildings in Guangzhou and deepen energy-saving measures.
- In the energy-saving transformation of existing buildings throughout the company, introduce high-standard energy-saving planning for new buildings, and cultivate a new driving force for green and low-carbon development.

### Case Complete the first phase construction of aircraft weight management system

The construction of the first phase of the aircraft weight management system has realized the systematic management of the weight of the items on the aircraft. According to the input calculation, the average service load space of the narrow-body aircraft to be optimized is 500-600KG, and that of the long-distance wide-body international flight is 800-900KG. China Southern completed the standard formulation and digital interface design of the weight of six categories of aircraft items, including aircraft basic weight, food, service, newspapers, duty-free items, and drinking water. The weight of a single flight is reduced by more than 70KG by optimizing the weight of meals, service, newspapers and logistics crates.

## Meals

### Promote "Dining on Demand"

- In terms of passenger meals, more efforts have been made to promote "on-demand dining". In 2022, 2.431 million meals were saved during the whole year. By the end of December 2022, the total of meals saved exceeded 7.351 million, effectively improving the environmental protection of in-flight meals and eliminating food waste.
- For crew meals, China Southern pushed forward the concept "Frugal and Free Meals for the Crew", promoted the in-flight food culture of eliminating waste in the China Southern service team, and reduced the waste of more than 591,500 crew meals as of December 2022.

the total of meals saved has exceeded

7.351 million

reduced the waste of more than

591,500

crew meals

### Case Receive the first A350 using domestic sustainable aviation fuel

On October 21, 2022, China Southern Airlines received and used the "Made in China" wide-body aircraft with sustainable aviation fuel for the first time. The SAF fuel used in this delivery flight was provided by Sinopec Zhenhai Refinery, using waste cooking oil as raw material, and using the grease hydrogenation (HEFA) technology with independent intellectual property rights. It is the first batch of domestic SAF fuel after China's first sustainable aviation fuel industrial unit realized large-scale production.



As of December 31, 2022,

69 sets  
of B777F engines and  
45 sets  
of B787 engines  
have been washed

saving more than  
1,400 tons  
of oil

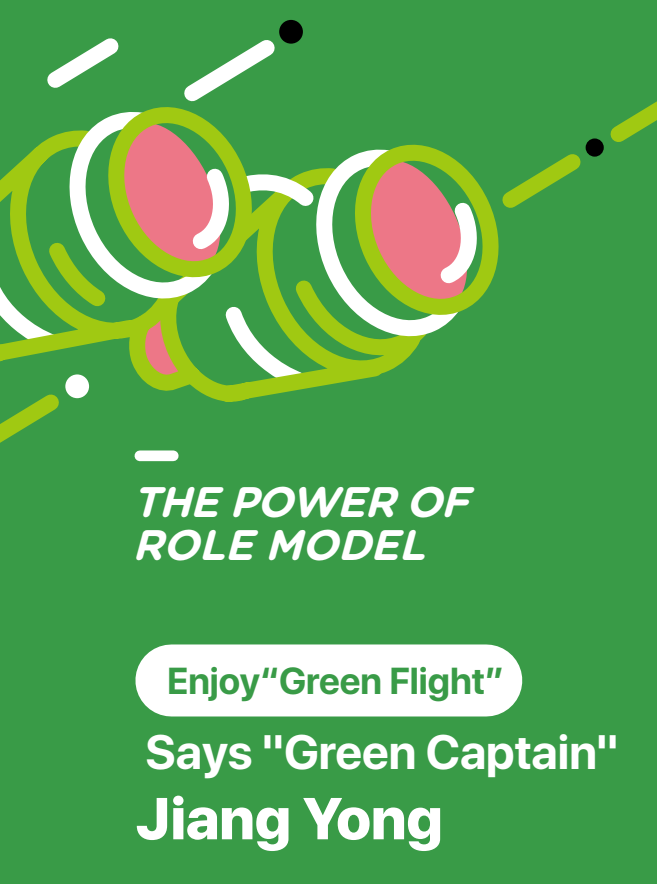


### Extended reading: Why should we "bathe" the engine?

The basic structure of aviation turbine engine is "compressor combustion chamber turbine". The air is compressed by the compressor into the combustion chamber and mixed with the fuel to produce high temperature and high pressure gas, which drives the turbine to work, and the turbine provides thrust for the rear exhaust, and drives the compressor to work to continue to compress the gas at the inlet. There are many blades on each stage of turbine and compressor. During operation, dust and pollutant particles in the air will accumulate on the blade surface. These attachments will slightly change the shape of the blade, thus reducing the aerodynamic efficiency.

"Bathing" is an essential skill for maintaining engine health. Water washing engine can restore the original aerodynamic shape of blades to a certain extent, thus improving the working efficiency of the engine and reducing the fuel consumption of the engine.





## THE POWER OF ROLE MODEL

Enjoy "Green Flight"  
Says "Green Captain"  
Jiang Yong



Jiang Yong, as the captain of the "green flight" theme flight, was affectionately called "green captain" by his colleagues. On the theme flight he carried out, the cabin was full of "green" elements, so that all passengers could feel the strong "green" atmosphere when entering the cabin. In the interactive activities such as award-winning questions with passengers, China Southern also conveyed the concept of green and low-carbon flight, aiming to call on passengers to choose more "Green Flight", while feeling the "Affinity and Refinement" service, and make a contribution to protecting the earth.

“

"The concept of green environmental protection has been integrated into our work and thoughts. Every flight of China Southern is a 'green' flight, and every pilot strives to be a 'green' pilot."

-- Jiang Yong

## Carry Out Pollution Prevention and Control

China Southern strictly complies with the requirements of laws, regulations and standards as stated by the People's Republic of China on the Prevention and Control of Air Pollution, the Law of the People's Republic of China on the Prevention and Control of Water Pollution, and the Comprehensive Wastewater Discharge Standard of Guangdong Province, explores and innovates resource conservation schemes, strengthens the disposal of waste gas, wastewater, and waste and noise control, strengthens the supervision of the "Three Wastes" disposal outsourcing units, and strictly implements the main responsibilities. In 2022, there were no illegal emissions.



## Resource Saving

### Explore the refined water filling scheme

To implement the company's "Cost Leading Long-term Mechanism", further refine the management of aircraft water filling, reduce aircraft load and save operating costs, relevant departments have set up a refined water filling project team, and formulated a water filling scheme from a single model to multiple models, and from a unified standard to a fine standard. After the initial trial operation, the data collection, analysis and information management have been continuously improved, and the refined water adding scheme has been gradually improved.

### Give priority to dry cleaning of aircraft

Except for special requirements or special treatment of aircraft (such as laming, etc.), we give priority to dry cleaning of aircraft. In 2022, 1,427 aircraft dry cleaning was completed, reducing the water consumption of aircraft cleaning 48,895 tons.

1,427  
aircraft dry cleaning was  
completed

reducing the water consumption of aircraft  
cleaning  
48,895 tons



Wastewater Treatment



For the wastewater from aircraft paint stripping, parts cleaning and various workshops, adopt the integrated sewage treatment station with biochemical treatment process, and discharge the wastewater into the airport sewage treatment plant through the airport pipe network after bio-degradation to meet the national discharge standards;



For the waste water generated from the production of aviation food, set an independent and standardized production waste water discharge outlet, and adopt a set of oil separation+air flotation+sedimentation sewage treatment system with a flow meter installed on the production waste water treatment equipment, specially assigned personnel to take care of and operate the system to ensure the normal operation of the environmental protection treatment facilities of the sewage treatment station, and to track the sewage treatment capacity in real time;



For the medical waste water, strictly carried out the disinfection treatment, and invite the third party environmental health inspection institution for monitoring, so as to eliminate the environmental pollution caused by the medical waste water.

Waste Gas Treatment

Install waste gas treatment facilities, use activated carbon adsorption technology to absorb the organic waste gas generated by aircraft painting, and add an online exhaust gas monitoring system to upload real-time emission data for monitoring by the environmental protection department.



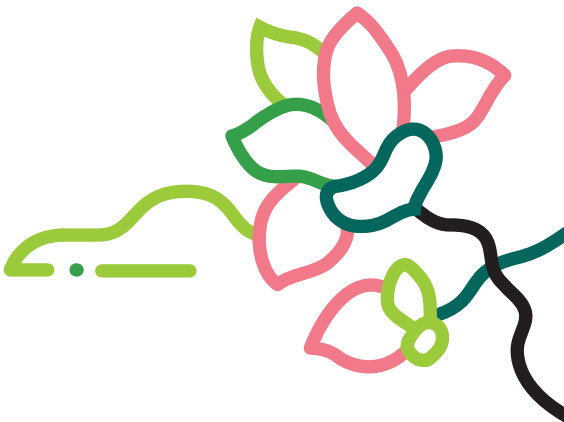
Waste Treatment

Strictly distinguish between hazardous and harmless wastes, and the wastes will be collected by specially-assigned person every day after initial classification and release; Sign disposal contracts with a number of qualified units for recycling and disposal, so that the wastes can be transferred for disposal at high frequency, so as to avoid long-term accumulation, and reduce the company's environmental hazards.

Case  
Carry Out Air Material Recycling Project and Innovate Air Material Processing Mode



China Southern actively carried out the disposal project of refitted and dismantled parts, and disposed of the refitted and dismantled parts through the processes of searching for domestic demand, searching for external demand, and turning waste into treasure, effectively improving the utilization rate of the warehouse and activating the assets of aviation materials; Carry out the cultural and creative project of small pearl aviation materials, and sell cultural and creative products through China Southern Airlines Mall, member mileage exchange, customer meetings and other channels to achieve the reuse of redundant aviation materials; Carry out the painting project of the aircraft, and comprehensively consider the weight of the paint layer, environmental protection performance, paint price and other technical and commercial performance by optimizing the paint procurement mode. A total of 33 aircraft repainting have been completed, of which the average weight loss of narrow-body aircraft is 39 kg, and the average weight loss of wide-body aircraft is 100 kg, and the newly sprayed paint contains no metal chromium, effectively reducing the emission of polluting gases.



Hazardous Waste Classification	Processing Capacity (Ton)
Waste kerosene	427.67
Waste miscellaneous oil	61.775
Waste organic solvent	119.688
Waste lubricating grease	2.205
Waste emulsion	0.93
Waste paint and paint residue	14.35
Waste organic resin	5.18098
Waste lamp tube	1.153
Waste acid and alkali	0.107
Waste activated carbon	31.66
Waste packaging materials and containers	25.274
Waste battery	4.14
Surface treatment waste liquid	0.12
Photosensitive material waste	0.074
Metal chips containing emulsion	2.466
Chromium-containing sludge	1.325





# Noise Control

## Strictly control the use time of APU

Formulate detailed measures from the aspects of bridge equipment, pre-flight work, short stop/troubleshooting, and continue to carry out lean management of APU use to further reduce aircraft noise pollution on the ground.

## Ensure the aircraft noise reduction facilities in good condition

The aircraft is equipped with a noise certificate issued by the manufacturer, which meets the requirements of the CAAC. The sound insulation layer of the engine inlet and tail nozzle shall be visually inspected before and after flight.

## Increase the proportion of low-noise engines

The newly introduced aircraft chooses to install a new high bypass ratio engine, and utilizes advanced noise control technology to reduce the howling of fans and improve the noise control effect.

### Case Introduce a New Large Wide-Body Airliner -- "Dark Mirror Man" A350



On January 6, 2022, China Southern introduced two new large long-range wide-body A350-900 passenger aircraft, which are affectionately called "Dark Mirror Man" due to their unique cockpit glass design. The "Dark Mirror Man" A350 adopts the latest aerodynamic design, uses a new generation of engines and lightweight materials, which can effectively reduce fuel consumption, carbon dioxide emissions and aircraft noise. It is estimated that the fuel consumption of the A350 can be reduced by more than 25% compared with other long-range aircraft, and the noise is 21 decibels lower than the latest noise standard of the International Civil Aviation Organization (ICAO).



Note: The statistical caliber of the above data is Guangzhou region.



# Pass on the Low-Carbon Concept

## Green Office

China Southern actively explores the green and low-carbon lifestyle, advocates employees to practice the work style of practicing strict economy and green office, continues to participate in the global action to protect biodiversity, increases the publicity of the concept of green environmental protection, and leads employees, customers, the public and other stakeholders to participate in the green and low-carbon action.

China Southern advocates that employees implement the green office mode of energy conservation, low carbon and environmental protection, and standardize the water and electricity use behavior of employees by strengthening the operation management of air conditioning, reducing the power consumption of office equipment, rational use of lighting fixtures, use of water-saving appliances, and implementation of paperless electronic work card signing system, so as to encourage employees to enjoy green commuting and green consuming, and create a green and low-carbon office environment.

### Case Launch the "Bring Your Own Coffee Cup" Activity

In September 2022, the Air Kitchen Entity Store of China Southern launched the activity of "1 yuan off for self-brought coffee cup" to reduce the use of disposable cups, so as to advocate the concept of environmental protection, encourage and reward customers' environmental behavior and contribute to environmental protection.



# Publicize the Concept of Environmental Protection

China Southern actively organizes and carries out public welfare and environmental protection activities, deeply participates in biodiversity conservation, vigorously promotes the concept of green environmental protection, and continuously improves the green and low-carbon awareness of all stakeholders.

### Case Issue a Series of Posters of "2022 International Biodiversity Day"

On May 22, 2022, China Southern issued the "2022 International Biodiversity Day" public welfare story reading poster, which corresponds to seven rare animals and plants, such as Chinese horseshoe crab, Hainan gibbon, and Mengxin beaver. Its public welfare and environmental protection story is selected from the public welfare column of the magazine "Home in the Air" of China Southern, which is committed to inviting passengers to pay attention to the public welfare of environmental protection and protect biodiversity.



### Case Actively Carry Out the 2022 National Energy Conservation Publicity Week



In June 2022, China Southern carried out the 2022 National Energy Conservation Publicity Week with the theme of "Dual Carbon Leading Green Flight", and carried out publicity activities from multiple angles and channels throughout the company, vigorously advocating green and low-carbon production and lifestyle, and creating a strong atmosphere of energy conservation and carbon reduction. During the event, the staff of China Southern responded quickly to the call, signed the proposal one after another, and enhanced their awareness of energy conservation and low carbon by participating in the DIY art experience of green plants, the DIY art experience of environmental protection flower sachet, and the DIY art experience of flower bookmarks.

### Case Participate in the Transportation of Rare and Protected Animals



On October 26, 2022, China Southern Airlines Logistics carefully escorted a 17kg golden monkey from Dalian to Chongqing. In order to ensure the safety of the golden monkey, China Southern Airlines Logistics established a special transportation support team to provide "door-to-door" services to ensure the smooth delivery of the golden monkey. In addition, China Southern Airlines Logistics also undertakes the transportation task of national protected animals (such as black leopards, penguins, flamingos, macaws, etc.), providing a solid guarantee for the transportation of rare protected animals.



# 4

## SINCERITY Enjoy New Experience of Service

China Southern has always adhered to the customer-centered concept, practiced the "Affinity and Refinement" service concept, continued to improve the service quality management, provided customers with sincere services, and improved the whole process service experience of passengers.

Respond to the UN 2030 Sustainable Development Goals





# Manage Service Quality

China Southern continued to deepen service quality management, improved the construction of service quality management system, and built an integrated control platform to continuously improve service quality control capability.

## Improve the Service Quality Management System

Promote the construction of service quality management standardization system, establish service quality data monitoring system, strengthen third-party quality monitoring, establish agent quality monitoring mechanism throughout the process, China Southern comprehensively and continuously improves the systematization and standardization of service quality management, and ensures service quality.

## Launch the "Five-Dimensional" Service Action Plan

Launch the action plan of "creating humanized, digital, refined, personalized and convenient services", improve the whole process service experience from the key points of travel efficiency, rights and interests protection, personalized choice, intelligent services, and promote the implementation of the "Affinity and Refinement" service concept, strengthen customer perception, and comprehensively improve the service quality of China Southern.

## Build an Integrated Service Management and Control Platform

Build and improve the integrated service management and control platform covering the whole process of service management, realize the dynamic display of key service data, and realize the visualization of service quality, service trend analysis, service risk threshold monitoring and early warning.

## Optimize Service Risk Management Mechanism

Timely update the risk source database, establish five-level risk early warning, verify the effectiveness of risk control measures, optimize the meeting system of the Service Management Committee, improve various emergency response plans, and strengthen communication and cooperation with the marketing and operation departments.

## Improve the Service Compensation and Authorization System

The system covers ticketing service, air service, ground service and other scenarios, and supports flexible means of compensation for mileage, vouchers and cash. At the same time, with the help of information technology, the system realizes "passenger self-service application and system automatic approval" in key scenarios. By empowering front-line staff, the system can quickly deal with on-site service defects and improve the viscosity and satisfaction of passengers.



# Ensure Normal Flights

China Southern continued to optimize the operation management plan, carried out the normal improvement of all flights, steadily improved the operation efficiency and flight normal rate, and ensured that passengers can fly on schedule.

## Consolidate the Construction of Operation Platform

Establish the "regional transportation management committee" of the subsidiary company to authorize the driving operation management responsibilities; Establish the daily report mechanism of the Operation and Management Committee to realize the rapid resumption of abnormal events; Prepare AOC local disaster recovery plan and Beijing off-site disaster recovery plan to ensure continuous production and operation under special circumstances; Standardize the management of operation on-duty leaders with certificates and qualifications, and improve the ability of on-duty personnel to perform their duties.

## Promote the whole process management of flights

Release the work plan for the whole operation process, carry out the whole process investigation, sort out 34 problems, and promote the operation process optimization in combination with the decoding of the big operation strategy.

## Keep an eye on the operation node and take multiple measures simultaneously

Optimize the flight arrangement and adjustment mechanism, and strengthen the pre-operation management of flights. Formulate the company-wide aircraft change workflow to shorten the decision-making time to less than 10 minutes. Optimize the rapid transit process, and focus on improving the security efficiency of delayed and scheduled flights. The station efficiency improvement projects such as the optimization of landing and takeoff stands on the same side were carried out at the multi-runway airport, and the whole company reduced 3.98 minutes from closing to taking off year on year.



In 2022, the flight availability rate was

95.45 %

up

5.56 percentage points

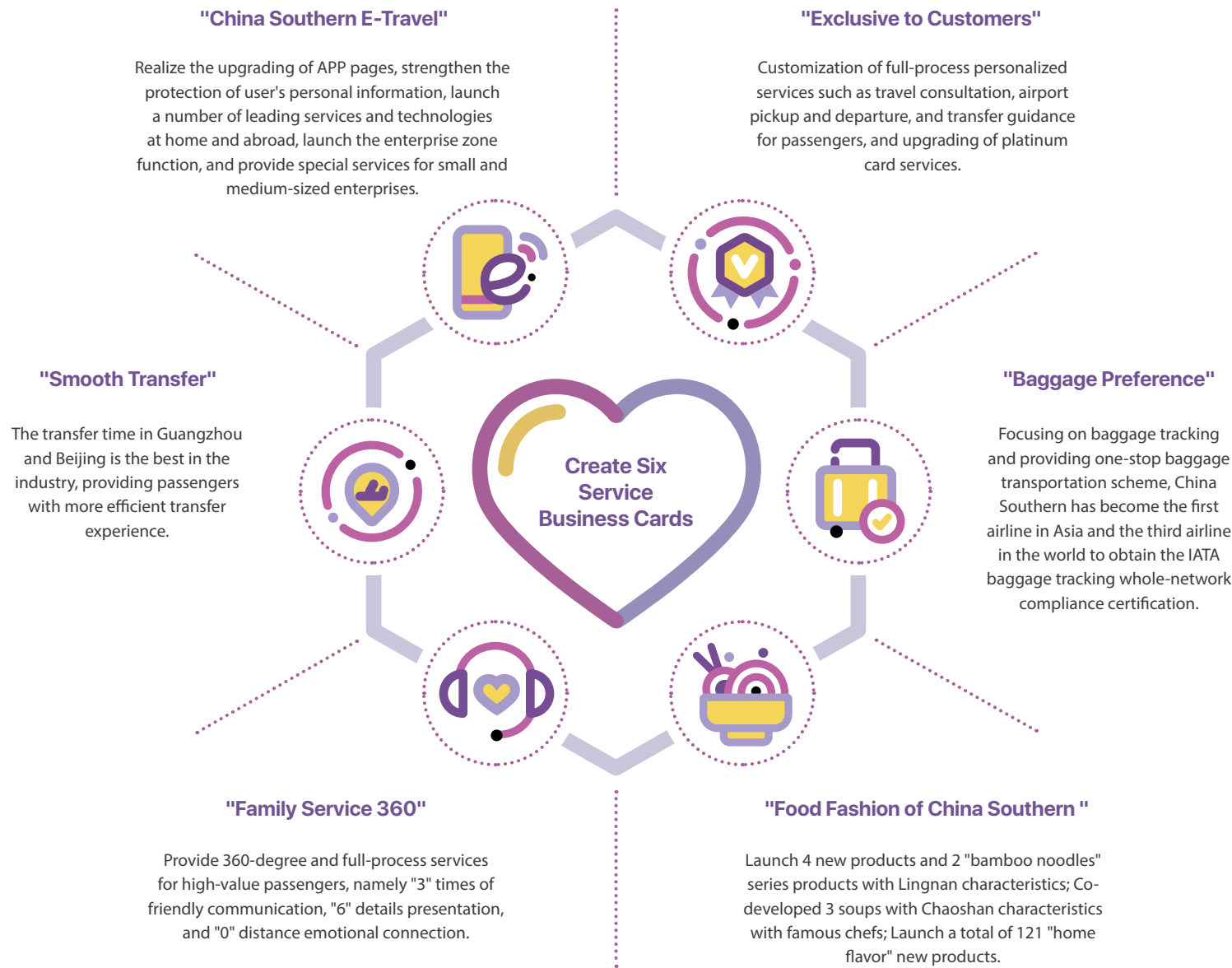
year on year

# Serve Customers with Sincerity

China Southern adheres to the service concept of "Affinity and Refinement", continues to promote product and service innovation, and makes every effort to create six service cards to continuously meet passengers' demand for better travel.

## Affinity and Refinement Service

China Southern continues to focus on the creation of six service business cards, constantly enriches the product system, optimizes the onboard experience, and strives to improve the service experience of passengers.



### Case Innovative "kapok Fresh" Characteristic Drink



The "kapok Special Drink" series is the flagship product of the "kapok Series" cabin service brand of China Southern. In combination with the characteristics of summer season, China Southern innovated the "kapok Fresh" solar special drink, and launched two new products, "Bubble grape" and "Ice and snow Lime grapefruit", which are made from sour and sweet ice juice and bubble water, and are decorated with golden lemon or green and fresh mint leaves, to relieve the heat and produce saliva, and let passengers feel cool and comfortable in summer.

## Rich Product Series

Online air ticket-related service products such as immediate upgrade, special baggage, pet consignment, etc., financial service products such as special baggage insurance, pet insurance, ticket refund and visa change, etc., and educational service products such as Xiaomingzhu Research and Learning Products; Launch "travel to China", business-class package tickets, "Spring and Summerrip", and "Two-City Trip" and other characteristic products based on customer segments, constantly enriching passenger travel options.

### Case Optimize "Pet Consignment" Product



China Southern launched optimized pet consignment products on September 5, 2022, and carried out trial operations on domestic routes starting from Guangzhou, Beijing, Shenzhen, Changchun, Haikou, Sanya and Dalian. Passengers with tickets from China Southern can purchase pet consignment product on the same flight. The product provides pet oxygen cabin air transportation, pet exclusive check-in counter, pet box protective net, pet comfort waiting area, pet priority withdrawal and basic pet transportation insurance and other fine services. In addition, the product realizes the visualization of the pet consignment node. Passengers can view the pet transportation status and the pet photos before loading or arrival and delivery through the baggage query module in the APP and applet service hall of China Southern. Currently, passengers can pay to upgrade the pet consignment insurance according to the actual needs, comprehensively guarantee the travel of pets, continuously meet the travel needs of pet passengers, and improve the travel experience of pet passengers.







**Case**  
Launch the "No Worries about Ticket Refund and Modification" Product



At the end of June 2022, China Southern launched the no-worry product for the first time, and realized the package sales of air tickets+insurance products through the way of additional fares. After the customer purchases the product, 80% of the refund and modification fee can be reduced if the ticket is refunded 48 hours before the flight takes off or changed four hours before the flight takes off, and 60% of the refund and modification fee can be reduced if the ticket is refunded within 48 hours or changed within four hours. The reduction process is automatically calculated and processed by the system, and the customer experience is significantly improved without manual operation by the customer.

**Optimize the Onboard Experience**

China Southern design relevant themes according to different festivals or conferences, plan relevant theme flights, and make monthly statistics of passengers' preference and usage habits for selecting films on the plane, so as to select films targeted, and bring more refined in-flight experience to passengers.

**Case**  
Launch the "Cloud Moon" Flight



From September 9 to September 12, 2022, from 19:30 to 02:00, China Southern launched the Mid-Autumn Festival Moon Appreciation Flight. By summarizing the flight information suitable for the Moon Appreciation during the Mid-Autumn Festival, including China Southern's Popular Moon Appreciation Route, China Southern's Best Moon Appreciation Route, the Best Moon Appreciation Flight Location, the Most Comfortable Moon Appreciation Flight, etc., for the reference of passengers traveling on the Mid-Autumn Festival, China Southern provides passengers with the best experience of the moon appreciation.



**Upgrade Smart Services**

China Southern makes full use of the intelligent platform and information technology to assist passengers in smart travel, upgrading smart services from the whole process of luggage, check-in, consumption, etc., and creating efficient and convenient travel experience for passengers.

**Smart Baggage Service**

The AI intelligent damaged baggage compensation algorithm was put into practice, the intelligent outbound baggage visualization system was launched, and the online query of abnormal baggage distribution nodes was optimized. The China Southern Global Baggage Query System (CSWT) was put into operation, providing intelligent baggage service for passengers, and improving the efficiency of tracking and retrieving abnormal baggage.

**Convenience of Electronic Compensation Payment for Aviation Delay**

The system launched the mobile terminal delay compensation module, supporting the query and compensation operation functions, and improving the convenience of the delay compensation work. Improve the system mileage compensation standard and the attractiveness of mileage compensation, reduce the pressure of cash compensation, and promote the re-consumption of passengers.

**Fingertip Departure Service**

For the first time in China, China Southern Airlines has innovatively implemented fingertip departure services for passengers through mobile terminals. Staff can quickly view flight information, passenger information, and other information anytime and anywhere using mobile phones, quickly handle peer check-in, certificate verification, passenger refund, and visa change services for passengers, effectively improving the intelligent service of ground level machines, and setting a new benchmark for industry services.



Staff use visual systems to check baggage information to improve support efficiency



AI intelligently identifies baggage damage and realizes online convenient compensation



## Warm Special Passengers

China Southern opened special passenger service counters and channels for domestic and international passengers, built special passenger service coordination centers, promoted one-stop service from special service application to approval and then to ticket issuance, and achieved 7 \* 24 hours full coverage, 100% response, and response speed less than five hours.

### Elderly Passengers

The core functions of the website and APP of China Southern have successfully completed the aging and barrier-free transformation, providing special services such as content reading, voice broadcasting, font amplification, so that special groups can experience the warm service of China Southern.

### Wheelchair Passengers

Xinjiang Ground Service launched "door-to-door" service for wheelchair passengers. The wheelchair service is divided into three levels, from low to high, which are pushed to the boarding gate, off the plane and on the plane. The whole process is operated by professional service personnel.

### Children Passengers

Relax the number of accompanied children. The number of children that each adult passenger can carry is adjusted from the original limit of two children per adult passenger to the total number of no more than eight. China Southern improves the standard of unaccompanied children and teenagers' boarding service, allows unaccompanied children and unaccompanied teenagers to be received in first class and business class, relaxes the limit on the number of unaccompanied children and adolescents on each flight, shortens the time limit for special service applications, and make parents more confident.

### First Flight Passengers

For the first flight passengers, China Southern APP launched the first flight guidance function; The Ground Service Department carried out a discussion on the first passenger and formulated a work plan for creating the "First Flight passenger" service; The Cabin Department optimizes the "humanized" service process of the first passenger, and clarified the travel tips from the perspective of flight safety and humanistic care.

### International Passengers

The launch of "Business E-Travel" helps international passengers solve the problem of passport information verification, and makes international passengers travel more convenient and smoother.



## THE POWER OF ROLE MODELS

### Fly with You

## Warmth accompanying Ordinary Hero Flight CZ6820 Crew, Crew and China Southern Xinjiang Branch

At 23:42 on April 30, 2021, the last flight (CZ6820) of China Southern from Xinjiang Hotan to Urumqi delayed taking off to save a boy who had accidentally broken his arm and returned to the bridge to "open the door for the second time". The operation headquarters and crew of the branch company cooperated with the medical staff, the airport and 101 passengers across 1,400 kilometers, and the captain scrambled for precious time and carried out an emergency rescue against time. The steward takes care of the boy as his own children. The passengers on the flight showed their doctor status and ready to help the steward take care of the sick passengers. China Southern organized all the forces that could be organized and mobilized all the resources that could be mobilized. Finally, the flight arrived in Urumqi successfully, and the boy with broken arm was sent to the ambulance at the first time. With the joint efforts of this group of ordinary heroes, the boy was successfully treated within eight golden hours, casting a miracle of life rescue, and also carrying forward the spirit of "Life First and Love Boundless".

"Hearing the news that the little boy's operation was successful, I want to tell people that what we did on the plane was worthwhile!"

-- Steward Zhao Yan

"Thanks for the concern of the Party and the country, thanks for the help of China Southern, great China Southern!"

-- The family of the boy with broken arm





## Optimize Ecosystem Construction

China Southern continues to optimize and upgrade the ecosystem construction, constantly implements and promotes platform building, partner finding, active integration, strong drainage and integration, and continues to create value for customers based on customer needs and provides one-stop comprehensive solutions.

### Improve the Internal and External Supply Chain

Continue to expand the cooperation ecosystem, optimize the supply chain management, improve the whole chain system of food, accommodation, entertainment, travel and shopping, introduce hundreds of quality partners to continue to provide aviation related characteristic goods, create the brand direct sales zone of the China Southern Mall, expand the offline cooperation scenarios of wallets such as Beijing Daxing Airport, standardize the operation of the China Southern Mall platform, and provide high-quality mileage exchange goods and services for mall members.

### Promote the Internal and External Circulation of Mileage

Improve the optimal allocation of rights and interests resources by taking the revenue system mileage accumulation as the starting point; Give full play to the role of mileage currency media, do a good job in the operation of non-airline mileage exchange customers, carry out joint marketing activities with banks such as Pudong Development Bank, and optimize personal mileage sales business; strengthen sales of non-airline miles and actively expand ecosystem partners through joint credit cards and other means.

China Southern adheres to responsible marketing, pays attention to customer privacy protection, listens to passengers' voices through multiple channels, and continuously improves customer satisfaction.

## Improve Customer Satisfaction

### Responsible Marketing

#### Responsible Marketing Publicity

Promote the customer manager system, understand customer needs and popularize product knowledge, establish a business operation coordination mechanism of "Four Groups, Three Databases, Two Systems and One Set", realize long-term communication, problem feedback and information sharing with marketing units, and improve the customer manager's ability to serve passengers.

#### Potential Risk Prompt

Take the initiative to fulfill the obligation of informing passengers, actively safeguard the rights and interests of passengers, revise the General Conditions for Domestic Transportation of Passengers and Baggage of China Southern as planned and publish it to the whole society every year, adopt more clear and understandable expressions for the contents of passengers' concerns such as ticket sales, ticket refund and change, passenger and baggage transportation policies, and fully protect the right to know and choice of passengers.

#### Case Launch the Ordinary Card Mileage Extension Policy

In recent years, customers' travel has decreased, the demand for redeeming incentive tickets has declined, and the mileage cancellation scenario is limited. A large number of members are facing the problem of mileage expiration. In order to solve those problems, China Southern continuously improves the mileage perception of members and strengthens the interaction frequency between members and China Southern Mall. The consumption mileage of China Southern Pearl Card members expired from July to November and not postponed were postponed to December 31, 2022, to provide more sufficient use time for passengers.



## Customer Privacy Protection

China Southern attaches great importance to the protection of passenger personal information, collects and uses passenger personal information in strict accordance with national and international laws and regulations, continuously improves the customer information protection management mechanism, and clarifies the organizational responsibilities, principle requirements and main work processes of the company's personal information protection.







Pay Attention to the Voice of Customers

Smooth Communication Channels

Optimize customer satisfaction measurement indicators, improve service requirements, set up channels for on-site service evaluation in key service places such as airport ground lounge, and set up satisfaction return visits for key service links such as customer service hotline and complaint handling.

Optimize the Complaint Mechanism

Establish a centralized complaint handling mechanism, give full play to the professional advantages of the customer care center, continuously optimize the complaint rules, simplify the relevant supporting materials, and provide fast and effective solutions to the complaint passengers.

4.688 points

Overall passenger satisfaction was

up 5.9 %

year on year

83.55 %

The net recommendation value was

up 8.99

percentage points

Passenger Evaluation

“

The service process was very friendly and patient, helping the elderly to popularize flight information and taking care of passengers with children, which was very good.

-- A passenger from Nanning to Chengdu

“

Passengers could feel their smile even though the crew wore masks throughout the flight. The service is very rhythmic and the experience is very good. I hope there are more such warm service staff.

-- A passenger from Zhuhai to Chongqing

“

The service quality of the lounge has been significantly improved, which is worth praising! Thank the staff of China Southern for their warm and thoughtful service!

-- Passenger Mr. Hu

“

For a long time, I like to choose China Southern when I fly. I feel comfortable and the flights are punctual.

-- Passenger Ms. Lixia

“

Due to personal reasons, I arrived at the airport late and almost missed the flight. Thanks to the little sister on duty who took me to check in and told me the fast security passage, thank you very much!

-- Passenger Mr. Si

“

The flight is punctual, the flight service is considerate, and the information is convenient and efficient. It is commendable that the service level remains efficient at all times.

-- Passenger Mr. Yuan



# 5

## HARMONY Fly to a Bright New Future

China Southern insists on sharing development with stakeholders, providing support for the growth and development of employees, undertaking social responsibilities and carrying out special flights, giving full play to its professional advantages to serve the coordinated development of regions, giving back to the community, working together with the supply chain and partners to achieve win-win results, and working with stakeholders to fly to a better future.

Respond to the UN 2030 Sustainable Development Goals





# Grow Together with Employees

China Southern effectively protects the legitimate rights and interests of employees, provides broad space for the growth and development of employees, gives care to employees, helps employees realize their personal values, and grows side by side with the company.

## Employee Rights and Interests

### Equal Employment

Implement diversified employment and integrated management, sign the "Special Collective Contract for the Protection of the Rights and Interests of Women Workers" with the trade union, and clarify that the principle of equality between men and women must be adhered to in the recruitment, assessment, promotion, promotion, evaluation and employment of professional and technical positions, enjoyment of welfare benefits, and implementation of the national retirement system. At the same time, China Southern insists on anti-discrimination and protects the rights and interests of foreign employees and ethnic minority employees.

China Southern strictly complies with the Labor Law of the People's Republic of China and other relevant national laws and regulations and the Labor Contract Management Regulations of China Southern Airlines Co., Ltd. in terms of dismissing employees, avoiding forced labor and prohibiting child labor, and fully protects the legitimate rights and interests of employees. In the event that the company forces employees to work by means of violence, threat or illegal restriction of personal freedom, or the company commands in violation of regulations and forces risky operations to endanger the personal safety of employees, the employees can immediately terminate the labor contract without prior notice to the company.

### Salary and Welfare

Adhere to the principle of equal pay and benefits for equal work, provide a competitive salary level in the industry, pay attention to the positive incentive of talents, strengthen the value contribution orientation of salary distribution, take the position value, performance contribution and labor market conditions as the main distribution basis, establish a salary distribution and salary adjustment mechanism closely linked to organizational performance, personal performance and labor efficiency, realize the salary "can increase or decrease", and highlight the accuracy and effectiveness of salary incentive; Explore medium and long-term incentive models suitable for various sectors; Implement employee stock ownership plan and promote the construction and implementation of equity incentive mechanism.

Implement the care and concern of low-income groups, focus on the problems of large income decline, low income level and living difficulties of the crew safety personnel, formulate and issue the optimization plan of human resources related policies, and effectively solve the problem of low income of the crew safety personnel through scientific management and control of attendance scale, active expansion of the work scene, and the establishment of salary guarantee and other measures.

The company pays the national statutory insurance in full, establishes supplementary insurance, and pays the "seven insurance and two fund" in full. In addition to the public holidays and statutory holidays stipulated by law, employees also enjoy marriage leave, maternity leave, home leave, birthday leave and other holidays.

100 %

Employee labor contract signing rate

100 %

Performance incentive compensation coverage rate

4,251 person

Number of new employees

23.86 %

Proportion of female managers at middle level and above

100 %

Employee social insurance coverage rate

100 %

Non-compensation and benefit coverage (including pension and pension)

585 person

Number of foreign employees

8 day

Leave per employee

## Democratic Management

Improve the democratic management system, revise the Detailed Rules for Democratic Management of the Company, and further standardize the implementation of the collective negotiation system, the reporting system for the grass-roots workers' congress and other work to protect the rights and interests of employees; Regularly hold staff congress and group working meetings, organize and carry out the inspection work of staff congress every year, build a proposal platform, pay attention to staff appeals, and earnestly urge departments to respond; Regularly negotiate and sign the Collective Agreement with the employee representatives (trade unions), and submit it to the Ministry of Human Resources and Social Security for review and filing.

By the end of October 2022, the "Working Platform for Proposal of Staff Representatives of China Southern" received

42 proposals

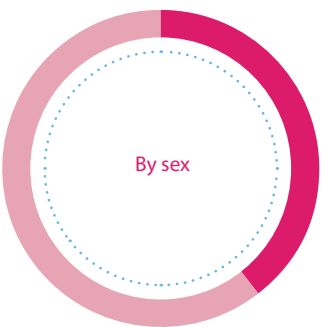
involving safety and labor protection, welfare and other benefits.



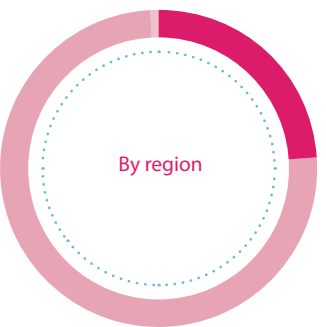
Harmony • Fly to a Bright New Future

Total number of employees

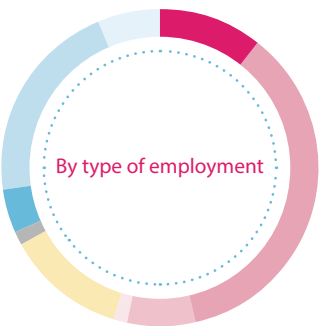
97,899 person



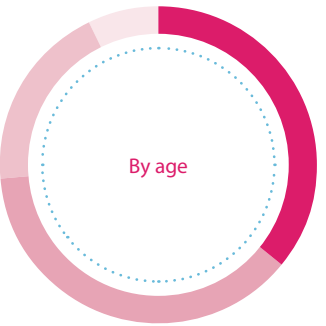
Female: 38,739 person  
Male: 59,160 person



Guangzhou: 23,658 person  
Domestic (except Guangzhou): 73,472 person  
International: 769 person



Flight: 10,501 person  
Service: 35,061 person  
Administration: 6,862 person  
Navigational matters: 1,395 person  
Maintenance: 11,770 person  
Information: 1,519 person  
Marketing: 4,287 person  
Comprehensive: 20,441 person  
Function: 6,063 person



30 years old and below: 35,226 person  
31-40 years old: 37,015 person  
41-50 years old: 18,684 person  
51 years old and above: 6,974 person



### Employee Development

#### Improve the Staff Training Mechanism

Standardize the management of the company's teachers, courses, and operations, establish and improve relevant systems, policies, and standards, and through scientific and standardized management and allocation of employee education funds and resources, give employees more initiative and choice to participate in training activities, and encourage employees to continuously improve their professional ability level in combination with their job ability requirements and personal development.

#### Optimize the training management mechanism

#### Build an integrated training platform

Promote various training elements and training products such as teachers and courses, operate, develop and trade on a unified platform, consolidate the construction of talent cultivation platform, skill improvement platform and knowledge management platform, and create a win-win training ecosystem.

#### Promote the training and selection of management trainees

Carry out the "Excellence of Pearl" management trainee program, launch the second phase of management trainee recruitment globally, strengthen the progressive training, multi-position training, and layer-by-layer test, constantly improve the brand awareness and influence of the management trainee project of China Southern Airlines, and realize the use of talents from all sides.

#### Carry out teacher skills competition

Organize face-to-face, live and micro-class competitions in ten competition areas, including flight, maintenance, aviation, cabin, security, ground service, marketing, cargo, foreign language, management and party building. Among them, 221 contestants participated in the face-to-face competition, 122 contestants participated in the live competition, and 196 works participated in the micro-class competition, with a total participation of more than 600 people. After the preliminary competition, the second round competition and the final competition, ten "China Southern technical experts", ten "China Southern top 10 teachers", ten "China Southern top 10 live broadcast teachers", ten "China Southern top 10 micro-class producers", 20 "China Southern excellent teachers", 20 "China Southern excellent micro-class developers" and 18 "China Southern excellent broadcast teachers" were finally determined.

#### Strengthen all types of teaching systems

Improve the crew teacher system, complete the rematch of the 6th National Red Cross Ambulance Competition, complete the "Integrated Shared Operation Plan for Crew Training Instructors", and complete the qualification authorization of the third batch of crew trainers; Optimize the talent assessment teacher system and organize the retraining of ICAO English evaluators.



### Diversified Training Empowerment



#### Cadre training

- Sailing training class, middle-aged and youth class
- Special training courses for four business systems
- In-depth study and implementation of the spirit of the Sixth Plenary Session of the 19<sup>th</sup> CPC Central Committee and the training course for improving political ability
- Rotating training classes for in-depth study and implementation of the spirit of the 20<sup>th</sup> CPC National Congress
- Network special class for in-depth study and implementation of the spirit of the 20<sup>th</sup> CPC National Congress
- Cloud "T" digital talent training course
- Training courses for the appointment and promotion of senior and deputy cadres of the management
- Training Course for Party Affairs Workers of the Party Committee of the directly affiliated organs
- Discipline inspection cadre training
- Strategic decoding training
- Training course on "greeting, publicizing, and implementing the 20<sup>th</sup> National Congress and promoting high-quality development."
- The first phase of the management quality improvement class of "Rongyao" talent plan

#### Crew training

- On-the-job training
- Territorial training

#### Business training

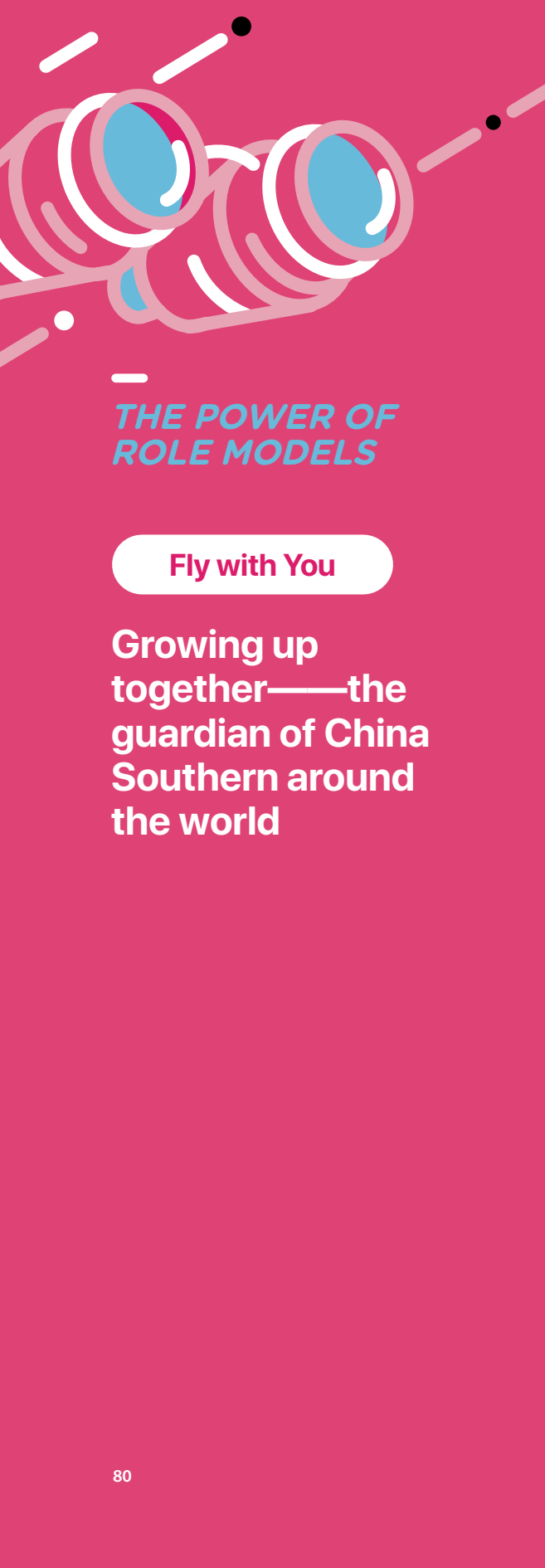
- Dangerous goods external training courses
- Training course on transport operations for the disabled
- Pilot PEPEC qualification class
- Crew English classes

#### Examination appraisal

- Flight personnel language level test
- Crew English test
- Professional skill appraisal of cabin crew and security personnel
- English test for crew recruitment

Employee Training Data		Employee Training coverage/person	Training Time per employee/hour
By sex	Male	44,682	284.10
	Female	33,680	132.91
By type of employment	Flight	8,370	250.69
	Service	31,167	378.97
	Administration	5,772	111.32
	Navigational matters	1,226	351.61
	Maintenance	8,642	84.18
	Information	932	25.32
	Marketing	2,849	120.16
	Comprehensive	15,104	54.03
	Function	4,563	75.34





THE POWER OF  
ROLE MODELS

Fly with You

Growing up  
together—the  
guardian of China  
Southern around  
the world



**Yu Gang**  
the guardian of China  
Southern in Anchorage

Anchorage, USA has long winters, low temperatures and short days. Yu Gang often undertakes supervision, short stop inspection, troubleshooting, anti-icing and other work here. Because cargo planes often arrive late at night or early in the morning, and the environment of extreme day and night, they often face the confusion of biological clock, and gradually become the familiar "China Southern Night Watchman".



**Liu Hui**  
the guardian of China  
Southern in Chicago

In January, a cargo plane was injured by foreign objects, stopped in Chicago, USA, Liu Hui urgently coordinated the American Airlines hangar, allocated maintenance resources, and successfully completed the emergency repair. The cold was defeated by the warmth of dedication. Like other representatives stationed abroad, he always had China Southern's safety in mind.



**Ma Rui**  
the guardian of China  
Southern in Seoul, South  
Korea

Ma Rui traveled in Incheon and Jinpu, and also assisted in handling the maintenance and service work of the larger terminals in Daegu, Busan and Jeju in South Korea. Incheon Airport is located on the island and heavy fog often leads to extensive flight delays. At the most serious time, Ma Rui once guaranteed 34 flights a day.

**Wang Zhonglian**  
the guardian of China  
Southern in Amsterdam,  
Netherlands

Once, a plane of China Southern stopped at Brussels Airport in Belgium to wait for replacement. Given the inability to assign maintenance personnel in China, Wang Zhonglian chose to go to the local with the KLM replacement team without hesitation to quickly dock, confirm personnel qualification authorization, check tools and equipment, and book transport vehicles... On the 21st day, the plane took off smoothly.

Although they are in all parts of the world, they silently stick to the front-line posts to guard the passengers' travel, achieve their own growth and breakthrough in the routine operation day after day and the handling of emergencies time after time, and contribute to the development of China Southern along with many front-line employees.



## Care for Employees

Adhering to the people-oriented concept, China Southern carries out characteristic cultural and sports activities, enriches employees' spare time life, provides a good employment environment, cares for women employees, takes care of employees in difficulties, and makes employees feel the humanistic care of China Southern materially and spiritually.

### Balance Between Work and Life

China Southern strives to build harmonious employment relations and guarantee employees' basic vacation rights. The company carried out special actions to improve the quality of life of employees, and compiled the Work Plan for Improving the Quality of Life of Employees of China Southern Airlines Group Co., LTD, and continued to improve the "8+N" care brand project, carried out "Send Warm in Winter" and "Bring Cool in Summer" activities, paid more care and concern to special groups, and continued to expand the "Double- Flying Family" care project, offer more support to front line staffs, and other flight crew.



Fight the heat and send cool



Shanghai Branch held Frisbee activities during the "three chiefs" training period

## Care for Female Employees

In the seventh phase of the civil aviation female employees' serious illness mutual aid application,

a total of **247** female employees with serious illness applied for mutual aid subsidies

and received a total of **3.015** million yuan of subsidy funds

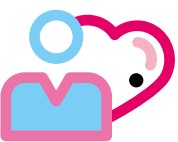
China Southern continues to protect the rights and interests of female employees, pay attention to pregnant and lactating female employees, and carry out a series of "Three One" activities of female employees' rights protection Action month, themed with knowledge competition of female employees' rights and interests protection, special popularization activities of female employees' labor safety protection, and supervision and inspection activities of female employees' rights and interests protection. Meanwhile, the company effectively guarantees and coordinated implementation of special physical examination of female air crew employees in Guangzhou.



The labor union of Jilin Branch expressed condolences to female employees

## Help Difficult Employees

Timely update and maintain the archives database of employees with difficulties, carry out the sympathy activities for employees with difficulties in combination with the activities of "Send Warm in Winter" and "Bring Cool in Summer", continue to do a good job in the "Three Funds" assistance and care work, and help the employees with difficulties through the mutual aid fund for serious illness of the female employees of China Southern, the staff condolence fund and subsidy, and the labor workers' love relief fund.



In 2022, visited and condoled **2,119** employees in difficulties

helped **10** families of labor workers

a total assistance fund of **0.42** million yuan



# Safeguard Special Flight

578

shifts carrying out important charter flights

Transporting

69,000

personnel for important charter flights

China Southern fulfills its social responsibilities as a central enterprise, practices the concept of People's Airlines serving the people and putting life first, actively participates in ensuring the transportation of important materials and personnel, and comprehensively assists in special flights.

## Case China Southern Logistics Helps "Made in China" Fly to Qatar World Cup



Delivery site of World Cup peripheral products and other materials

On November 22, 2022, during the World Cup, China Southern Logistics successfully ensured the smooth flight of a batch of Qatar World Cup mascots "Laib" dolls made in China to Doha by visiting customers in advance, accurately grasping customer needs, opening exclusive green pickup ports, improving cargo inspection and collection efficiency, optimizing cargo loading plans, and other measures. Previously, China Southern Logistics had successfully ensured the smooth flight of more than 10 tons of World Cup peripheral products, such as clothing, decorations, stickers, hand clappers, speakers, whistles, as well as LED screens and lighting equipment used in World Cup venues to Qatar, helping "Chinese Elements" appear on the green field.

## Case A "Relay for Life" at an Altitude of 9,800 Meters



On May 7, 2022, shortly after the takeoff of China Southern Airlines flight CZ6652 from Changchun to Wuhan, a passenger suddenly suffered from heart discomfort, shortness of breath, and confusion. China Southern Airlines cabin crew quickly initiated the emergency medical treatment procedures on board, provided oxygen assistance to the passenger, helped him recover body temperature, and continued to accompany and encourage him. At the same time, the crew immediately formulated a flight backup plan, reported the passenger's condition to the controller along the route in real time, and under the premise of ensuring safety, tried to apply for a large speed direct flight to buy time for the passenger to seek medical treatment. When the flight arrived, the medical staff who had been waiting for a long time quickly boarded the plane for rescue, and the passenger was rushed to the hospital, and finally the passenger turned around and arrived at his destination smoothly.



On-board rescue scene

# Serve Regional Development

## Serving the Guangdong-Hong Kong-Macao Greater Bay Area

China Southern has actively implemented the national strategy, actively integrated into the construction of the Guangdong-Hong Kong-Macao Greater Bay Area, opened new routes to facilitate the revitalization of the western region, served the construction of Hainan Free Trade Port, and promoted the coordinated development of regions.

China Southern will continue to contribute to the development of a world-class airport cluster in the Bay Area, enhance the hub route network, ensure basic transport capacity, further integrate into the construction of Guangdong-Hong Kong-Macao intelligent three-dimensional transport, and jointly promote the development of the cultural and tourism ecosystem in the Guangdong-Hong Kong-Macao Greater Bay Area.

## Case Create "+ Cultural Travel" Mode



On January 7, 2022, China Southern and Guangdong Radio and Television officially signed a partnership agreement on "2022 Ice and Snow Tour". The two sides will carry out in-depth cooperation on "Sports + Cultural Tour" and "Film + Cultural Tour". China Southern, Guangdong Radio and Television Sports Channel and Guangdong Tourism Association jointly organized and planned the launch of "2022 Ice and Snow Dream Tour" themed products ---- multiple round trip Ice and snow Dream Tour and adventure Tour Ice and snow Dream version, providing Baiyun Airport membership rights or travel gift package and other ground travel rights. Currently, China Southern has launched the "Bay Area Link" product system for travelers from major cities in the Greater Bay Area. China Southern helps the development of ice and snow industry, promotes the popularization and promotion of ice and snow sports in Southern China, and drives 300 million people to participate in ice and snow sports. In the future, China Southern and Guangdong Radio and Television will give full play to their respective advantages in resources, services and networks to carry out comprehensive cooperation in various fields and contribute to the high-quality development of the Guangdong-Hong Kong-Macao Greater Bay Area.



2022 Ice and snow dream trip



# Assist in the Revitalization of the Western Region

China Southern actively builds air corridors, increases the investment in the western transport capacity, improves the level of connectivity, optimizes the east-west route, facilitates the travel of passengers, continues to implement the Xinjiang aid card, provides preferential benefits and warm services for the cadres of Xinjiang aid, further strengthens the connection between the eastern and western regions, and serves the national strategy of western revitalization.

## Case China Southern Linzhi-Guangzhou direct mail route officially opened

At 11:24 on April 3, 2022, China Southern flight CZ3478 Linzhi-Guangzhou took off from Linzhi with various kinds of goods of China Post, marking the official opening of the direct mail route of China Southern Linzhi-Guangzhou. After this direct mail service, it is expected that 40,000 pieces of cargo and mail will be transported throughout the year, which is expected to generate about 20 million yuan of income for farmers and herdsman. It will greatly improve the local logistics efficiency, achieve the arrival of fresh agricultural and forestry products in Linzhi Prefecture in Guangzhou on the same day, help create a new ecosystem of consumption and aid to Tibet, let characteristic agricultural products enter the Great Bay Area of Guangdong, Hong Kong and Macao, and contribute to the "Rural Revitalization" of Tibet. In the future, China Southern will take this opportunity to further guarantee the last 1km transportation of Tibetan cargo at the source, and contribute to the construction of beautiful villages in Tibet.



# Serving Hainan Free Trade Port

Actively build air transport channels in and out of Hainan Island, continuously increase transport capacity investment in the Hainan market, increase routes between Hainan and East China, Southwest and Central South, optimize the route structure of Hainan, optimize some stopover routes into direct routes to Hainan, optimize the main routes between Hainan and Guangzhou/Beijing, as well as the time layout of routes between Hainan and Northeast China, and meet the travel needs of passengers at different times to help build a free trade port in Hainan.

## Case The air Messenger of the Consumer Fair

From July 26 to 30, 2022, the second China International Consumer Goods Expo was held in Haikou. As the "designated air carrier" of the Expo, China Southern further enhanced the popularity and influence of the Expo and promote the construction of Hainan Free Trade Port by jointly launching the "Xiaobo" painted aircraft with Hainan International Economic Development Bureau, which helped spread the brand image of Hainan international tourism and China Southern's international development. In order to ensure the smooth holding of the Expo and further meet the travel needs of passengers, China Southern provided exclusive services and rights for the passenger and cargo transportation of participants by increasing the capacity investment of Haikou and Sanya routes. Meanwhile, members of China Southern who participate in the Expo can receive special gift packages.





# Keen to Public Welfare

China Southern is enthusiastic about public welfare undertakings, carries out public welfare education, practices overseas social responsibilities, and promotes Chinese culture.



# Focus on Education

**Case**  
Carry out public welfare student assistance activities

At 11:30 am on August 31, 2022, Zhang, a student from Kunming, boarded China Southern flight CZ3998 to register at Beijing Normal University. Adhering to the concept of "Public Benefit Assistance", China Southern has jointly launched a public benefit education activity with 29 universities including Peking University, Renmin University of China, Shanghai Jiao Tong University, University of Science and Technology of China, Huazhong University of Science and Technology, providing over 1,000 free air tickets and related exclusive services for the newly enrolled poor college students in 2022. This activity is the most powerful free ticket activity in the industry. China Southern has launched a number of travel-specific services and products for college students across the country, including discount air tickets, mileage rewards, coupon gift packages, etc., providing personalized services for college students to travel during holidays and return to school.



**Voice of stakeholders**

"Thanks to China Southern for providing me with a free air ticket, which gives me wings to take off on my way to study and my youth dream!"

-- Mr. Zhang

Zhang took flight CZ3998 to Beijing Normal University

# Carry Forward the Traditional Culture



Poster of the 24 Solar Terms



The Qi Xi Festival, creates a "sweeter" waiting experience



# Fulfillment of Overseas Responsibilities and Cultural Exchanges

China Southern actively carries out overseas responsibilities, carries out cultural exchange activities locally, constantly promotes the spread of Chinese culture overseas, and enhances the brand awareness of China Southern.



## Case Co-hosting the Events marking the 50<sup>th</sup> Anniversary of the Establishment of Diplomatic Relations between China and Australia



On September 29, 2022, China Southern Melbourne Business Department, as President of Melbourne Branch of Australia China Chamber of Commerce, On behalf of China Southern, participated in the special activities of "50<sup>th</sup> Anniversary of the establishment of Diplomatic Relations between China and Australia – Lecture on Legal Risk Prevention of Business Management in Australia" and "50<sup>th</sup> Anniversary of the establishment of Diplomatic Relations between China and Australia – Opportunities and Challenges of cross-border Asset Reorganization Series of China-Australia Cooperation Development", jointly organized by Han's Law Firm and DLA Hua Law Firm. In addition, China Southern sponsors the "Melbourne Chinese Film Week" in 2022 and the Melbourne Symphony Orchestra's "East meets West" series to support the spread of Chinese films overseas and promote cultural exchanges between the two countries.

A series of activities on the 50<sup>th</sup> anniversary of the establishment of diplomatic relations between China and Australia - lectures on legal risk prevention of enterprise management in Australia

## Case Promoting the landing of "China Bookshelf" in Auckland



On September 22, 2022, the Auckland Sales Department of China Southern promoted the launch of "China Bookshelf" in Auckland, from which the local people can understand China. Through "China Bookshelf", we can tell Chinese stories well and spread Chinese literature to all the local people who are interested in Chinese culture and frequent passengers and local partners of China Southern, so as to be a good ambassador and bridge of cultural exchanges between China and New Zealand.



Chinese bookshelf

## Case The New Zealand Department of Business sponsored the Ronald McDonald House project



On November 21, 2022, China Southern held a sponsoring room listing ceremony for the Ronald McDonald House project. China Southern invited the industry, partners and high-end travelers to the site and cooked dinner for children and family members at the same time. China Southern actively participates in local community public welfare activities and fulfills its overseas social responsibilities, establishing a good brand image of China Southern.



McDonald's uncle's home project

## Case New Zealand Care Day



On January 18, 2022, China Southern and the New Zealand Trade Development Authority officially launched the "New Zealand Care Day" project. From now on to the end of 2022, on the "New Zealand Care Day" day of every Tuesday, a number of well-known New Zealand enterprises will provide customized services for passengers in the Pearl Lounge of China Southern Guangzhou and Beijing dual hub, including seasonal health drinks, and special new product experience, and take care of every journey of passengers through "Affinity and Refinement" services.



New Zealand Care Day



# Join Hands with Partners for Win-Win Cooperation

China Southern is committed to building a sustainable supply chain, carrying out extensive cooperation and exchanges, working together with upstream and downstream supply chains and partners to achieve win-win development and jointly promote industry progress.

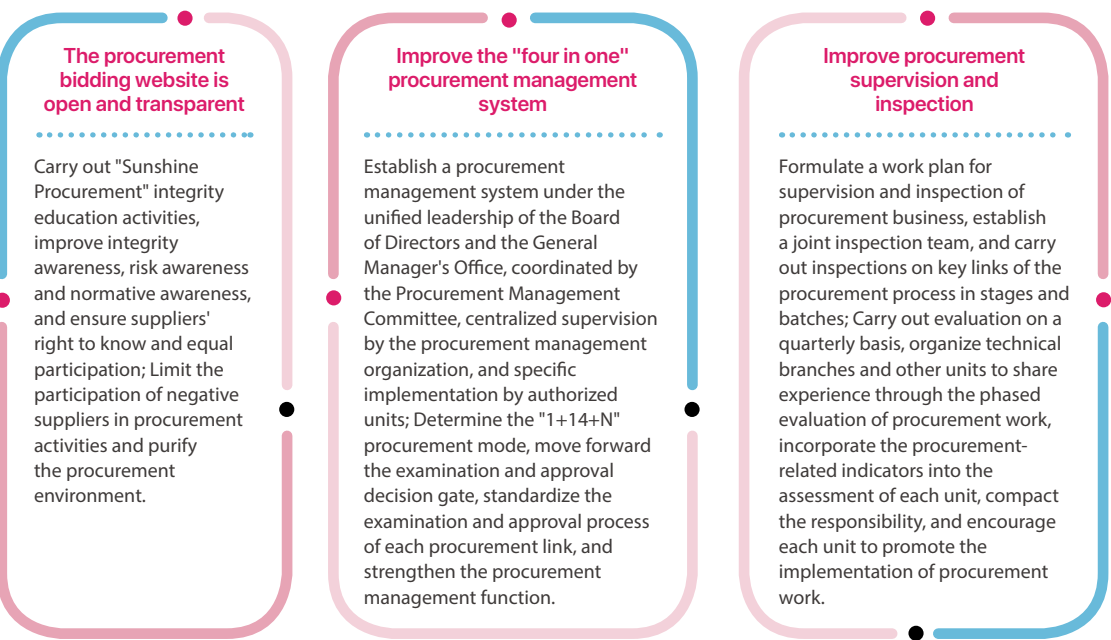
## Build a Sustainable Supply Chain

China Southern insists on improving supplier management, adhering to responsible procurement, carrying out supplier training and exchange, constantly promoting the sustainable development of the supply chain.

### Responsible Procurement

China Southern standardizes its cooperation with suppliers in terms of operation, society and environment, jointly abides by laws and regulations and business ethics, constantly improves supplier requirements, establishes reputation management system, prevents procurement risks, continues to form scientific procurement strategies, strengthens localization substitution and independent research and development, and promotes the solution of procurement-related "bottleneck" problems.

### Sunshine Procurement



### Green Procurement

**Adhere to the concept of green development.** Promote the in-depth development of green and low-carbon supply chain, deeply integrate energy conservation and emission reduction, green flight and other aspects into the construction of supply chain, promote aviation fuel saving, aircraft weight reduction, plastic restriction promotion, and clean energy use, and create a green and low-carbon supply chain.

**Promote green aviation food.** China Southern independently develops a green and smart airline food supply chain, obtains passengers' personalized meal needs from the reservation system, intelligently calculates the corresponding procurement demand data through standard meal profiles, connects the system to procurement, production, warehousing and distribution activities, and connects flight attendants to handheld mobile terminals to form a supply chain guarantee system driven by passenger needs.

**Create digital logistics.** China Southern adheres to the "Internet +" thinking and the concept of "Big Operation", builds a COC operation monitoring platform, creates "one screen for cargo operation", provides "one network for booking and pickup" services, promotes the implementation of "Digital Logistics", builds an aviation logistics ecosystem, realizes electronic freight documents through "5G + IoT" technology, achieves "contactless freight" and promotes green development.

## Supplier Management



The number of suppliers whose cooperation was suspended due to non-conformity of social



The number of suppliers "listed in the list of seriously illegal and dishonest enterprises (blacklist) information" in business activities is



**Improve rules and regulations.**Supplier Management Measures is an important management manual for the company to carry out supplier management. It defines the management requirements of warehousing, grading and application of suppliers, evaluation and rating, so as to prevent supply chain risks, build a stable and efficient supply chain, and create a benign supplier ecosystem.

**Supplier enrolling.** Establish and improve the enrolling standards for all categories of suppliers, realize closed-loop management of product quality through three acceptance links: delivery inspection, optimization and improvement, delivery and production, and evaluate suppliers according to the acceptance data.

**Supplier performance assessment.** Carry out dynamic assessment and evaluation of contract, acceptance, payment and after-sales implementation stages for the successful suppliers of the project around the dimensions of "Business, Technology, Delivery, Quality and Service", and realize dynamic evaluation of informatization, and improve the "quality archives" of suppliers.

**Hierarchical management of suppliers.** Based on supplier complaints, management of rewards and punishments, management of suppliers with restricted transactions, and performance management of suppliers' activity, classify the suppliers into excellent suppliers, qualified suppliers, registered suppliers, suppliers with restricted transactions, and enterprises with prohibited transactions, and strengthen the cooperation with excellent suppliers.

**Supplier capability improvement.** Communicate with suppliers by means of video conference, website publicity, network questionnaire, short message and so on; Through the Notes for Making Bidding Documents and the Initiative on Building a "Sunshine Procurement" trading Environment issued by China Southern Aviation Procurement Tendering website, standardize the making of bidding documents and remind of common mistakes in bidding, so as to promote the improvement of suppliers' capabilities.



Indicator		2022 Performance
Suppliers by region	Central South	11,898
	Northeast	3,690
	East China	4,668
	North China	3,799
	Northwest	3,059
	Southwest	1,915
	Hong Kong, Macao and Taiwan	27
	Other regions	214
Total number of suppliers		29,270
Number of suppliers evaluated		29,270



# Carry out Extensive Cooperation and Exchanges

China Southern has actively participated in the formulation of industry standards and industry activities such as the CIIE and Air Show to promote the development of the industry.

## Participate in Standard Formulation

China Southern has actively participated in the optimization of industry standards and policy formulation, and has successively joined the Chairman Committee of the International Aviation Association, the highest governing body of the International Aviation Association, and the Advisory Committee, an important policy formulation body of the International Aviation Association, to speak on behalf of the company and CAAC on the global industry organization platform and export Chinese solutions. In addition, China Southern has successively recommended more than ten business experts to join the IATA grassroots working group to contribute to the implementation of industry policies and the formulation of standards.

## Strengthen Strategic Cooperation

Comprehensively strengthen strategic cooperation, formulate Strategic Cooperation Management Measures, and sign nine strategic cooperation Agreements with Hunan Provincial government, China Merchants Group, Guangdong Reclamation Group, Qingdao Airlines, etc., promote cooperation between central and local governments and central enterprises, and continue to expand the company's "circle of friends".

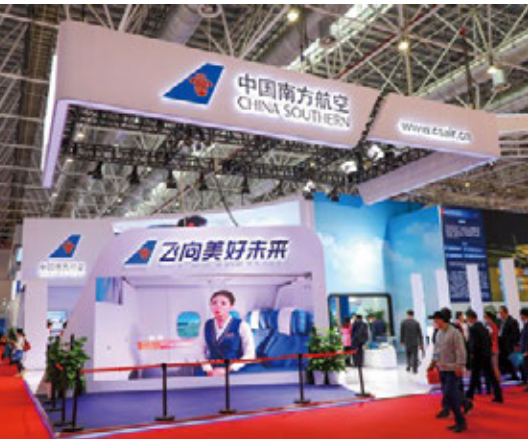
# Participate in Industry Exchanges

## Case Appear at the 14th Zhuhai Air Show

On November 8, 2022, under the theme of "Flying to a Better Future", China Southern showed its major initiatives to serve the country's "the Belt and Road Initiative" development strategy, three boutique sub brand projects, namely, Guangzhou and Beijing dual hub brand, Affinity and Refinement Service brand, and green flight responsibility brand, as well as the overall product and service brand of China Southern Group.



Flight Vigorous Zhuhai



Air show site

## Case Service and Support for CIIE

On November 6, 2022, as the "core support enterprise" of the Fifth China International Import Expo, China Southern signed 16 import procurement projects with 14 large international manufacturers and suppliers in the field of global aviation services, such as CFM International Corporation and IAE International Aero Engine Corporation, with a total transaction amount of 706 million US dollars. Meanwhile, as the "designated air carrier", China Southern mainly serves the Fifth CIIE by increasing capacity and optimizing routes at Shanghai Hongqiao and Pudong airports. The flight service and signing support not only reflect China Southern's determination to contribute to regional development, but also reflect China Southern's responsibility to promote international exchanges.



Signing ceremony of China Southern Airlines Group at the 5th China International Import Expo



# Outlook

Looking forward to 2023, China Southern has always been guided by Xi Jinping's thought on socialism with Chinese characteristics for a new era, deeply studied and implemented the spirit of the 20<sup>th</sup> National Congress of the Communist Party of China, anchored the goal of building a world-class air transport enterprise, took high-quality development as the primary task, fully promoted the implementation of aviation safety, production and operation, reform and development, green and low-carbon and other key work, and steadily made progress towards the goal of building a world-class air transport enterprise.

● **Build a solid security development and step up to a "new level"**

Adhere to the bottom line of responsibility of "safety first", continue to strengthen safety management, continuously improve safety capability, focus on preventing safety risks, and ensure that the security situation is steadily rising.

● **Improve the management level and strive for "new breakthroughs"**

Do a good job in passenger transport operation, accelerate the improvement of the core competitiveness of freight transport, enhance the profitability of professional sectors, establish a long-term mechanism for lean cost control, and comprehensively promote the construction of world-class enterprises.

● **Improve the operation quality and build a "new ecosystem"**

Continue to optimize the flight guarantee process, comprehensively promote the implementation of the "Five Dimensional" service, build a scientific and effective service quality management system, implement the central enterprise brand leading action, and strive to build a first-class service brand.

● **Promote reform and innovation and plan a "new layout"**

Continue to promote the construction of large operations, deepen the "Four Transformation" reform of locomotive, promote technological innovation and digital transformation, carry out special actions to benchmark world-class value creation, and deepen the reform of the system and mechanism of scientific and technological innovation.

● **Focus on green and low carbon and cultivate "new advantages"**

Deeply implement the carbon peak and carbon neutralization action plan, promote the implementation of major energy conservation and carbon reduction projects, continue to improve the ESG management mechanism, strengthen the carbon asset management, and promote the green development to reach the industry's leading position.



List of Policies and Regulations

ESG indicators	Internal Policies of 2022	Relative Law and Regulations of 2022
A1 Emissions	Management measures for verification of the annual carbon emission data monitoring report of China Southern Airlines flight activities. Pollution Prevention and Control Work Plan of China Southern Airlines Group	
A2 Resource usage	Energy conservation and emission reduction management manual Business process of energy and environmental protection management Work plan for plastic pollution control of China Southern Airlines Group from 2021 to 2025 Management standard for prohibition and restriction of China Southern Airlines disposable plastic products China Southern Airlines Group Emergency Management Plan for Environmental Emergencies	Law of the People's Republic of China on the prevention and control of water pollution. Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Wastes Interim Measures for the administration of verification of carbon dioxide emission monitoring report of civil aviation flight activities of Civil Aviation Administration Requirements plan for plastic pollution control in civil aviation industry (2021-2025)
A3 Environment and Natural Resources	Guidance on comprehensively strengthening ecological and environmental protection Work plan for green development of China Southern Airlines Group	
A4 Climate Change	Notice on strengthening charging management of new energy vehicles Emergency response plan for accidents of new energy vehicles Notice on further controlling the use time of APU Notice on promoting the implementation of the work flow of optimization and guarantee of ground power supply and air conditioning equipment Work plan for green development of China Southern Airlines Group Report on China Southern Airlines Group's carbon peak, carbon neutralization goal and realization path	
B1 Employment	Regulations on labor contract management Regulations on labor dispatch management Regulations on the administration of part-time employment	Labor law of the people's Republic of China Labor contract law of the people's Republic of China Regulations on the implementation of the labor law of the people's Republic of China
B2 Health and Safety	General emergency management plan of China Southern Airlines (Co., Ltd.) Guidance on style construction of safety practitioners of China Southern Airlines Standard code of conduct for pilots of China Southern Airlines (flight operation)	Labor law of the people's Republic of China Law of the people's Republic of China on the prevention and control of occupational diseases Civil aviation law of the people's Republic of China Production safety law of the people's Republic of China Emergency response law of the people's Republic of China Anti-terrorism law of the people's Republic of China Fire protection law of
B3 Development and Training	China Southern Airlines training master Plan (2018-2025)	
B4 Labor Code	Special collective agreement for the protection of the rights and interests of female employees Management measures for interns Regulations on honor recognition management Employee punishment regulations List of Typical Negative Behaviors of Employees Management measures for sick leave of employees Employee leave management measures Management measures for staff waiting for post Internal talent market management measures	Labor law of the people's Republic of China Provisions on the prohibition of child labor Law of the people's Republic of China on the protection of minors

ESG indicators	Internal Policies of 2022	Relative Law and Regulations of 2022
B5 Supply Chain Management	Supplier management measures Management measures for video and audio data of bidding monitoring Procurement management manual Implementation rules for confidentiality of procurement information Code for honest employment of employees Manual of procurement management department (import and export trading company) Supplier Code of Conduct Procurement Risk and Internal Control Management Provisions Measures for the Supervision and Administration of Purchasing Business Procedures on Handling Procurement Complaints	Bidding law of the people's Republic of China Regulations for the implementation of the bidding law of the people's Republic of China Government procurement law of the people's Republic of China
B6 Product Responsibility	Safety audit manual Regulations on management of dishonesty Regulations on supervision and management of cockpit sound Regulations on the administration of comprehensive smoking ban on aircraft Flight technology management manual Pilot training program Operation manual Aviation health management manual Aircraft public health manual Emergency control plan for public health emergencies	Civil aviation law Rules for operation qualification certification of large aircraft public air transport carriers Rules for certification of civil aircraft pilots
B7 Anti-Corruption	Regulations on regulating the wedding and funeral celebrations of leading cadres of China Southern Airlines Group Administrative measures for incorruptible government archives of leading cadres of China Southern Airlines Group Notice on publishing the reporting methods of letters and visits Objectives and measures for grass-roots burden reduction in 2021 Work Arrangement for Reducing Burdens at the Grassroots Level by Further Solving the Problem of Formalism Opinions on the Steps of Cleaning up and standardizing the Company's Consultation and Coordination Organs Provisions on the Establishment of the Group's Discussion and Coordination Body Supervision measures for the group's implementation of the spirit of the eight provisions of the Central Committee Measures for the Management of the Due Diligence Compliance Disclaimer List Notice on the Change of the Acceptance Channel of Disciplinary Inspection, Supervision and Complaint Reporting of China Southern Airlines Group Regulations on Discipline Inspection Suggestions and Supervision Suggestions of China Southern Airlines Group Measures to Strengthen the Construction of Clean Culture in China Southern Airlines Group Guidance on Fault Tolerance and Exemption of Discipline Inspection Organs of China Southern Airlines Group Procurement Supervision Measures of China Southern Airlines Group Implementation Rules for the Commission for Discipline Inspection to Carry out the Responsibility of Supervising the Construction of Party Conduct and Clean Government Employee Integrity Practice Code Integrity Risk Prevention and Control Process	Criminal law of the people's Republic of China Company law of the people's Republic of China Anti money laundering law of the people's Republic of China Anti unfair competition law of the people's Republic of China Interim Provisions on the prohibition of commercial bribery Anti monopoly law of the people's Republic of China Bidding Law of the people's Republic of China Supervision law of the people's Republic of China
B8 Community Investments	Implementation opinions on further strengthening China Southern Airlines' voluntary service Notice on the establishment of China Southern Airlines Group voluntary service Steering Committee China Southern Airlines Voluntary Service Management Measures Constitution of China Southern Airlines "Ten Points" Care Foundation	Charity law of the people's Republic of China



ESG Performance Data

A. Environment					
ESG Indicator		Unit	2020	2021	2022
A1. Emissions					
A1.2	Carbon dioxide emissions (scope I) <sup>1、2</sup>	10,000 tons	1,931.80	1,910.86	1,432.75
	Carbon dioxide emissions (Scope II) <sup>1、2</sup>	10,000 tons	14.69	13.52	17.19
	CO <sub>2</sub> emissions <sup>1、2</sup>	10,000 tons	1,946.49	1,924.38	1,449.90
	Carbon dioxide emission per ton kilometer	Ton / 10,000 ton km	9.29	8.98	8.72
A1.3 <sup>3</sup>	Hazardous waste (maintenance)	ton	471.508	704.903	916.73
A1.4 <sup>3</sup>	Non-hazardous waste (onboard service)	m <sup>3</sup>	8,896.0	11,063.0	12,000.0
A1.6 <sup>3</sup>	Waste gas treatment (maintenance)	10,000m <sup>3</sup>	28,800	26,080	36,000
	Industrial wastewater treatment (maintenance)	ton	11,025.9	12,987.0	10,881
	Treatment of aviation food production wastewater	10,000 tons	8.6	9.3	6.64
	Treatment rate of aviation food production wastewater	%	100	100	100
	Hazardous waste treatment rate (maintenance)	%	100	100	100
	Harmless waste disposal rate (onboard service)	%	100	100	100
A2. Resource Consumption					
A2.1	Aviation fuel consumption	10,000 tons	613.27	605.31	453.34
	Fuel consumption per ton kilometer	Ton / 10,000 ton km	2.95	2.85	2.77
	Gasoline	ton	3,922.78	3,452.12	2,684.53
	Diesel oil	ton	7,282.09	6,384.37	4,969.15
	Electricity	10,000 kWh	27,873.09	25,651.38	29,580.77
	Natural gas	10,000 m <sup>3</sup>	965.80	930.83	1,064.829
	Liquid gas	ton	167.17	215.68	146.27

A. Environment					
ESG Indicator		Unit	2020	2021	2022
A2.2	Total water consumption	10,000 tons	612.20	477.97	528.33
	Water consumption intensity <sup>4</sup>	m <sup>3</sup> / 10,000 yuan	0.6585	0.4703	0.6231
A2.5	Consumption of packaging materials (air food)	ton	566.66	419.99	318.52
B. Society					
B1. Number of Employees: by gender, type of employment, age group and region					
B1.1	Number of employees	Person	100,431	98,098	97,899
Gender	Male	Person	52,883	58,893	59,160
	Female	Person	47,548	39,205	38,739
region	Guangzhou	Person	25,215	25,167	23,658
	Domestic (except Guangzhou)	Person	74,219	72,029	73,472
education	Number of employees	Person	997	902	769
	Postgraduate and above	Person	4,399	4,283	4,361
	Undergraduate	Person	51,494	52,160	52,296
	Junior college	Person	29,780	28,201	26,982
	High school and below	Person	14,758	13,454	14,260
age	Under 30	Person	43,831	38,941	35,226
	31-40 years old	Person	32,149	35,113	37,015
	41-50 years old	Person	19,079	17,985	18,684
	Over 51 years old	Person	5,372	6,059	6,974
B1.2	Comprehensive turnover ratio	%	3.46	4.58	3.62



B. Society					
ESG Indicator		Unit	2020	2021	2022
B2. Health and Safety					
B2.1	Work related deaths <sup>5</sup>	Person	1	1	3
	Proportion of employees died at work	%	0.0010	0.0010	0.00306
B2.2	Working hours lost due to work	Working day	12,242	12,839	12,839.5
B3 Development and training					
B3.1	Total number of trainees	person	68,630	81,253	78,362
	Proportion of trainees: by gender				
	Male	person	38,397	46,879	44,682
	Female	person	30,233	34,374	33,680
B3.2	Average training hours of employees	hour	128.25	74.57	219.12
	Average training hours of employees: by gender				
	Male	hour	128.81	81.65	284.10
	Female	hour	128.74	63.54	132.91
B5 Supply Chain Management					
B5.1	Total number of suppliers	Company	14,431	21,636	29,270
	Number of suppliers: by region				
	Central South	Company	6,900	10,368	11,898
	Northeast	Company	1,596	2,315	3,690
	East China	Company	1,926	3,130	4,668
	North China	Company	2,288	3,248	3,799
	Northwest	Company	834	1,271	3,059
	Southwest	Company	739	1,082	1,915
	Non-Mainland China	Company	148	222	241

B. Society					
ESG Indicator		Unit	2020	2021	2022
B6 Product Responsibility					
B6.2	Number of complaints received about products and services				
	Complaint rate	%	0.1320	0.4394	2.65
B7 Anti-Corruption					
B7.1	Number of corruption lawsuits				
	Litigation cases involving corruption, bribery, extortion, fraud and money laundering	Case	0	0	0
B8 Community Investments					
B8.2	Resources used in the focus area				
	Number of volunteer service participants	Person time	15,000	18,000	25,000
	Working time	10,000 hours	1.5	1.8	7.7
	Perform important charter tasks	Shift	321	74	578
	Transport personnel for important charter flights	Person time	42,705	7,288	69,000

Note: unless otherwise specified, the data coverage of this report is consistent with the 2021 financial report of China Southern.

1. Carbon dioxide emission factors and calculation methods refer to civil aviation comprehensive statistical reporting system (average carbon dioxide emission factors of China's regional power grid in 2011 and 2012).

2. Category 1 CO<sub>2</sub> includes direct emissions from aviation kerosene, gasoline, diesel, coal, natural gas, liquefied gas, etc; Category 2 CO<sub>2</sub> includes indirect CO<sub>2</sub> emissions caused by outsourcing power; CO<sub>2</sub> emissions=category 1 CO<sub>2</sub>+category 2 CO<sub>2</sub>;

3. The statistical caliber of indicator A1.3, A1.4, and A1.6 is only for Guangzhou.

4. Water consumption intensity = total water consumption/operating revenue.

5. All three of them died suddenly. We have made a deep reflection on such incidents. We will avoid such incidents by reminding employees to pay attention to personal health management, establishing employees' health awareness, providing employees with annual physical examination, encouraging employees to finish their holidays, and achieving a proper balance between work and rest.



Index of Indicators

ESG Index of Indicators






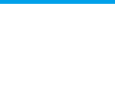
A Environment			
Main Category		Content	Location
Level A1: Emissions	General Disclosure	Information on exhaust and greenhouse gas emissions, pollution to water and land, generation of hazardous and non-hazardous wastes: (a) policies and (b) compliance with relevant laws and regulations that have a significant impact on the issuer	P46、 P48、 P50-51、 P54-55、 P98
	A1.1	Emission types and relevant emission data	P46、 P48、 P100
	A1.2	Direct (range 1) and energy indirect (range 2) greenhouse gas emissions (in tons) and (if applicable) density (in units of production, per facility)	P46、 P100
	A1.3	Total amount of hazardous waste generated (in tons) and (if applicable) density (in units of production and facilities)	P54-55、 P57、 P100
	A1.4	Total amount of harmless waste generated (in tons) and (if applicable) density (in units of production and facilities)	P57、 P100
	A1.5	Describe the emission targets set and the steps taken to achieve them	P9、 P48-49、 P50-53
	A1.6	Describe the methods for handling hazardous and non-hazardous wastes and the waste reduction goals set and the steps taken to achieve these goals	P9、 P54-55
Level A2: Resource use	General Disclosure	Policies for the efficient use of resources (including energy, water and other raw materials)	P50、 P54、 P58、 P98
	A2.1	Total direct and / or indirect energy consumption (i.e. electricity, gas or oil )( calculated in thousands of kilowatt hours) and density (i.e. per unit of production, per facility) by type	P46-47、 P100
	A2.2	Total water consumption and density (i.e. per unit of production, per facility)	P47、 P101
	A2.3	Describe the energy efficiency goals set and the steps taken to achieve them	P9、 P50、 P54
	A2.4	Describe any issues that may arise in obtaining the applicable water sources, the water use efficiency objectives set and the steps taken to achieve these objectives.	P53
	A2.5	The total amount of packaging materials used in the finished product (in tons) and, if applicable, the percentage per production unit.	P101
Level A3: Environment and natural resources	General Disclosure	Policies to reduce the significant impact of Issuers on the environment and natural resources.	P46、 P98
	A3.1	Describe the significant impacts of business activities on the environment and natural resources and actions taken to manage the impacts.	P48-50、 P58-59
Level A4: Climate change	General Disclosure	Identify and respond to policies on mitigation measures related to major climate related issues that have and may have an impact on the issuer.	P48-49、 P98
	A4.1	Describe major climate related issues that have had and may have an impact on the issuer, and response actions.	P48-52

B Society-Employment and labor practices			
Main Category		Content	Location
Level B1: Employment	General Disclosure	Information on: (a) policies on remuneration and dismissal, recruitment and promotion, working hours, holidays, equal opportunities, diversification, anti-discrimination and other treatment and benefits; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer.	P76、 P98
	B1.1	Total number of employees by gender, type of employment(full-time or part-time), age group and region.	P77
	B1.2	Turnover rate by gender, age group and region.	P101
Level B2: Health and Safety	General Disclosure	Information on: (a) policies for providing a safe working environment and protecting employees from occupational hazards; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer.	P42-43、 P76、 P82、 P98
	B2.1	The number and rate of deaths due to work in the past three years (including the reporting year) per year.	P102
	B2.2	Number of working days lost due to work injury.	P102
	B2.3	Describe the occupational health and safety measures adopted, as well as relevant implementation and monitoring measures.	P42-43、 P76、 P82-83、
Level B3: Development and Training	General Disclosure	Policies on improving employees' knowledge and skills in performing their duties. Describe training activities.	P78-79
	B3.1	Percentage of trainees by gender and type of employees (i.e. senior management, middle management).	P79、 P102
	B3.2	Average number of training hours per employee by gender and type of employee.	P79、 P102
Level B4: Labor Standards	General Disclosure	Information on: (a) policies to prevent child labor or forced labor; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer.	P76、 P98
	B4.1	Describe measures to review recruitment practices to avoid child labor and forced labor.	P76
	B4.2	Describe the steps taken to eliminate violations when they are identified.	P76
B Society-Business Practice			
Level B5: Supply Chain Management	General Disclosure	Manage environmental and social risk policies in the supply chain	P92-93、 P99
	B5.1	Number of suppliers by region	P93、 P102



B Society-Business Practice			
Main Category		Content	Location
Level B5: Supply Chain Management	B5.2	Describe the practice of employing suppliers, the number of suppliers to whom the practice is implemented, and relevant implementation and monitoring methods.	P92-93
	B5.3	Describe the management, implementation and monitoring methods for identifying environmental and social risks in each link of the supply chain.	P70、P92-93
	B5.4	Describe the practices for promoting the use of environmentally friendly products and services when selecting suppliers, as well as the relevant implementation and monitoring methods.	P93
Level B6: Product Responsibility	General Disclosure	Information on the health and safety, advertising, labeling and privacy of the products and services provided and remedies: (a) policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer.	P30、P33、P41、P70-71、P99
	B6.1	Percentage of the total number of products sold or delivered that need to be recovered for safety and health reasons.	Not applicable
	B6.2	Number of complaints about products and services received and how to deal with them.	P103
	B6.3	Describe practices related to the maintenance and protection of intellectual property rights.	P26
	B6.4	Describe the quality verification process and product recovery procedure.	Not applicable
	B6.5	Describe the consumer data protection and privacy policy, as well as the relevant implementation and monitoring methods.	P71
Level B7: Anti-Corruption	General Disclosure	Prevention of bribery, extortion, fraud and money laundering: (a) policies; and (b) complying with relevant laws and regulations that have a significant impact on the issuer.	P26、P99
	B7.1	Number and outcome of corruption lawsuits brought and concluded against the issuer or its employees during the reporting period.	P103
	B7.2	Describe preventive measures and reporting procedures, as well as relevant implementation and monitoring methods.	P26-27
	B7.3	Describe the anti-corruption training provided to directors and employees.	P25-26
Level B8: Community Investments	General Disclosure	Policy on community involvement to understand the needs of the communities in which they operate and to ensure that the interests of the communities are taken into account in their business activities.	P17、P99
	B8.1	Focus on areas of contribution (i.e. education, environmental issues, labor needs, health, culture, sports).	P17、P84-91
	B8.2	Resources (such as money or time) used in the area of focus.	P17、P84-91

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# Report Verification



## 社会责任报告审验声明书

### Assurance Statement of Social Responsibility Report

TUV NORD (Hangzhou) Co., Ltd (‘TUV NORD’ for short) has been commissioned by the management of China Southern Airline Co., Ltd (‘China Southern’ for short) to carry out an independent assurance of the 2022 Corporate Social Responsibility Report (‘report’ for short) .

China Southern is responsible for the collection, analysis, aggregation and presentation of information within the Report. TUV NORD is responsible for conducting this work (assurance the report) is in accordance with terms of reference agreed in the scope of engagement with China Southern. China Southern is the intended users of this statement.

This statement is based on the 2022 Corporate Social Responsibility report which prepared by China Southern, who is responsible for the integrity and authenticity of the information and data in the report

#### Assurance Scope:

- Key social responsibility performance and relevant information disclosed in the 2022 report.
  - Audit address: No.68 Qixin Road,Baiyun district, Guangzhou, Guangdong Province, the HQ of China Southern, and didn't visit its branch and other place;
  - We evaluate the collection, analysis, aggregation of the information and data.
  - The economic data is audited by other third party, so no repeated verification.
- Assurance of the Report was done from 2<sup>nd</sup> Mar. 2023 to 3<sup>rd</sup> Mar 2023.

#### Assurance Methodology:

Assurance process including following activities:

- Review the document information which provide by China Southern;
- Interview the person who collected the report information;
- View the related websites and media reports, verify the data and information through sampling method;
- Refer to CSR requirement of Environment, social, and governance guideline which made by SEHK, we evaluate the report in terms of Materiality, Quantitative, Balance and Consistency;
- Refer to GRI Sustainability Reporting Guideline(GRI Standards) on Balance, Comparability, Accuracy, Timeliness, Clarity, Reliability, and give the evaluation;
- Refer to AA1000AS (V3) Assurance methodology;
- Assurance activity is based on TUV NORD CSR report assurance management procedure.

#### Assurance Conclusion:

The 2022 Corporate Social Responsibility Report of China Southern Airlines Co., Ltd. objectively reflects the implementation status and performance of the company's social responsibility work in 2022. The data in report is reliable and objective, TUV NORD didn't find the system or substantial error.

- **Materiality:** China Southern conducted a survey on material issues, and disclosed the important objective performance of China Southern in 2022 in the fields of economy, society and environment from 20 substantive issues,



such as "Ensuring Safe Flight", "rural revitalization ", respond to the expectations of investors and other stakeholders in time;

- **Quantitative:** The report disclosed performance data in various forms such as "Highlights of 2022 " and "ESG index of indicators" in the environmental and social fields such as safe flight time and harmless waste weight, which has a certain quantification.;
- **Balance:** The report discloses data such as the number of deaths due to official business and the number of suppliers on the blacklist, with a certain balance;
- **Consistency:** The Social Responsibility Management Committee of China Southern is responsible for collecting, recording, arranging, and analyzing the information and processes used in the preparation of the report. The data sampled during the verification process can be traced to the source, and the consistency is good.

#### Suggestion for improvement

Through assurance and evaluation, we had following improvement suggestion on CSR practice and management:

- It is recommended to comprehensively analyze the reasons for passenger complaints and formulate relevant measures to improve passenger satisfaction;
- It is recommended to pay continuous attention to the rating results of social rating agencies, actively benchmark with other companies, and continuously expand disclosure indicators to improve social responsibility management performance.

#### Special statement

This statement excluding:

- The activity outside information reveal;
- The position, idea, faith, object, future developing direction, and promise which stated by China Southern.

#### Statement of Independence and Competence

TUV NORD Group is the world's leader Certification Authority in inspection, testing and verification, operating in more than 70 countries throughout the world and providing services which includes management systems and product certification; quality, environmental, social and ethical auditing and training; environmental; social responsibility and sustainability report assurance.

TUV NORD (Hangzhou) Co., Ltd. is an independent organization registered and established by TUV NORD Group in China, ensure that there are no conflicts of interest with China Southern Airlines Co., Ltd. or its branches and stakeholders during the implementation of the verification process of social responsibility report. All information in this report was provided by China Southern Airlines, and TUV NORD was not involved in the report preparation process.

The team leader:Ms.Huang Li  
Date :17.03.2023

The Authorized person:Mr.Song Haining  
Date: 17.03.2023

注：当声明的中文和英文版本有冲突时，请以中文为准



# Feedback form

Dear Reader:

Hello! Thank you for reading this report. To further improve our work and make the next report more in line with your expectations, we would like your feedback and suggestions in the following areas.

Your identity is:

- ☐ Customers
- ☐ Investors
- ☐ Government
- ☐ Staff
- ☐ Partners
- ☐ Environmental Protection Agency
- ☐ Community
- ☐ Media
- ☐ Media
- ☐ Other

Optional question:

1. Are you satisfied with this report as a whole?

- ☐ Yes ☐ No ☐ Normal

2. Is the information you are concerned about reflected in the report?

- ☐ Yes ☐ No ☐ Normal

3. Do you think the report truly reflects the content of China Southern's social responsibility work and its impact on stakeholders?

- ☐ Yes ☐ No ☐ Normal

4. Can you easily find the information you care about in the report?

- ☐ Yes ☐ No ☐ Normal

5. Are you satisfied with the layout design of the report?

- ☐ Yes ☐ No ☐ Normal

Open question:

6. What do you think are the shortcomings of this report?

7. What do you wish to disclose on a regular basis in this report?

8. What opinions and suggestions do you have on our future social responsibility work and reports?

# About the Report



This report is the 16<sup>th</sup> social responsibility report issued by China Southern Airlines Co., Ltd. It systematically discloses the company's practice and achievements in the fields of economic, environmental and social responsibility. Hope you can learn more about China Southern through this report and grow together with China Southern.

## Reliability Guarantee

The board of directors and all directors of the company undertake that there are no false records, misleading statements or major omissions in the contents of this report, and are responsible for the authenticity, accuracy and completeness of the contents.

## Report Time Frame

The reporting time range is from January 1 to December 31, 2022, and is appropriately extended to enhance the comparability of the report.

## Reporting Boundaries

The disclosure boundary of the data indicators in this report is mainly based on China Southern Airlines Co., Ltd., and individual indicators are extended to China Southern Air Holding Co., Ltd. The scope of data disclosure has been specified in the report.

## Data Statement

The financial data in this report comes from the audited annual report of China Southern, and other data comes from the public data of government departments, official documents of the company and relevant statistics. The financial data in this report is calculated in RMB, unless otherwise stated. For more economic data, refer to the company's 2022 annual report.

## Compilation Basis

The State-owned Assets Supervision and Administration Commission of the State Council of the State Council "Guiding Opinions on the Fulfillment of Social Responsibility by Central Enterprises";

Hong Kong Stock Exchange Environmental, Social and Governance Reporting Guidelines;

Guidelines for the preparation of the "Report on Corporate Social Responsibility" issued by the Shanghai Stock Exchange and the Guidelines for Environmental Information Disclosure of Listed Companies on the Shanghai Stock Exchange;

Global Sustainability Standards Council GRI Sustainability Reporting Standards (GRI Standards); GB/T 36001-2015 Guidelines for Compilation of Social Responsibility Reports.

## Appellation Description

For the convenience of expression and reading, "China Southern Airlines Co., Ltd." is also represented by "China Southern", "Company" or "We", "China Southern Air Holding Co., Ltd." is also represented by "China Southern Group", "Group", "Xiamen Airlines" Co., Ltd." is also represented by "Xiamen Airlines", local branches are represented by "region name + branch", and "Civil Aviation Administration of China" is also represented by "Civil Aviation Administration".

## Report Acquisition

This report includes both Chinese and English versions, and is published in both paper and electronic formats. You can log in to the official website of China Southern Airlines to browse or download this report online.

## Contact Information

If you have any questions or suggestions about this report, please write to China Southern Airlines Co., Ltd.

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