

China Southern Airlines Co., Ltd.
Corporate Social Responsibility Report
2021



China Southern Airlines Co., Ltd.

Report Preparation: Publicity Department of Corporate Social Responsibility Management Committee of China Southern Airlines Group Co., Ltd.

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About the Report

This report is the 15th Corporate Social Responsibility report issued by China Southern Airlines Co., Ltd. It presents the Company's practice and achievements in the fields of economics, environment and Corporate Social Responsibility.

We look forward to your learning more about China Southern Airlines through this report.



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 its contents.

Report Time Frame

The reporting time range is from January 1 to December 31, 2021 and has been appropriately extended to enhance the comparability of the report. This report is published concurrently with the Annual Report, which was published in March 2021.

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 Airlines Group Co., Ltd. The scope of data disclosure has been specified in the report. There are no significant changes in the organization size, structure, ownership or supply chain during the reporting period.

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. This report collects data based on the quantitative Corporate Social Responsibility indicator system that conforms to the characteristics of China Southern Airlines.

The financial data in this report is in RMB unless otherwise stated.

Compilation Basis

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

Hong Kong Stock Exchange Environmental, Social and Governance Reporting Guidelines (HK-ESG)
Guidelines for the preparation of the "Report on Corporate Social Responsibility" issued by the Shanghai Stock Exchange
Chinese Academy of Social Sciences "Guidelines for Compilation of Corporate Social Responsibility Reports in China" (CASS-CSR4.0)
Global Sustainability Standards Council GRI Sustainability Reporting Standards (GRI Standards)
GB/T 36001-2015 Guidelines for Compilation of Corporate Social Responsibility Reports

Appellation Description

For the convenience of expression and reading, "China Southern Airlines Co., Ltd." is also represented by "China Southern" or "Company", "China Southern Group 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 company" 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 may log in to the official website of China Southern Airlines to browse or download this report online.

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Set Sail on a New Journey -
Flying Safely into the Future

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Letter from the Chairman

During Year 2021, in the face of the complex and severe situation created by the COVID-19 global pandemic, China Southern adhered to the guidance of Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era and resolutely implemented the requirements of the Central Government and superiors, staying true to its original mission.

China Southern began this new “normal” situation of COVID-19 with practical work and made overall plans for pandemic prevention and control as well as safe production and operation, reform and promoting various work of party building, fully fulfilled political, economic and social responsibilities, and practiced “airline of the people and for the people” with practical actions.

We took solid and meticulous prevention and control measures to push down the impact of COVID-19. We regarded pandemic prevention and control of COVID-19 as a top priority, further consolidating responsibilities, improved pandemic prevention and control mechanisms, adjusted in-flight service procedures, carried out special rectification at airports to prevent the importation of this plague from overseas travelers and strengthened our closed-loop management of five categories of personnel on international flights. Concurrently, we strengthened employee pandemic prevention training and education and psychological counseling for quarantined personnel and promoted the full coverage of vaccination. A total of 79 new crown vaccine charter flights were carried out throughout the year, carrying 130 million doses of new crown vaccine, ranking first in China's civil aviation.

We overcame multiple challenges and demonstrated good momentum for high-quality development. In terms of safety, we vigorously promoted the construction of seven major safety systems and continuously provided flight operations safely for 266 months and air defense safely for 331 months. This high safety level commitment continued to maintain China Southern Airlines' leadership position in China's civil aviation.

In terms of flight operations, we fully responded

to the severe impact of the COVID-19 pandemic, improved operational revenue, reduced costs and revitalized resources; regarding flight operations, a special campaign to improve flight regularity was carried out and as flight regularity rate reached a strong 89.89%, 1.9 percentage points higher than the industry average.

In terms of service, we built a new service brand “Affinity and Refinement”, strengthened service management and control and all service indicators were listed in the forefront of China's domestic airlines. Strategically, the overall idea of high-quality development has been clarified; The 14th Five-Year Plan has been formulated; Digital transformation has been accelerated; Five major structural adjustments have been optimized; China Southern's ecosystem has been built, and various strategic tasks have been steadily advanced. In terms of reform, more than 70% of the three-year reform action tasks have been exceeded and the vitality of development momentum has been further enhanced.

We fully fulfilled the Corporate Social Responsibilities of central enterprises and achieved “three boosts”. The first was to boost the national strategy, promoting the high-quality development of our Beijing at Beijing Daxing International Airport hub; promoted the “four integrations” of the Greater Bay Area market, products, services and networks and accelerated

the implementation of projects such as cross-border e-commerce, general aviation and aircraft leasing at the Hainan Free Trade Port. The second was to boost rural revitalization, investing 17.28 million in assistance funds and implementing 40 new projects in the rural revitalization stage throughout the year. We donated five million to purchase 5,617 television sets that were given to disadvantaged residents of Moyu and Pishan counties in the Hotan area of Xinjiang - the designated aid targets - and invested 58 million to construct the Xinjiang Moyu Mingzhu Primary School. The total amount of consumer assistance exceeded 66.32 million. The third was to promote green development, carrying out a streamlined digital energy conservation and emission reduction program that reduced carbon emissions by 221,100 tons, guiding passengers to our all-new On Demand Dining in-flight meal program which saved more than 3.71 million meals and earned the “Annual Environmental Protection Airline”, “Golden Key” Champion Award, “Carbon Neutral Case” and other honors.

We focused on people's livelihood projects and conducted “three services” very well. In the study of party history, the “I do practical things for the masses” activity was carried out, 21 new key livelihood projects were announced, and secondary units launched more than 600 key livelihood projects, meeting the people's “urgent and long-awaited” challenges. One is to serve the public. We always put the safety of people's lives



first. In April 2021, in order to rescue a Uyghur boy with a broken arm, China Southern airport officials instructed the flight to return to the departure gate to open the cabin door a second time to invite the child (and his parents) into the cabin and still maintained an on-time departure/arrival so the young child could meet the awaiting ambulance and receive needed treated in time; In June, a shipment of lychees from Guangdong was blocked due to the COVID-19 pandemic. China Southern urgently deployed 320 flights, carrying more than 7,200 tons of lychees, opening up the air passage for Guangdong lychees to leave the province and in doing so earned a special contribution award of “I do practical things for farmers who grow lychees” by Guangdong Province. The second was to serve our travelling passengers. We sincerely care for our special passenger groups, and we have opened service windows for our senior travelers at 66 directly affiliated ticket offices and 30 airports,

and launched the “one-network interconnection” function for unaccompanied minors. The arrival time of flight delay compensation has been shortened to less than two minutes, and the entire process of domestic passenger tickets has now been automated. Our baggage transportation error rate dropped by 15.7% year-on-year. The third is to honor and respect the more than 100,000 employees and managers who work for China Southern Airlines. We optimized and adjusted the standard of heatstroke prevention fees for front-line positions, popularized supplementary medical insurance policies, provided additional service for families where both husband-and-wife are working for China Southern, strengthened the care of quarantined personnel, equipped 900 sets of fitness equipment, and launched nearly 500,000 “specialized quarantine meals” to let employees and the masses experience the special cuisine which was created just for them!

During Year 2022, China Southern Airline is pledged to work closely around the CPC Central Committee with Comrade Xi Jinping as the core, forge ahead with a new journey of high-quality development with a more high-spirited attitude, accelerate the pace of becoming a world-class airline while actively giving back to the society and celebrating the successful convening of the 20th National Congress of the CPC.

Ma Xulun
Chairman
China Southern Airlines Co., Ltd.

About Us

Company Profile

Headquartered in Guangzhou, China Southern Airlines Co., Ltd. was established in Year 1995, listed on the Hong Kong Stock Exchange and the New York Stock Exchange in 1997 and was listed on the Shanghai Stock Exchange in Year 2003. As the largest airline of the People's Republic of China, China Southern has 21 branches (including branches in Taiwan and Macau), with 21 domestic sales offices and 53 international sales offices.

China Southern Airlines is proud to operate the largest number of modern aircraft, the most developed route network and the largest annual passenger volume in China. The scope of business services spans domestic, international and regional scheduled and irregular air passenger, cargo, mail and luggage transportation.

In recent years, China Southern has made significant progress in building up its Guangzhou-Beijing dual aviation hubs through newly opened and optimized route networks ... while continuously providing passengers with safe and reliable air transportation products and services as it works to become a world-class air transport enterprise.

By the conclusion of Year 2021

Routes operated by China Southern –

1,401 lines

New domestic routes throughout the year -

175 lines

The total transportation turnover was

21.2 billion ton-kilometer

98.50 million passenger traffic

1.44 million tons of cargo and mail

- Ranked 12th in Skytrax's "2021 Global Airline Top 100" list, ranked #1 among major domestic airlines
- Earned the seventh CAPSE Airline Service Award for "Best Airline" and "Innovative Service"
- Claimed 41st place in "China's 50 Most Valuable Brands" by World Brand Lab in 2021
- Ranked in the "2021 Chinese Enterprise Sustainable Development 100 List"
- Awarded the highest "Seven-Star Safety Rating" and the title of "COVID-19 Pandemic Prevention Seven Star Airline" by AirlineRatings.com – an internationally renowned independent aviation rating network.
- Selected as a "Typical Case of Carbon Neutrality" by People's Daily Online
- Earned the "Advanced Unit to Win the Blue Sky Defense War" by the Civil Aviation Administration
- Ranked the top 15 of SASAC's 2020 Important Enterprise Brand Building Capability Top 30 List
- The 4th "China Centralized Supply Chain Leading Enterprise" Award in 2021
- Ranked No. 1 in China's Brand Power Research Aviation Service Industry for 11 Consecutive Years
- Ranked 7th in Brand Finance Magazines' 2021 "World's 50 Most Valuable Airlines"
- Named the Best Airline of the Year Award from CAPSE for the four consecutive year

2021 Fleet Structure

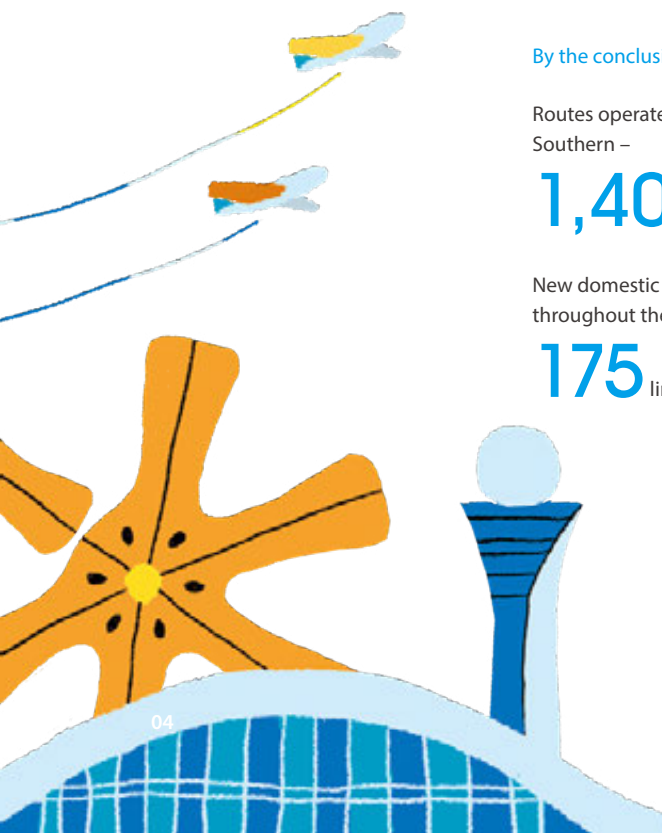
Passenger Aircraft	
Airbus A350	12
Airbus A330	40
Airbus A320	334
Airbus A380	5
Boeing B787	39
Boeing B777	15
Boeing B737	399
EMB190	6
ARJ21	12
Cargo Aircraft	
Boeing B777	14
Boeing B747	2

A total of

878 passenger aircraft

862 passenger aircraft

16 cargo aircraft



Company Culture

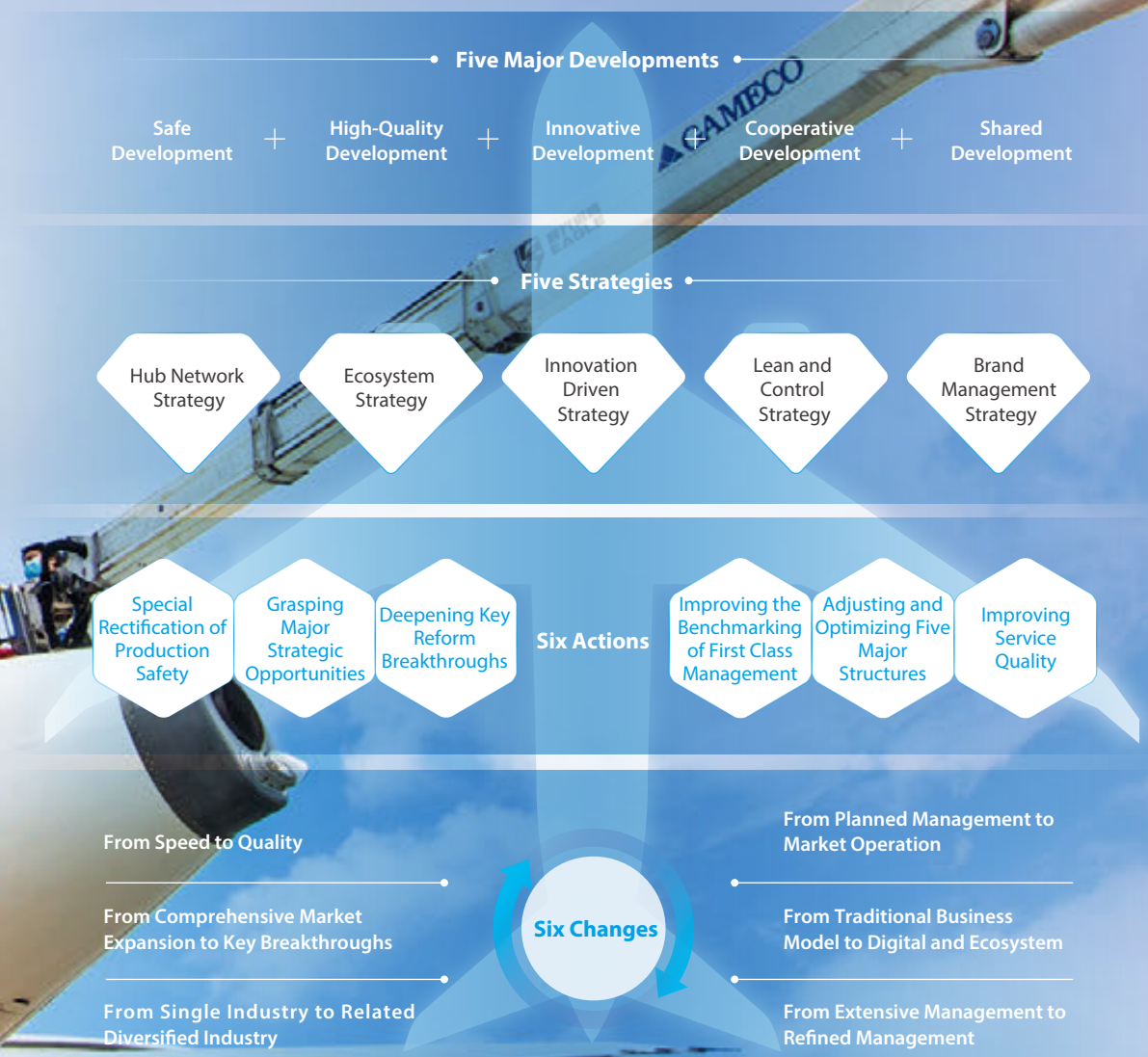
China Southern's corporate culture embraces "Sunshine China Southern Convention" as its precious spiritual wealth, accumulated during the continued Company's growth and development. It is both a call to action and ideological guide that all China Southern staff and senior managers abide by and practice together, which injects a special inspiration into all employees to build China Southern into a world-class air transport enterprise with global competitiveness.

Core Concepts



Development Strategy

Year 2021 was the first year of the "14th Five-Year Plan". With the vision and goal focused squarely becoming a major, world-class airline, China Southern remains steadfast in its mission of high-quality development, adheres to five major developments, implements five major strategies, promotes six major actions, realizes six major transformations and formulates the "14th Five-Year" development plan and 19 business sub-plans by actively promoting the implementation of its strategic plan while striving to develop a its market-leading high-quality development path.



Daxing China Southern - China Southern Daxing

During Year 2021, China Southern thoroughly implemented its strategy of serving the nation, serving the coordinated development of the Beijing-Tianjin-Hebei region, the construction of the Xiongan New Area and regarded "comprehensively improving the operational quality of Beijing Daxing International Airport" as one of the seven tough battles.

Decisive efforts were made during Year 2021 to build up China Southern's Beijing hub brand of "Daxing China Southern - China Southern Daxing" as well as "comprehensively improving the operational quality of

Beijing Daxing International Airport" which has become a protracted battle that requires long-term investments and in-depth cultivation in the deepening operation stage of the airline's Beijing hub, which is a challenge earned by all of China Southern Airlines team members and also serves as a comprehensive improvement of all factors such as market, transportation capacity, basic support and mechanism construction.

"Daxing China Southern - China Southern Daxing" is the new brand of China Southern hub construction which has achieved remarkable positive results.

Voice of Stakeholders



"Beijing-Guangzhou Express Line' runs every half an hour or an hour, you don't have to wait, you can fly when you arrive and there is a dedicated check-in and security check channel which I have found to be very convenient. It feels like taking a bus or subway in the city."

- Mr. Zhang, passenger



Improving Beijing Daxing International Airport Operational Quality

The opening of the "Beijing-Guangzhou Express" and "Beijing-Shenzhen Express" flight service has become an exciting new, two-core air express business at Beijing Daxing International Airport, which will provide passengers with a convenient and comfortable travel experience. At present, China Southern has carried out nearly 68,000 flights safely on the routes at Beijing Daxing International Airport. The network spans 47 domestic destinations and the average daily flight volume exceeds 300 to form a new route network radiating outward from Beijing-Tianjin-Hebei and Xiongan New Area to nearly every part of the nation.

Launching Daxing "Multi-point Check-In"

Launched a new "multi-point check-in" at Beijing Daxing International Airport required the addition of self-service kiosks as well as new sales counters to meet the needs of rail transit passengers when making their airport check-in as well as a consignment ticket change booth, itinerary printing and other services ... all focused on reducing valued time at multi-point check-in.

Building Daxing Goods Station

Building an aviation hub and "urban cargo terminal" requires the active rights of international airlines and efficiently transporting temperature-controlled pharmaceutical goods as well as actively opening up domestic and international logistics air channels in North China. This dramatically has worked to build up the Daxing Cargo Terminal into an important facility for the coordinated development of Beijing, Tianjin and Hebei. On September 25, 2021, China Southern Beijing Daxing-Vancouver general cargo passenger-to-cargo flight successfully launched its maiden flight, signifying China Southern Daxing Cargo Terminal becoming the only cargo terminal that offers international passenger-to-cargo general cargo transportation at the international port of Beijing Daxing International Airport.

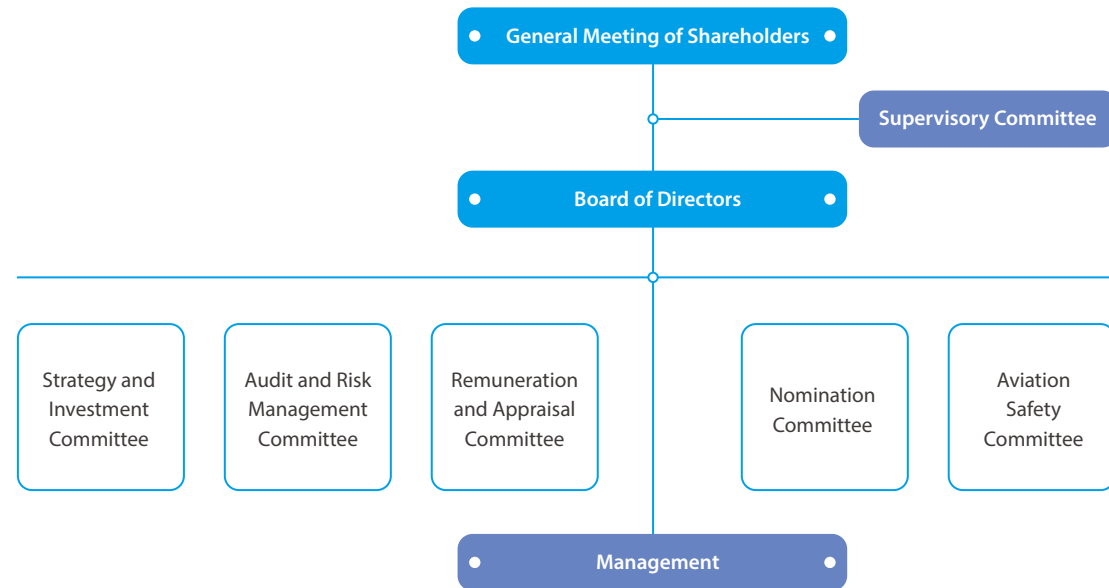


Corporate Governance

China Southern implemented the "Two Consistency", strictly implementing a three-year action program for the reform of state-owned enterprises which has as its core the strengthening of party leadership in improving corporate governance.

The Company complied with national laws and regulations while improving its corporate governance systems, articles of association and other governance systems, and revised the "Articles of Association", "Procedure Rules of the Board of Directors" and formulated corporate governance documents such as the "Administrative Measures for the Authorization of the Board of Directors", "Procedure Rules for the Chairman's Office Meeting" and promoted the group and subsidiaries at all levels to formulate a list of major business management matters that will be studied and discussed in advance by the party organization and clarified the boundaries of rights and responsibilities of each governance body.

The Company comprehensively standardized the governance of the Board of Directors, strengthened the construction of the Board of Directors, implemented the functions and powers of the Board of Directors, promoted that the Board of Directors should be fully established, and ensured that external directors in the Board of Directors occupy the majority in principle, ensured that the management performs their powers and duties in accordance with the law, and strove to ensure the standardized and stable operation of the Company.



China Southern Airlines followed the regulatory requirements of listed companies to carry out information disclosure, revised the "Information Disclosure Management System of Listed Companies of China Southern Airlines Co., Ltd.", and expanded online and offline information disclosure channels and established good investors communication mechanisms with dedicated shareholder communication to protect the interests of small and medium investors and fully protected investors' "Right to Know".

Received the Shanghai Stock Exchange's **A**-level evaluation for information disclosure for eight consecutive years

Information Disclosure and Investor Relations Management

Party Building

China Southern adheres to the leadership of the party, thoroughly studied and implemented Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, and continuously improved the quality of China Southern's party building and maintained an "A" grade in the assessment of the Party Building Work Responsibility System of the SASAC of the State Council for four consecutive years. The Company promulgated the "China Southern's Opinions on Guaranteeing High-Quality Development with High-Quality Party Building" and the "Outline of China Southern's "14th Five-Year Plan" Leadership and Cadre Team Building Planning Outline to ensure the high-quality development of China Southern Airlines and is dedicated to building a world-class air transport enterprise as it transformed into a streamlined state-owned enterprise.

Strengthening Political Leadership

The Company carried out high-quality party history learning and education, organized a series of activities to celebrate the 100th Anniversary of the founding of the CPC, carried forward the great spirit of party building, and carried out in-depth "I do practical things for the masses" to boost spirit and unite the entrepreneurial efforts of officers. The Company's higher-level steering group applauded China Southern's party history learning and education programs that achieved remarkable results.

Strengthening the Construction of Party Style and Good Government

The Company promoted normalization of political supervision, deepened the reform of the discipline inspection and supervision system, focusing on building an integrated system and mechanism to promote the "do not dare to be corrupt, cannot be corrupt and do not want to be corrupt", improved the supervision of "top leaders" and leading groups at all levels; consolidated the effectiveness of central inspections and rectifications, further improved the reporting system for important matters of party committee inspections in secondary units and established a special inspection mechanism for inspections and rectification.

Improving the Quality of Party Building Work

Implemented the requirements of the "Year of Innovation and Expansion of Party Building in Central Enterprises" and introduced systems to strengthen the party building work in mixed-ownership enterprises and the assessment and evaluation of the responsibility system for party building work; continued to strengthen the "Three Base Construction" vigorously carried out "Party Member Pioneer Action" and creatively created and delivered a "Four Dimensions" party organization of the Headquarters functional department with high theoretical study and ideological work, vigorous promotion of development and bright organizational activities.

Strengthening the Training of Outstanding Young Cadres

Created a talent pool of outstanding cadres and formulated a management plan for the construction of China Southern's talent team; completed the first phase of "Pearl Talents" management trainee internal and external recruitment and selection and promoted management trainees to rotate in the service system and marketing system.

Promoting the Integration of Party Building into Production and Operation

Built an effective organizational system and improved the system and mechanism, and carried out in-depth research, assistance and guidance on the work of the party building integration center; optimized the party building assessment of "one enterprise, one policy" and strengthened the standardization of Central Enterprise Headquarters" and penetrated downwards, increasing the intensity of competitive selection, organized and implemented the competitive induction and open selection work for more than 250 positions at the group level as the proportion of personnel quitting exceeds five percent.

Strengthening Publicity and Ideological Work

The Company continued to strengthen theoretical study and strengthened positive publicity, actively promoting media integration. The total exposure of the entire network reached 8.3 billion person-times, of which 1,609 were reported by key Chinese media. The brand of Sunshine China Southern has been streamlined, the corporate culture system has been improved and the incident of the boy with a broken arm in Xinjiang became a national social media phenomenon with 1.6 billion exposures and featured the Beijing Daxing International Hub, "Affinity and Refinement" and Green Flight were all well-publicized.

Deepening the Reforms of the Cadre and Personnel Systems

The Company hired a professional cadre talent team and implemented the "Six Haves" guidance on selecting and employing personnel while actively promoting the exchange of cadres. The exchange rate of cadres between the group-level Headquarters and the grassroots offices throughout China reached 9.8%. The allowed for rectification of challenges of "Institutionalization of Central Enterprise Headquarters" and penetrated downwards, increasing the intensity of competitive selection, organized and implemented the competitive induction and open selection work for more than 250 positions at the group level as the proportion of personnel quitting exceeds five percent.

In-Depth Group Work

The Company actively organized and carried out team building activities and invested 34.5 million to care for isolated personnel dur to COVID-19 as well as front-line duty personnel and other groups. Activities such as the first "China Southern Craftsman" selection, "Innovation and Effectiveness - Heroine's Action" and "Youth Model Project" were carried out to consolidate China Southern's characteristic poverty alleviation achievements and promoted the completion and operation of the Moyu Pearl Primary School.

Board Statement

Board Oversight of ESG Matters

As the highest decision-making body for ESG management, the Board of Directors has overall leadership in decision-making on ESG management, assesses the potential risks of environmental, social and governance issues to the Company's business model, participates in and is ultimately responsible for formulating the Company's environmental, social and governance strategies and goals and ensure that environmental, social and governance issues, social and governance strategies are incorporated into the business decision-making process; Regularly monitor and review the achievement of goals and propose improvement suggestions and approve the importance, quantification, consistency and balance of ESG reports.

Board of Directors ESG Management Policy and Strategy

Corporate Social Responsibility Management

China Southern senior managers strictly implemented:
 -The requirements of the State-owned Assets Supervision and Administration Commission of the State Council, the Shanghai Stock Exchange and the Stock Exchange of Hong Kong on the airline's Corporate Social Responsibility efforts
 -Formulating the "Corporate Social Responsibility Management Manual"
 -Established and improved the Corporate Social Responsibility governance structure
 -Further refined the Corporate Social Responsibility management functions and integrated ESG matters, included responsibilities at all levels, and
 -Reported ESG matters decided by the Corporate Social Responsibility Steering Committee to the Board of Directors, emphasizing the board's participation in ESG management

China Southern continued to:
 -Improve its Corporate Social Responsibility management mechanisms
 -Regularly conducted Corporate Social Responsibility report preparation training
 -Established a Corporate Social Responsibility demonstration base
 -Formulated the "Administrative Measures for China Southern's Corporate Social Responsibility Demonstration Base"
 -Established a Corporate Social Responsibility day, and
 -Held Corporate Social Responsibility day activities every year
 Activities related to green flight, energy saving and emission reduction were held on the ground as well as on flight from time to time and passengers and employees were invited to participate actively to enhance communication with stakeholders.

China Southern's Corporate Social Responsibility Governance Framework



Corporate Social Responsibility Steering Committee

The Corporate Social Responsibility Steering Committee is headed by the chairman and the general manager of China Southern Airlines. The secretary of the Board of Directors is the leader in charge of Corporate Social Responsibility efforts of China Southern Airlines including:
 -Establishing effective Corporate Social Responsibility and ESG risk management and internal monitoring systems
 -Making decisions, leading and promoting Corporate Social Responsibility efforts, and
 -Regularly report to the board on ESG matters to gain board support. ESG-related matters mainly include monitoring the formulation of corporate ESG strategies, goals, risks and strategies, regularly reviewing the progress of ESG goals, and making suggestions for improvement.

Corporate Social Responsibility Office

The Corporate Social Responsibility Office:
 -Is physically located within the China Southern News Department
 -Cadres are responsible for implementing the resolutions of the Corporate Social Responsibility Steering Committee which coordinates the construction and implementation of the Company's Corporate Social Responsibility management system
 -Formulate and promote the implementation of Corporate Social Responsibility phased plans and annual work plans, and regularly research, summarize, and improve Corporate Social Responsibility work
 -Coordinate and manage Corporate Social Responsibility information disclosure, Corporate Social Responsibility demonstration base construction, Corporate Social Responsibility training and communication, Corporate Social Responsibility research, Corporate Social Responsibility evaluation activities and other special Corporate Social Responsibility work, and
 -Supervise relevant functional departments and subordinate units to carry out Corporate Social Responsibility work, and provide professional support

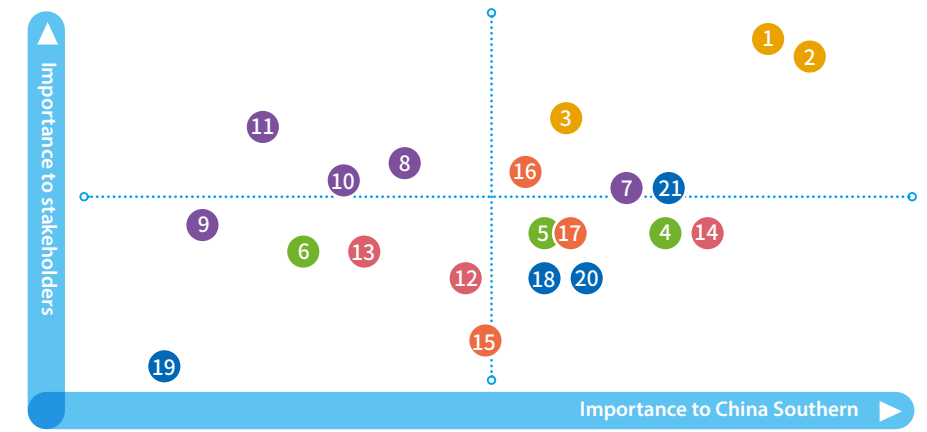
Corporate Social Responsibility Working Group

The Working Group is composed of functional departments of the Headquarters and subordinate units, participates in the preparation of Corporate Social Responsibility reports and is responsible for the management of Corporate Social Responsibility and ESG issues, formulates ESG management goals and work plans, implements ESG management according to the work plans, regularly reports the progress of ESG goals and assists in ESG information disclosure.

Analysis of Material Issues

Based on the internal and external social and economic environment, the Company's development strategy and the investigation and communication of stakeholders, China Southern senior managers analyzed and adjusted important issues based on the identification and analysis of important issues in Year 2020, and clarified 21 important issues of Year 2021 involving key areas such as safety, environment, service, employees, society, and economy, which have been determined, reviewed and managed by the Board of Directors.

Analysis Matrix of China Southern's Materiality Issues



Safety



1 Ensuring Safe Flight

- Continued to promote the "strong system, strict work style and risk control" safety management
- Established a long-term safety mechanism from various aspects such as flight, maintenance, operation control and even technological innovations

2 Passenger Health and Safety

- Formulated standards and requirements for personnel protection, environmental disinfection and food safety

3 Employee Occupational Health and Safety

- Regularly carried out employee health examinations and training lectures
- In-depth examination of aircrew mental health

Environment



4 Combating Climate Change

- Set up a leading group for ecological
- Environmental protection work to focus on identifying risks and opportunities brought about by climate change
- Formulated the "China Southern Group's Green Development Work Plan"
- Integrated green development into the entire production and operation process of enterprises from the aspects of aircraft energy saving and carbon reduction, ground energy consumption reduction and passenger green travel

5 Waste Disposal

- Formulated a work plan for pollution prevention and control and issued the "China Southern Airlines Group's 2021-2025 Plastic Pollution Control Work Plan"
- Compliant disposal of production and domestic waste
- Promoted plastic pollution elimination

6 Sustainable Use of Resources

- Steady promotion of clean energy replacement
- Accelerate research and development and actively promote advanced and applicable plastic substitute products

Service



7 Reducing Flight Delays

- Continued to promote the construction of large-scale flight operations
- Carried out the normal flight improvement project

8 Protecting Passenger Privacy

- Formulated the "Administrative Measures for the Protection of Personal Privacy Data of China Southern"
- Compliance and lawful collection and use of passenger personal information

9 Convenient Business Management

- The first domestic airline to launch the whole "luggage home" product
- Launched "One ID" full-process face-scanning travel service

10 Optimizing the Passenger Experience

- "China Southern e-Travel" provided door-to-door service for the whole process of air travel
- Built platforms, found partners, activated points, attracted customers and integrated resources to accelerate the construction of China Southern's ecosystem
- Special Needs and People with a Disability

11 Passenger Rights Protection

- Responsible for product knowledge promotion
- Continued to optimize omni-channel refund and correction services
- Carried out the key activities of "providing services and minimizing complaints"

Staff



12 Supporting Employee Training and Education

- Organized and implement curriculum development
- Strengthening the construction of teaching staff
- Established a management training mechanism

13 Diversity and Equal Opportunity

- Adhered to equal pay and equal benefits for equal work
- Signed the "Special Collective Contract for the Protection of Female Workers' Rights and Interests"

14 Employee Compensation and Benefits

- Established a sound salary system and provided competitive salary
- Paid five insurances and one housing fund and optimized supplementary medical insurance

Society



15 Overseas Responsibility

- Strengthening international cooperation with New Zealand, integrated into local communities and promoted local development

16 Rural Revitalization

- Formulated the "China Southern Group's Fixed-point Assistance Work Plan"
- Carried out cultural assistance

17 Pandemic Response

- Upgraded COVID-19 prevention and control measures
- Transported COVID-19 vaccines to support the global fight
- Communicated pandemic prevention policies in a timely manner through multiple channels
- Carried out "Defense and Escort" volunteer action

Economy



18 Anti-Corruption

- Formulated and issue relevant systems for rectifying the "four bad styles"
- Strengthening the supervision of the "top leaders" and the leadership team

19 Promoting Suppliers' Responsibility

- Adhered to the honest procurement and degradable green materials procurement
- Standardized supplier management and promoting suppliers to assume social responsibilities

20 Innovative Development

- Carried out the top-level design of digital transformation
- Carried out "Cloud T" digital talent training
- Fully integrated digitalization into information management, aviation safety, marketing services and green development

21 Legal Compliance

- Improved comprehensive risk management
- New intellectual property protection

Stakeholder Communication

China Southern has attached great importance to the expectations and demands of various stakeholders and has been committed to building a diversified communication mechanism using multiple channels to communicate with stakeholders, effectively safeguarding the rights of stakeholders to know, participate and supervise as well as responding to stakeholders' expectation and demands.

Investor



Expectations and Demands

Participated in corporate governance
Protected shareholders' rights and interests
Control risks
ROI - return on investment
Important information disclosure

Communication Channels and Methods

Board of Directors
Shareholders' Meeting
Supervisory Board
Regular disclosure reports, and temporary announcements

Government



Expectations and Demands

Abided by the law and paid taxes according to the law
Implemented national strategies and deepened reforms
Maintenance and appreciation of state-owned assets
safe flight
Promoted employment
Improving people's livelihood

Communication Channels and Methods

Communication channels and methods
Daily report, special report
Research visit
Project cooperation, working meeting
Statistical report

Supplier



Expectations and Demands

Integrity management and common development
Open, fair and just procurement

Communication Channels and Methods

Transparent procurement
Training and technical exchange meeting
Daily communication

Financial institution



Expectations and Demands

Improved solvency
Reduced business risks

Communication Channels and Methods

Strengthened compliance management
Strengthened risk management and control

Community



Expectations and Demands

Helped rural revitalization and development
carried out volunteer service
Community communication and exchange

Communication Channels and Methods

Promoted rural revitalization
Charity and public welfare activities
Information disclosure
Public communication

Media



Expectations and Demands

Established information release channels to deliver the messages of China Southern Airlines to the domestic and international public

Communication Channels and Methods

Press conferences
News releases

Peers



Expectations and Demands

Fair competition and friendly cooperation
information communication and exchange
Healthy and harmonious industry development

Communication Channels and Methods

Strengthened cooperation
Organized exchanges and learning, forums and meetings

Client



Expectations and Demands

Continuous safety and quality service
Quickly replied to customer comments or complaints
Protected customer privacy

Communication Channels and Methods

Information disclosure
Safety management system
Customer relationship management, online services

Staff



Expectations and Demands

Safeguard the rights and interests of employees
established communication channels
Strengthened employee training
Continuously improved employee compensation and benefits
Employee care
Open, transparent, healthy and upward human policy

Communication Channels and Methods

Employee representative meeting
Diversity employee training
Remuneration system reform
Employee integrated management
Employee activity

Board management of ESG progress

In accordance with the new ESG guidelines of the Hong Kong Stock Exchange, the "Consultation Summary Document", the board of directors identified the important areas that are most closely related to the company's business and that the company can make a significant contribution to in combination with the company's strategy and the United Nations 2030 Sustainable Development Goals, setting energy conservation, emission reduction and environmental protection, "Dual Carbon", plastic pollution control and other aspects of ESG annual goals or mid-term and long-term goals, and regularly evaluated and reviewed their implementation and completion, and put forward suggestions for improvement on the company's ESG performance to ensure that ESG policies be accurately implemented.

FOCUS
2021

Loyal to the CPC - Celebrating the 100th Anniversary of the CPC

Year 2021 marked the 100th Anniversary of the founding of the Communist Party of China. From the little red boat that sowed the seeds of revolution, to the majestic giant ship that steered the great cause of rejuvenation, the Communist Party of China has united the nation and led the people to create development achievements that "Surprise the World" in the course of its century of struggle, leaving behind precious experience and spiritual wealth.

Standing on the precipice of an exciting new starting point towards the second centenary goal, China Southern bravely undertakes the mission of the times, inherits the "red" gene, and leads the majority of cadres and employees to learn history to understand rationale; learn history to increase trust; learn history to honor morality; learn history to practice; draw forward strength from a century of party history and transform that people power into concrete actions that can overcome and challenge and lead businesses, like China Southern Airlines in building a world-class air transport enterprise with global competitiveness.

China Southern won the Outstanding Organization Award in the finals of the "National Party History Knowledge Contest" jointly organized by the Party History Learning and Education Official Website and People's Daily Online



Learn, Think, Practice and Comprehend to Build Consensus

Learning and Sharing - Members of the Central Propaganda Group were twice invited to give special lectures as the central group of the party group carried out numerous concentrated study seminars and the central group of party committees at all levels carried out more than 600 special studies.

Learning "July 1 Speech" - The party committee and the center group of party were organized to study the spirit of the "July 1st" important speech and more than 1,000 sessions of various thematic study, symposiums and lectures were held to share study materials that spanned each branch and every party member.

Themed Activities - Held a symposium to celebrate the 100th Anniversary of the founding of the party, and led party members and cadres to strengthen their beliefs; carried out the "Party Flag flutters for a hundred years, Party History Recalls Profound Years" micro-party class competition, and held live online singing performances; walking to learn the party history; calligraphy as well as a painting and photography exhibition with more than 35,000 employees participating.

Carry Forward the Spirit - Serving the People

Created "red route" products - Optimized the routes and flights of Jinggangshan, Yan'an, Nanchang, Ganzhou, Zunyi, Linyi and other "red" cities that share the revolution footprint; launched "Red Tour" themed products and carried out themed activities such as "Check-in Red Footprints" to provide passengers with new opportunities to learn key educational perceptions.

Implementing "I do Practical Things for the Masses" - In response to the common needs and challenges every citizen of China, some 21 key livelihood projects were offered such as expanding the coverage of China Southern's award-winning On Demand Dining in-flight meal selection as well as marketing the airline's "green flight" brand products that directly benefit more than 42 million passengers, and solving the urgent problems of 19.172million passengers with package and the long-awaited problem of more than 568,000 employees.

Working Hard - Inheriting the Glory

Between Years 1921 to 2021, generations of Chinese Communists have overcome significant difficulties and forged ahead, opening up the great cause of socialism with Chinese characteristics. Between Years 1995 to 2021, every staff member of China Southern worked tirelessly, contributing wisdom and strength to the high-quality development of China Southern.



Zhu Deci
42 year party member

As "the first person in the capital operation of China Southern", this 100-year-old hero worked hard for the development of China Southern, the civil aviation industry and the cause of Communism until he was nearly 80 years old.



Liu Yuhui
23 year party member

As the winner of the "National May 1st Labor Medal", Liu developed the first "aircraft remote diagnosis and real-time tracking system" in China's civil aviation industry, providing technical support for the flight safety of civil aviation aircraft.



Feng Yunwu
50 year party member

During Year 1983, as the navigator and the crew, he calmly handled challenges as they emerged and worked tirelessly to ensure the safety of all passengers. The crew was awarded the title of "Heroic Crew of Chinese Civil Aviation".



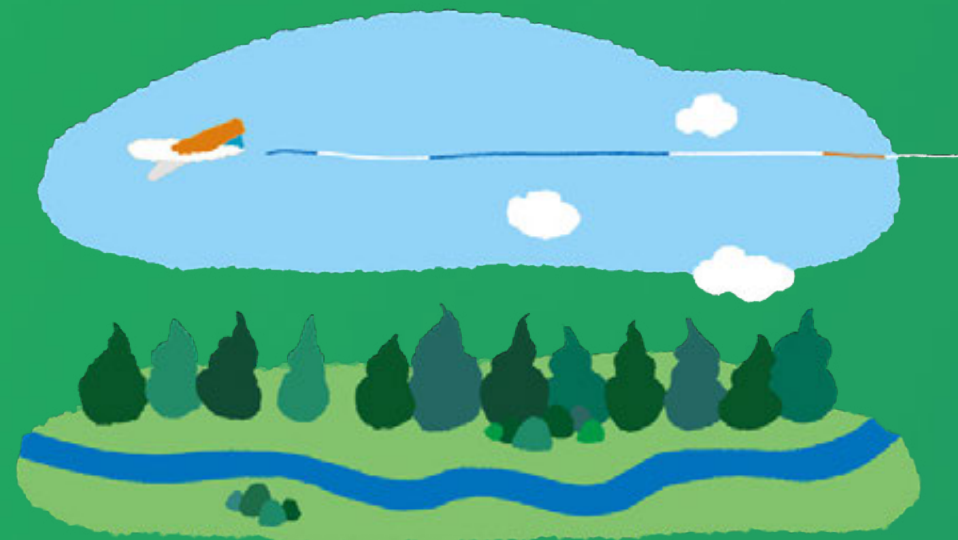
Tang Huizhong
13 year party member

During the continuous rescue and treatment of children with broken arms in Hotan, Xinjiang, Tang contacted the airport as soon as possible to apply for the aircraft to be returned to the gate which opened a "door of hope" for the treatment of this young boy with a broken arm.

FOCUS
2021

Green Flying Towards the "Dual Carbon" Era

Achieving peaking carbon dioxide emission and carbon neutrality is a major strategic decision made by the Party Central Committee with Comrade Xi Jinping at its core after careful consideration. It is related to the sustainable development of the Chinese nation and the building of a community with a shared future for mankind. In order to help achieve peaking carbon dioxide emission and carbon neutrality and build a beautiful China, China Southern integrated green development into the entire process of its ground handling and flight operations - starting from aircraft energy saving and carbon reduction, reducing ground energy consumption, and green travel for passengers. The green development model from air to ground, from on-site to off-site, and from operation to management to push forward green development to reach the domestic leading level and the international First Class.



Drawing the "Dual Carbon" Blueprint

During the "14th Five-Year Plan" period, China Southern actively:

-Responded to the requirements of the national "Peaking Carbon Dioxide Emission Action Plan before 2030"

-Compiled the "China Southern Group Peaking Carbon Dioxide Emission and Carbon Neutrality Target and Achievement Path Report"

-Improved the green operation and management standard system, optimized aircraft weight reduction and fuel saving measures

-Strengthened the reserve of environmental protection and energy saving technology, and

-Promoted the utilization of recyclable resources and the application of clean energy, continued to reduce fuel consumption per ton-kilometer and carbon emissions, implemented green and low-carbon actions in transportation through actions in seven major areas

The fuel consumption per ton-kilometer maintains the best level of the three major airlines, leading the low-carbon development of the aviation industry.

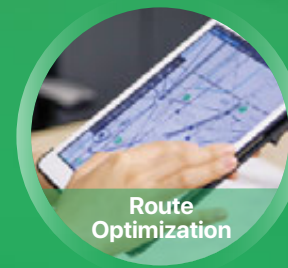
China Southern's Carbon Neutral Action Principles

Aiming at peaking carbon dioxide emission, taking overall consideration to reduce energy consumption
Steady neutralization to boost the high-quality development of China Southern
Green operation, leading the low-carbon development of the aviation industry



Promoting "Dual Carbon" Practice

Aircraft Energy Saving and Carbon Reduction



Route Optimization

Adjusting the route direction - China Southern Airlines optimized the direction of air routes in the direction of Sanya and adjusted the use of land routes as main routes and sea routes as backup routes which also included optimizing air routes in combination with airspace adjustments in the southwest region and added Shenzhen-Nairobi, Pudong-New York City routes to save voyage distance that would reduce flight time and fuel consumption.

- The accumulated flight distance saved about **6.67** million kilometers
- Flight time saved **1,026** minutes
- Fuel consumption reduced by **3,077** tons

Establishing an Optimization Mechanism - Company officials sorted out airspace rules and practiced the shortest route optimization mechanism as well as civil aviation cost rules and established a minimum airspace cost optimization mechanism; Completed mathematical modeling, established an airway optimization model and operation process based on airspace rules and operating costs, and reduced ineffective fuel consumption.

Dynamically Adjusting the Center of Gravity - Evaluated the actual impact of adjusting the cruise center of gravity parameters on flight, formulated a dynamic adjustment plan for the cruise center of gravity and improved flight performance by optimizing the cruise center of gravity.

- Fuel saved about **1,200** tons



Jet Fuel Management

Developing "Fuel e-Cloud" - Developed the aviation fuel big data management application platform "Jet Fuel e-Cloud", integrated flight refueling data through the Internet of Things technology, realized management standardization and value creation, promoted the intelligent transformation of the aviation fuel refueling industry, and provided big data support for scientific decision-making.

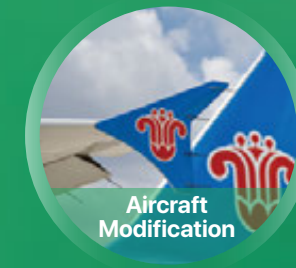
- **17%** savings in flight refueling time

Promoting Digital Fuel Economy. - Developed a fuel-saving big data platform and pilot EFB fuel-saving assistant, and refined the management precision to every flight and every fuel-saving application through digitization; innovated the fuel-saving technology of the whole operation chain, implemented single-engine slide-in, fuel-saving wheel release, 19 innovative fuel saving points including cruising altitude.

- Innovated the fuel-saving technology of the whole operation chain, saving about **83,000** tons of jet fuel in total

Strengthening High-Level Management and Control. For international long-haul routes, the actual wind temperature was considered. For short-haul routes, by referring to the QAR historical flight data, the route altitude information fed back by dispatchers and pilots was analyzed daily, and the deviation between the planned altitude and the actual altitude of the flight route was monitored monthly to determine the optimal flight altitude.

- Average cruising altitude increased by approximately **846** feet
- The total fuel saving is **32,800** tons



Aircraft Modification

Reducing Aircraft Weight - Lightweight equipment such as thin seats and dining cars were used for wire installation and modification. Lightweight carbon brakes were used for new aircraft. The idle coffee machine was removed from the aircraft, and paperless operation in the cockpit was fully implemented to "reduce the burden" of aircraft, improve fuel economy and save flight costs.

- Fleet weight reduction of **22** tons
- **2,227** tons of fuel saved every year

Improving Flight Performance - Wire-mounted and modified winglets can reduce aircraft resistance and fuel consumption; performed engine modification to improve engine performance; monitored Boeing B777F engine performance degradation in real time and actively performed aircraft engine water washing to effectively reduce aircraft fuel consumption.

Reducing Floor Energy Consumption



Use of New Energy Vehicles - In accordance with the annual review requirements of the Airfield Management Department of Baiyun Airport and the Traffic Management Detachment of Baiyun Airport Public Security Bureau and the requirements of the "blue sky defense" document, the vehicles with emissions below the national level 3 were scrapped and new energy vehicles were purchased to replace non-new energy vehicles to improve clean energy use ratio.

- Purchased **219** new energy vehicles

APU Management. Monitored the startup status and fuel consumption of APU (auxiliary power unit), formulated APU usage specifications, strengthened the use of ground power supply, air conditioners and other equipment, regulated the improper operation behavior of flight and maintenance personnel, and further reduced APU use time and aircraft fuel consumption.

Green Travel for Tourists

In the four major links of ticket purchase, travel, boarding and after travel, China Southern provided passengers with a green and low-carbon full journey experience and called on passengers to do their part to protect the earth.



Launched the "China Southern e-Travel" one-stop service platform - Spanning more than 300 travel nodes including ticket booking, payment, check-in, security check and flight boarding and promoted online processing of electronic invoices to realize the "paperless" process of passenger travel.

- Accumulated **15** million person-times participating in "green full journey" services such as paperless boarding and electronic invoice processing

Launched Meal Carbon Labeling Project - Carried out carbon footprint analysis for Economy Class meals and obtained third-party carbon label certification, provided passengers with low-carbon meal choices, and guided and led passengers to practice carbon reduction with actions.

- A total of **1.4** million electronic invoices have been issued

Advocating Green Flight "On Demand Dining" - Passengers can choose not to dine in advance through the China Southern Airlines APP, WeChat, customer service hotline and other channels six hours before travel, and in return earn a specific China Southern Sky Pearl Club FFP mileage reward.

- Cumulatively, more than **3.71** million passengers participated in the green flight "On Demand Dining" service
- That saved more than **1,762** tons of meals

Meeting the Realization of "Dual Carbon"

China Southern is the first airline in China's civil aviation industry to begin "dual carbon" research as Company directors moved quickly to market the "plastic restriction order" of civil aviation.

The Company was also the first airline to:

- Self-develop a domestic aviation fuel big data management system
- The first to carry out bio-jet fuel research and development projects
- The first to innovative a practical jet fuel saving management model, and
- The first to develop an intelligent monitoring system for on-site vehicles

The Company's annual comprehensive energy consumption is 8,963,974 tons of standard coal and the comprehensive energy consumption per 10,000 yuan of income is 0.8726 tons of standard coal per 10,000 yuan

Honors

Successfully achieved NDRC's "13th Five-Year" target on "double control" of energy consumption total and intensity as well as the assessment target of "100" key energy-consuming units' energy-saving target.

"Green Flight" On-Demand Dining Meal Service

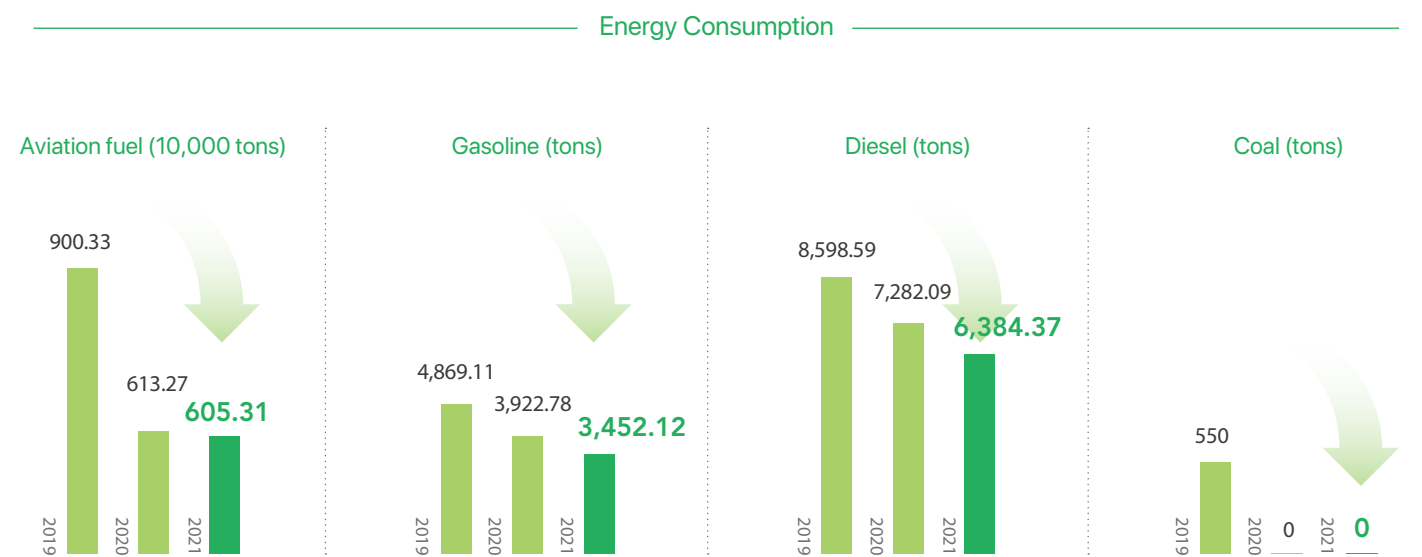
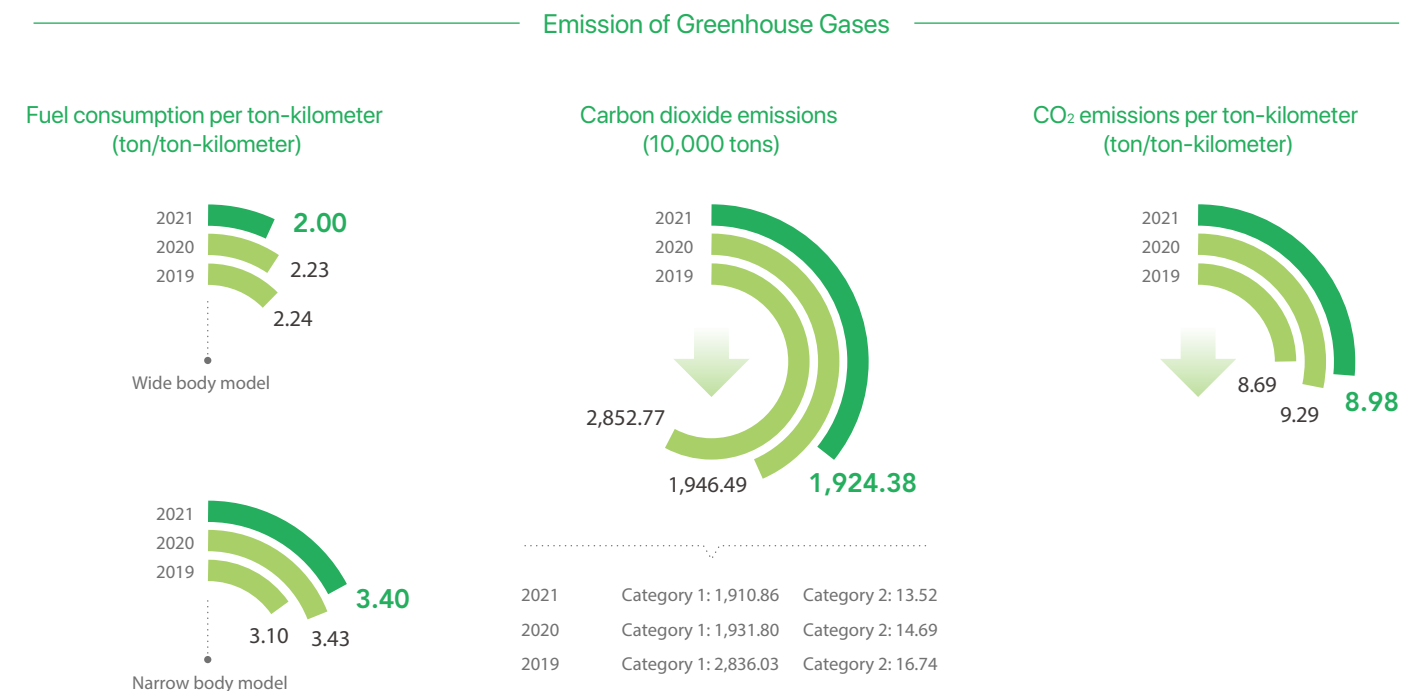
Won the Champion Award of the first "Golden Key - SDG-oriented China Action"

Included as a model for creating a low-carbon "source" in the "Action to the Future - The Golden Key Shaping Chinese Enterprises' Low-Carbon Action Leadership Report" and released this program to the world at China Enterprise Pavilion 2019 at the 26th Conference of the Parties (COP26) of the United Nations Framework Convention on Climate Change

Selected as the "Carbon Neutrality Typical Case" of the 2nd Green Economy Development Forum 2021 co-hosted by People's Daily Online, China Environmental Protection Federation and the Publicity and Education Center of the Ministry of Ecology and Environment

Awarded the "Environmental Airline of the Year" by "China Civil Aviation" magazine, maintaining a leading position in China's civil aviation industry, and

Won the "Annual Quality Service Airline" by the Beijing News



FOCUS
2021

Digital Transformation Enabled High-Quality Development

In response to the call for accelerating the development of the digital economy during the "14th Five-Year Plan", China Southern has continued to explore diversified digital paths, gradually marketing the construction of a digital management and control system and regarded "strongly promoting digital transformation" as one of the seven tough battles during Year 2021 to comprehensively enhance its competitiveness, to drive comprehensive changes in management, technology, services and products through digital transformation, and supported the construction of a world-class air transport enterprise.

Earned the "2020 Digital Honorary Pioneer of Government Affairs and People's Livelihood"

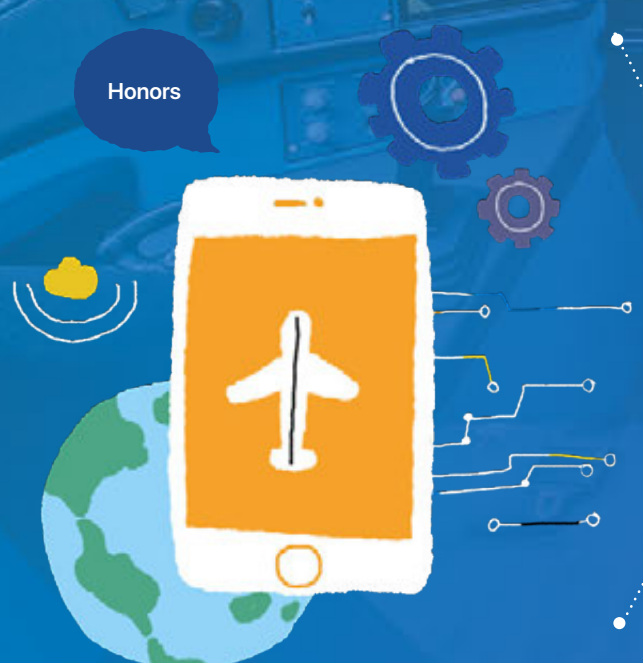
Won the DAMA2021 Data Governance Best Practice Award

Digital transformation work won IDC "2021 Digital Transformation Future Enterprise Award"

One-stop information service platform won the 2021 "Jointly Build a Community of Shared Future in Cyberspace" Excellent Case Award

The one-stop information service platform won the "Top Ten Achievements of Enterprise Digital Transformation in 2021" at the First Central Enterprise Digital Transformation Summit

Honors



"BNS-based airport vehicle personnel dispatching system, optimizing resource allocation and improving management efficiency" was rated as "Typical Case of Digital Transformation of State-owned Enterprises" by the State-owned Assets Supervision and Administration Commission

China Southern's "Internet of Things Global Container Management and Control Platform System" won the "Silver Award for Innovative Application of Satellite Navigation and Positioning Science and Technology" issued by China Satellite Navigation and Positioning Association

The official website of China Southern Airlines has passed the assessment of the Ministry of Industry and Information Technology of the People's Republic of China and has become the first website to pass the assessment of aging-friendly and barrier-free renovations

Developing a Digital Path to Practice

China Southern senior managers insist on innovative development, constantly exploring digital transformation as an important path to achieve high-quality development, carried out top-level design for digital transformation, striving for the goal of building a world-class air transport enterprise.

Promoted the construction of "three networks" and "four modernizations" to help China Southern Airlines develop with high quality

Built a social Internet that continuously interacts with customers around touch points, built a consumer Internet that creates value for customers around products and services, and built a win-win industrial Internet around internal operating units and external ecological partners; Strengthened the deep integration of new generation information technology and business and realized digital customers, digital employees, digital processes, and digital companies

Built a new IT architecture, implemented the EA methodology, and promoted the deep integration of technology and business

Continued to strengthen IT infrastructure, network security and computing power support; introduced enterprise architecture (EA) methodology, strengthened the integration from intelligent vision planning, business architecture design, technical architecture specification to project implementation, and led the architecture to layered construction and service-oriented and consistent user experience development

Relied on the new IT architecture, creating new capabilities to quickly respond to business changes

Based on the new generation IT architecture planning of "one cloud (China Southern Airlines Cloud) + one data center (China Southern Airlines Data Center) + two middle stations (data middle station, business middle station) + N front-end applications based on new IT architecture", realized resource sharing and capability platformization

Adept in Using the Cloud and Data to Empower Wisdom

China Southern insisted on innovative development, constantly explored digital transformation as an important path to achieve high-quality development, carried out top-level design for digital transformation, moved towards the goal of building a world-class air transport enterprise. China Southern has continued to improve its information management system, strengthened its digital management and control capabilities, carried out "Cloud T" digital talent training, steadily promoted the cloud-based use of data and empowered intelligence, comprehensively improved digital management and control and injected new momentum into digital transformation.

Strategic Leadership

Improved organizational structure and mechanism construction and enhanced digital awareness and capabilities

Adopting the first-in-command responsibility system, China Southern's senior managers took the lead personally and set up the enterprise structure and process management committee at the Headquarters, set up the scientific and technological information and process management department, strengthened the top-level design and overall management of digital construction; coordinated processes, IT and data to promote business transformation and upgrading; With the help of the "Cloud T" digital talent training project, cultivated compound talents who understand both business and technology

Management Assurance

Business Innovation

Accelerated industrial digitalization, built up the China Southern Airlines ecosystem, and explored business model changes

With the help of a new generation of information technology, promoted the transformation of passenger transport to a modern service integrator and freight transport to a modern logistics integrator; opened up the upstream and downstream industrial ecology, build a platform for China Southern's ecological circle, established a supply chain system around the whole process of passenger travel, connected high-quality partners, and provided passengers with one-stop comprehensive solutions and promoted business model changes

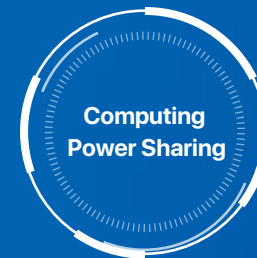
Technical Support

Skill Building

Cultivating Digital Talents

The "Cloud T" digital talent training project took China Southern Airlines Pearl Innovation Studio as the carrier, and through innovative management methods, it continued to build a digital talent team to realize the "Five Ones": a new talent training model, a group of combined talents that understand both business and IT, a unified set of enterprise architecture method and language, a set of enterprise architecture assets and enterprise architecture governance system, and a batch of value creation and subject research projects helping China Southern digital transformation and intelligent transformation.

Going to the Cloud and Empowering Wisdom with Numbers



Complying with the national development concept of "new infrastructure" and based on the hybrid cloud strategy, China Southern has steadily promoted the cloudification of its information systems and the rate of resource cloudification has reached 66%. By introducing a multi-cloud management platform, China Southern Airlines' technicians applied cloud-native technologies, optimized operation management process, improved the efficiency of R&D, deployment and operation as well as the agility of the system which fully supported the digital transformation of China Southern.



China Southern Data Center has covered data from 16 data domains and more than 131 systems, with a storage capacity of 1,200T and has provided 159 services, 444 indicators, and 540 tag data services. With the help of data collection and application to feed back the business, the level of production intelligence was further improved and a virtuous circle came into being. In terms of technology, the authority of data middle-stage analysis tools was opened to all employees to satisfy the self-construction of data models and reports, so that the flow of data created value, offering a new impetus for internal innovation.



With the help of a new generation of information technology, applications such as block chain mileage points, real-time vehicle tracking in the field, augmented reality intelligently assisted maintenance and other applications were realized. Using sensor technology, Internet of Things technology, 5G network technology, cloud computing, big data analysis, AI and edge new technologies such as computing, we have created comprehensive solutions such as smart operation, smart factories and smart cargo stations empowering front-line production which greatly improved labor productivity.

Improving the Quality of Development

From the perspective of customers, China Southern created a safe, punctual, caring and green air travel experience for passengers through digital transformation.



Ensuring Aviation Safety with Digitalization

Through the development and application of digital technology in key links, precise training, fine management, and lean flight were realized. At present, China Southern has continuously guaranteed flight safety for 266 months and air defense safety for 331 months. The safety level continued to maintain a leading position in China's civil aviation industry.

Improving Operational Efficiency with Digitalization

Created a unified operation command information platform to continuously improve operation efficiency. China Southern's flight punctuality rate has been among the best among major domestic airlines for six consecutive years. In 2021, the flight punctuality rate reached 89.89%, 1.9 percentage points higher than the industry average.

Improving Service Quality through Digitalization

Created a one-stop service platform for the whole process of "China Southern e-Travel", covering more than 300 service points, to achieve "one machine in hand, worry-free throughout the process". The "China Southern e-Travel" APP has been downloaded and activated more than 77.77 million times with more than 3.32 million monthly active users, ranked first among Chinese airlines. "China Southern e-Travel" was displayed on site at the 2021 World Internet Conference as a boutique case.

Promoting Green Development with Digitization

The first in-flight On Demand Dining meal service of "green flight"; the first domestic airline company to independently develop the aviation fuel big data management system and rated as an advanced unit in the three-year action of "Winning the Blue Sky Defense War" by the Civil Aviation Administration; Winning the champion award of the first Golden Key - China Action for SDG (Sustainable Development Goals)".

Fighting the COVID-19 Pandemic with Digital Support

Realized all-round digital management and control such as "real-time location tracking, multi-temperature control", and delivered 130 million doses of China-made COVID-19 vaccines to 16 international countries and 20 domestic cities; launched one-stop ticket purchase services at an international venue and created and delivered omni-channel ticketing quick refunds and changes which have greatly eased the travel troubles caused by the uncertainty of the pandemic.



FOCUS
2021

The "Lifeline" in the Anti-Pandemic Escort Aviation

During Year 2021, the spread of the COVID-19 plague surged around the world as the domestic pandemic situation was intertwined and superimposed by sporadic and local clustered outbreaks. On the basis of summarizing the effective experience of pandemic prevention and control during 2021, China Southern senior directors paid close attention to various prevention and control measures, and adhered to "taking all vaccinations as needed", strictly implemented the strategy of "defense of overseas input, defense of domestic rebound and personal defense", did a good job in employee self-protection and passenger service management, built a solid air defense line, and went all out in fighting the COVID-19 scourge.



Preventing International Import

During Year 2021, China Southern organized a special rectification team for preventing the import of overseas pandemics, general manager of the Company serving as the team leader.

The team consisted of four special classes for inbound crews, inbound passengers, inbound cargo and inbound aviation waste. We established a three-level supervision and inspection mechanism of post-supervision, department inspection, and unit inspection, and comprehensively rectified all aspects of the Company's prevention of overseas input, eliminated hidden risks, ensured that protective measures were in place, and guaranteed the safe travel of passengers.

Preventing Domestic COVID-19 Proliferation

Since May 2021, local COVID-19 pandemic has rebounded in many parts of the country and the domestic medium and high-risk areas have been continuously updated, sounding the alarm for pandemic prevention and control. China Southern directors acted quickly and made careful arrangements to prevent and control outbreaks of COVID-19 and comprehensively upgraded pandemic prevention and control measures to ensure the safety and health of all passengers and employees.

Employee Safety

Focusing on Key Population Groups - Company officials formulated differentiated COVID-19 prevention and control measures for key groups such as crew members, flight attendants, ground service personnel and freight transporters and provided detailed protection guidelines for employees in different positions; carried out pandemic prevention and control training for all employees and strengthened the supervision and inspection of key units, key positions and key links ... and effectively achieved an effective closed-loop management scheme.

Line of Defense Against Pandemic - Encouraged employees to take all vaccination needed. During Year 2021, 89,599 people were vaccinated against COVID-19 as the vaccination rate reached 99.96% (except for contraindications). The vaccination rate of on-the-job staff and aircrews in high, medium and low-risk positions reached 100%; strictly implemented nucleic acid screening and carried out nucleic acid testing for airline employees in different positions in accordance with the requirements of the Civil Aviation Administration and local pandemic prevention departments.



Passenger Health

Boarding Service

The Company took preventive measures including the use of non-contact temperature detection equipment to conduct temperature detection of all departing passengers, disinfecting passengers' hands, and required all passengers to complete health declaration cards to minimize the risk of spreading COVID-19 via air travel.

Cabin Service

Additional hygiene and anti-pandemic kits were provided, and each flight was equipped with N95 masks, disposable surgical masks, hand sanitizers and other anti-pandemic materials; flights in key domestic control areas were required to be disinfected after short-term stops and connecting flights, and other domestic flights were subject to post-flight disinfection.

Medical Support

All aviation doctors stayed at the front line of anti-pandemic measures and assigned medical professionals to the Company's AOC seats to deal with the information of passengers with fevers on any given flight in a timely manner, and designated specialized aviation doctors to provide 24-hour online health consultation and medical advice for sick passengers.

Maintaining "zero infection" for passengers on all international and domestic China Southern Airlines flights



Provided hand sanitizers for all passengers

Assisting the Global Fight against COVID-19

Facing the dire challenges of the international pandemic, China Southern actively responded to the clarion call of the state, supporting the global fight against the pandemic and created the "China Southern Vaccine Safe Delivery" procedures to help China's COVID-19 vaccine be delivered to the world safely and quickly.

Actively participated in the nation's clarion call to build a global community with a shared future for mankind and delivered three categories of COVID-19 vaccines to

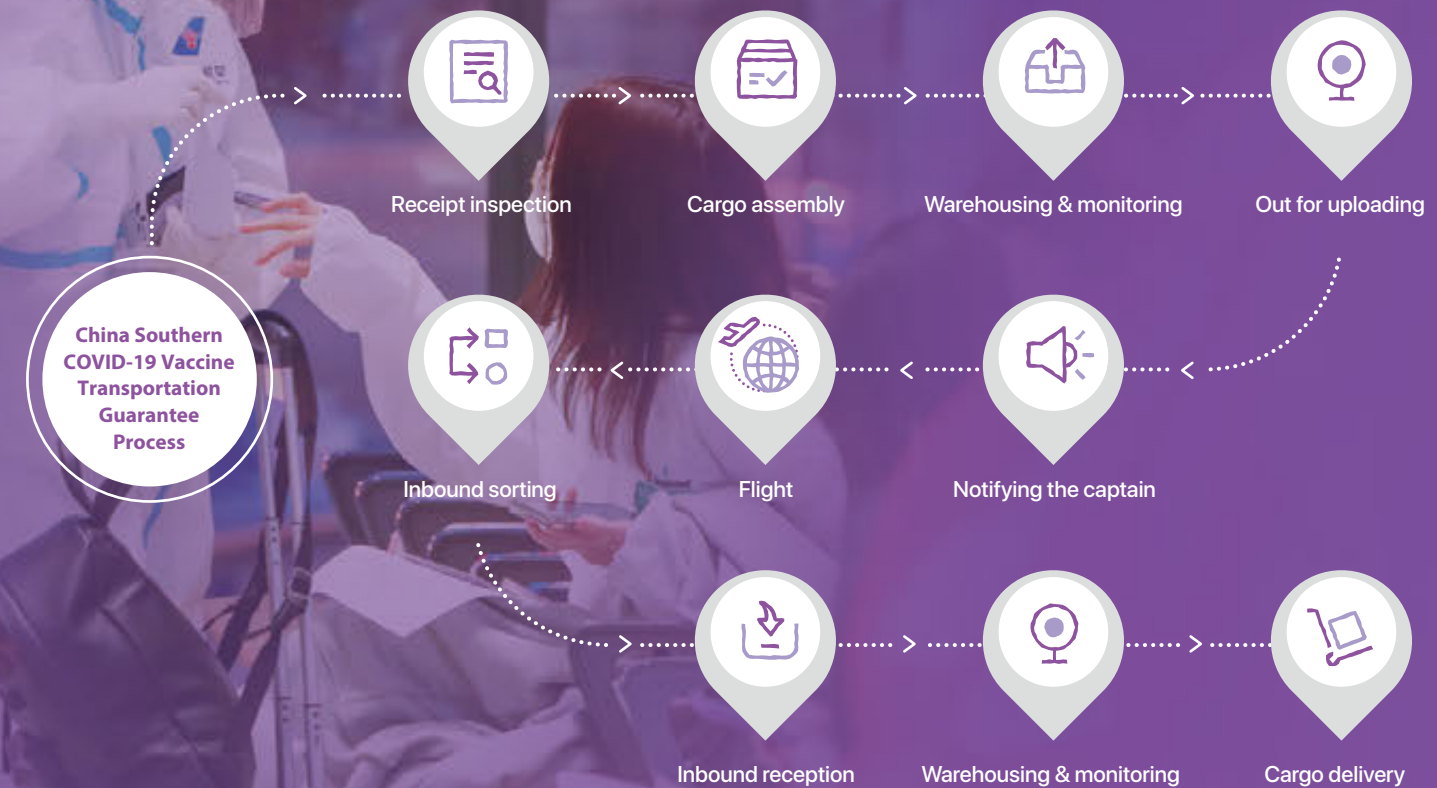
16 international countries including Cambodia, Tajikistan, Ukraine and Serbia as well as **20** domestic cities.

The transportation volume of the COVID-19 vaccine exceeded **130** million doses, ranking first in China's civil aviation.

Actively participated in "COVAX" - the implementation plan of dispersing COVID-19 vaccines and served international organizations such as UNICEF as part of its Corporate Social Responsibility service.

Vigorously developed aviation logistics, relying on the largest Boeing B777 freighter fleet in China; completed

19 intercontinental freight routes, organized **7,023** passenger-to-cargo flights and made significant efforts to ensure the safety and stability of the national industrial supply chain.





Case | The First Charter Flight of China's Civil Aviation of COVID-19 Vaccines in North Macedonia

On June 27, China Southern Airlines flights CZ8083 and CZ5077, carrying 500,000 doses of Sinovac's COVID-19 vaccine, departed from Beijing Daxing International Airport to Skopje, the capital of the Republic of North Macedonia.

This marked the first time that Chinese civil aviation has carried COVID-19 vaccines to a non-navigable point in Europe. In order to successfully complete this chartered transport of the COVID-19 vaccine in North Macedonia, China Southern established a special transport working group, and formulated work checklists and emergency plans for many links including vaccine packaging, security check entry, cold storage, outbound installation, and destination station unloading. Concurrently, a smooth communication channel with the North Macedonian government, vaccine manufacturers and logistics operators was established, a "housekeeper-style" tracking and service guarantee was tailored to ensure the safe escort of China's COVID-19 vaccines.



| Heart-Warming Anti-Pandemic

Love Prevails - In light of numerous changes in the COVID-19 pandemic, China Southern directors actively optimized and adjusted its flight services and encouraged employees to actively participate in the "Anti-Pandemic Escort" volunteer service action to share personal time with passengers and related personnel during the normalization of the pandemic.

Swift Delivery of Pandemic Prevention Policies

The Company utilized news announcements, online ticketing flow reminders, online smart Q&A, text messages and other social media methods to immediately convey its pandemic prevention and control policies to passengers, guiding the completion of refund and modification operations such as air tickets, products and services, and reduced passenger complaints and the risk of unused seats to ensure smooth travel for passengers.

More than **200,000** notifications SMS related to the pandemic and prevention and control policies were transmitted

Online customer service pandemic-related Q&A presented more than **900,000** times



Scan to watch the video "Behind the Isolation Crew, It is the Mission of the Aviation Service Personnel"

The video views exceeded **639,000** times

Thumb-ups more than **19,000** times

Successful Completion of Isolation Crew Service

In order to ensure the orderly and safe management of COVID-19 pandemic prevention and control of crew members, the Company conscientiously implemented a centralized isolation of aircrews and the management of home health monitoring. Meal arrangements were adjusted monthly and "box lunch quality" isolated meals and healthy light meals were introduced to meet the crew's dietary needs.

For staff units that were isolated due to the COVID-19 pandemic, the Company provided conducted video centralized "one-on-one" communication and heart-to-heart chats so that isolation from other people did not mean separation from love and the psychological challenges of isolation.

During Year 2021, China Southern quarantined more than 67,000 aircrews with the longest personal quarantine period lasting 293 days.

"Anti-pandemic Escort" Volunteer Service Action

Organized and mobilized young volunteers to fully support on-site guidance, code scanning assistance and order maintenance at nucleic acid testing points such as Guangzhou Baiyun International Airport.



"Anti- Pandemic Escort" Volunteer Service Action
A total of **6,210** volunteers participated

Serving **585** nucleic acid tests

Serving more than **1.5** million people

The total volunteer service time exceeded **30,000** hours

Building a Strong Line of Defense - Setting Sail for a Safe Future

01



Contributed to the achievement of the UN 2030 Sustainable Development Goals



Safety is the lifeblood of the civil aviation industry. China Southern Airline has always taken ensuring aviation safety as its primary task of practicing "aviation of the people and for the people", and made every effort to ensure the safety of every passenger; the health and safety of all employees and guarantee the safe situation is stable and controllable as it continues to maintain the best airline safety record in China.

Consolidating Safety Management

China Southern senior managers continued to tackle the tough safety battles of “strengthening the system, keeping strict work style, and controlling risks” by continuously deepening the three-year special rectification of safety production, further promoting the construction of seven major safety systems, consolidating the safety foundation, and preventing and controlling safety risks so as to create a good safety culture atmosphere and fundamentally improve safety management and control capabilities. During 2021, China Southern had no production safety incidents.

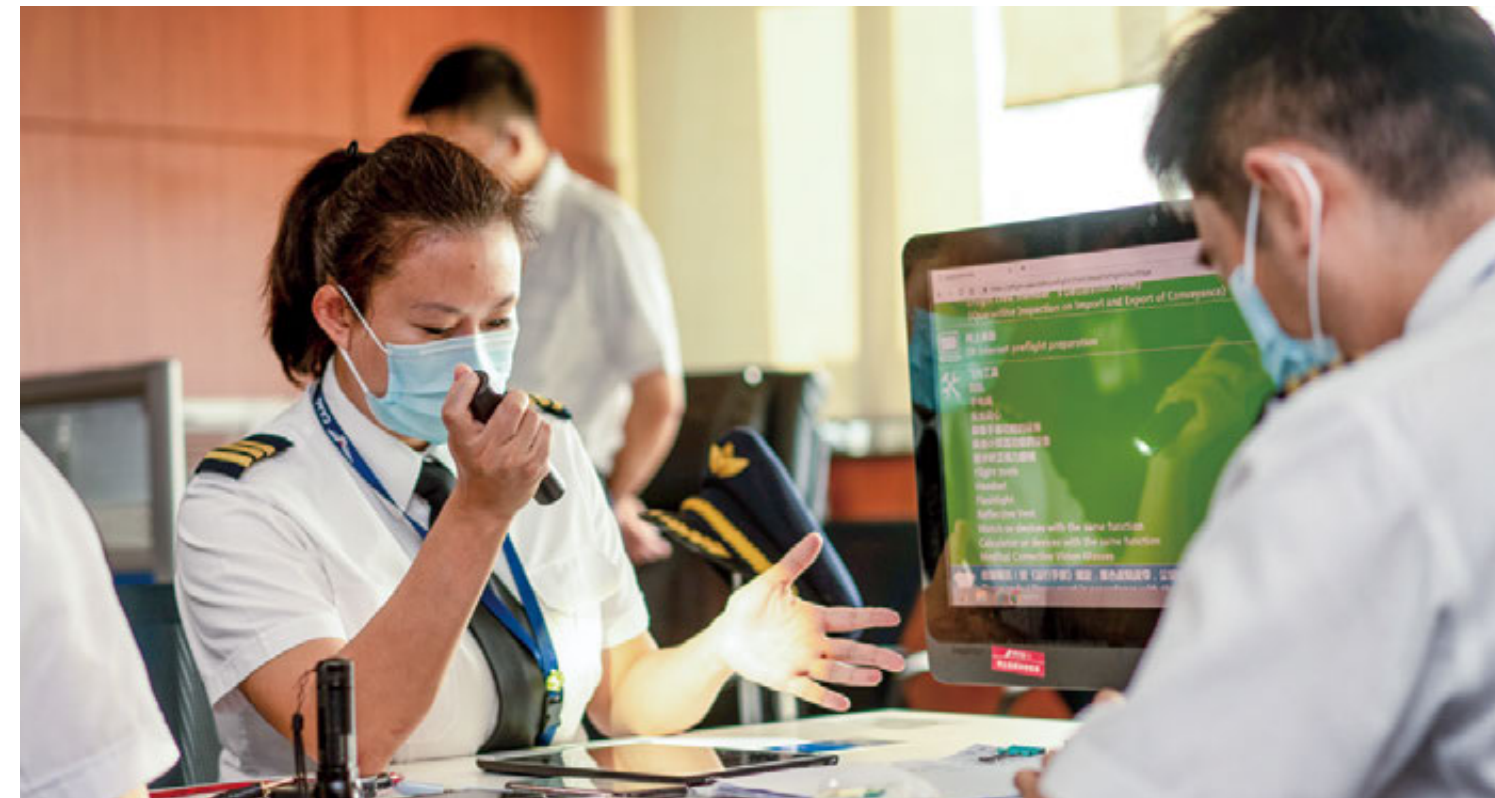
Safety System Construction

Deepening the Construction of Seven Major Safety Systems

The Company adhered to its tried-and-true system concepts and focused on safety with rules and manuals, drills and training, process control, risk management and control, safety culture, and technological innovation as the core, to further the transformation of safety management to institutionalization, structure, systemization, and informatization, and continuously improved its safety levels of modernization of governance systems and governance capabilities.

Serious Safety Responsibilities

The Company further clarified the main responsibilities, leadership, supervisory and post responsibilities; revised, improved and implemented the main responsibilities list and its post responsibilities list to ensure that safety responsibilities were not in vain and not virtual, and can easily be implemented.



Construction of Style and Discipline

Promoting Safety Culture

The Company launched the "Three Awes" and safety culture presentations to promote the “Three Awes” to be deeply rooted in the hearts of the people and achieve positive results; comprehensively used cultural publicity, special lectures, online micro-classes and other social media means to effectively strengthen safety education; formulated and applied “four forms of comprehensive and strict public security” and continued to strengthen the construction of its work culture.

Strengthening Aircrew

Ideological and political construction helped to improve the professional team's work style and behavior norms as Company officials built a systematic and efficient ideological and political work system for the air crew, and carried out the "Year of Consolidating the Ideological and Political Work of the Air Crew".

Implementing Quantitative Management Style

China Southern Airlines' officials strengthened QAR data application, cabin sound monitoring, route safety assessment, remote video monitoring and other means to further the corporate work culture and stove to make work challenges "visible and manageable".

Security Risk Management

Tackling Key Points of Safety

The Company stayed with its "zero tolerance" policies to look out for potential safety hazards, continued to promote "zero potential problems"; dynamically updated and controlled the “two lists” and revised and improved system regulations and procedures including the launch of the “Hundred Days Action” campaign to ensure a stable security environment.

Improving System Risk Management and Control Capabilities

The Company implemented a dual prevention mechanism of safety risk classification management and control and hidden danger investigation and management which added to joint risk prevention and control and improved the ESMS (safety management system)

platform and emergency plans which included the full use of the i-ORCS risk management and control system which connected the professional risk management and control functions of each unit and managed and controlled complex cross-unit risks.

Practicing the Original Intention and Doing Good Works

SPECIAL PLAN

Promoting the I-CARE Voluntary Reporting System

China Southern's I-CARE (Information Confidential Report) voluntary reporting system collected voluntary reports from grassroots employees on hazards, potential safety hazards and safety risks. The purpose was to call on all China Southern staff and management around the world to care about safety and encouraged all employees to participate in the Company's safety management schemes to sort out varied challenges, investigate potential safety hazards and alleviate safety risks. During Year 2021, China Southern promoted the I-CARE system, practiced the mass line of safety work, listened to the voices of the masses and responded to their concerns as it continuously optimized the user experience. This, combined with the activity of “I offer my true words for safety”, based on more than 28,000 reports collected ... more than 170 manuals, systems and procedures were revised, 51 issues of safety warnings were issued, and seven technical renovations were initiated to effectively solve the safety issues concerned by employees and improved safety levels to creating a cultural culture of “active management, full participation, team mutual assistance, and continuous improvement”.

- Revised more than **170** items of manuals, systems and procedures
- Issued **51** safety warnings
- initiated **7** technical reforms

Adhering to Aviation Safety

China Southern established a long-term safety mechanism covering all aspects of flight, maintenance, operation control and even technological innovation and practically implemented the management of safety risk prevention and failure in every link of each flight to ensure flight safety and air defense safety and guarantee the safety situation in the fields of dangerous goods and public health.

This high safety level continued to maintain a leadership position in China's civil aviation.



Note: The statistical scope of accumulated safe flight time did not include Xiamen Airlines and non-China Southern Airlines holding subsidiaries.



Aircrew Management

China Southern has continuously strengthened the management of aircrews from the aspects of capability improvement training, promotion of safety performance management of fatigue risk, to improve safety awareness and safe aircrew operation levels.

Competence Building

- The Company was the first in China to:
- Carry out EBT pilot work
 - Explored CRM (crew resource management) courses for key inflight personnel, operation control, maintenance and other key positions
 - Carried out "Flight Lecture" training to improve the qualifications and capabilities of flight personnel
 - Organized seasonal learning seminars and complex state recovery training to improve aviation safety
 - Fully utilized online training, VR training and practical drills to carry out special training on hatch door controls, and
 - The proper use of emergency equipment to improve on-board safety operations and emergency response capabilities



Case | The Largest Air Crew Training Center in Northwest China was Placed into Operation

On February 4, 2021, the largest comprehensive aircrew training center in Northwest China - China Southern Xinjiang Aircrew Training Center - was officially opened. As one of the three major training bases of China Southern, Xinjiang Air Service Training Center was mainly responsible for flight attendant training, daily air security training and regular recurrent training.

More than 20,000 hours of practical training and recurrent training was guaranteed throughout the year to meet the training needs of local airline pilots, flight attendants, air police and safety officers in emergency survival, air security, and cabin simulation exercises.





Case : The First Cabin VR Multi-Person Collaborative Training System in China

In order to effectively improve the emergency response and decision-making response capabilities of front-line personnel, China Southern Airlines has innovatively applied VR technology to the aviation field.

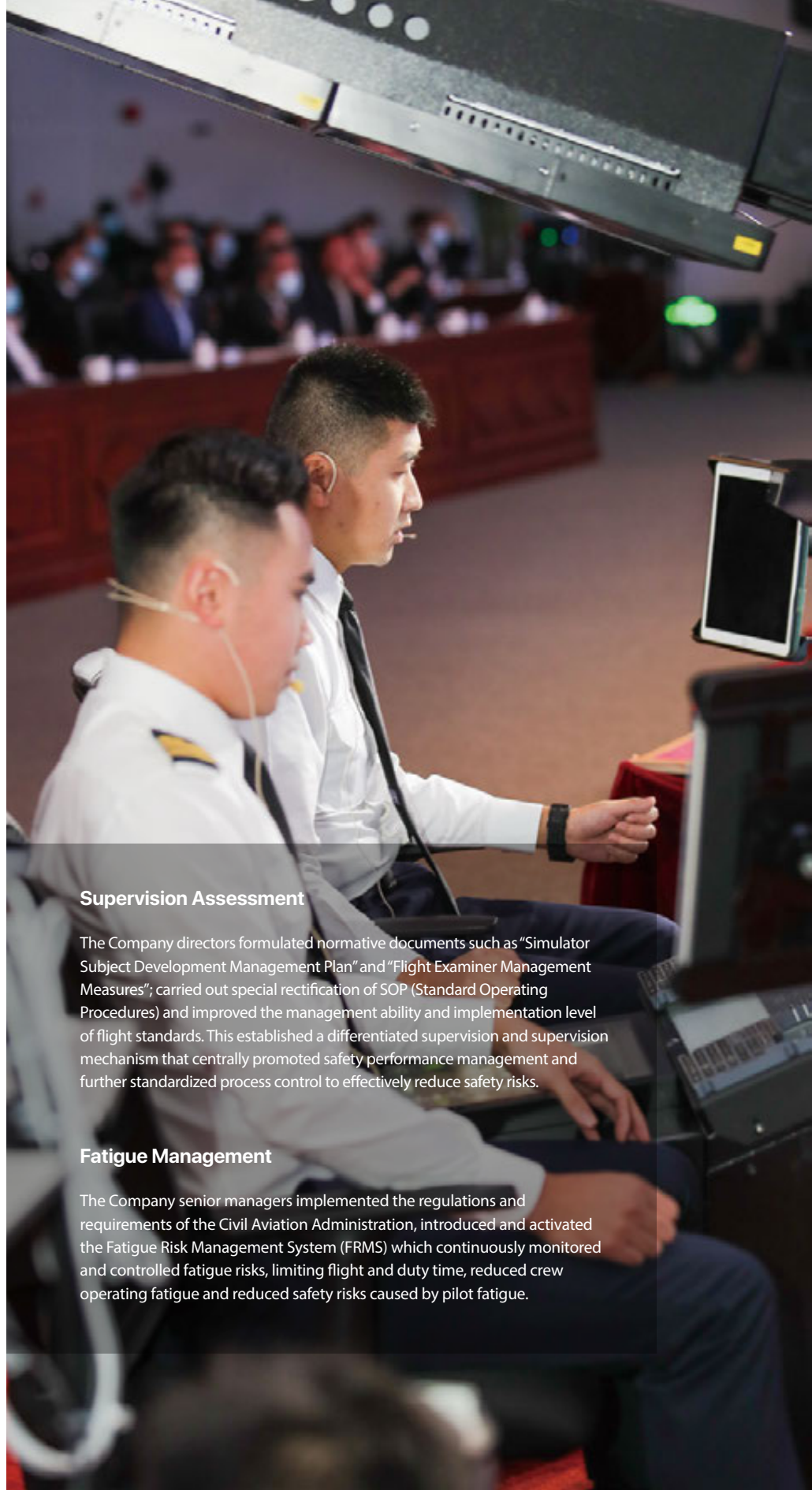
The first domestic VR multi-person collaborative training system in the cabin broke the VR operation limitation of single person and single task and realized the simultaneous completion of firefighting training by three people. A series of emergency situations that could occur after a cabin fire was simulated and collaborative fire-fighting training was carried out; the indicators of each link of fire-fighting disposal were quantitatively analyzed, and detailed fire disposal analysis reports and comparison of previous disposal data were provided; multi-person interactive LED large screen teaching improved the effectiveness of the training of simulation cabin trainees.



Case : Holding the First Flight SOP Competition

In order to further test and enhance professional knowledge and practical skills, China Southern held the first flight SOP competition during Year 2021, closely following the reality, focusing on the key and difficult points of flight safety and integrated the skills competition with flight work.

From the flexible application of SOP knowledge, strict implementation of procedures to proficiency of regulations, and accurate judgment of decision-making, comprehensively tempered the ability of pilots, this program fully demonstrated the superb skills, rigorous style and tacit cooperation of China Southern pilots, helping to promote safety quality.



Supervision Assessment

The Company directors formulated normative documents such as "Simulator Subject Development Management Plan" and "Flight Examiner Management Measures"; carried out special rectification of SOP (Standard Operating Procedures) and improved the management ability and implementation level of flight standards. This established a differentiated supervision and supervision mechanism that centrally promoted safety performance management and further standardized process control to effectively reduce safety risks.

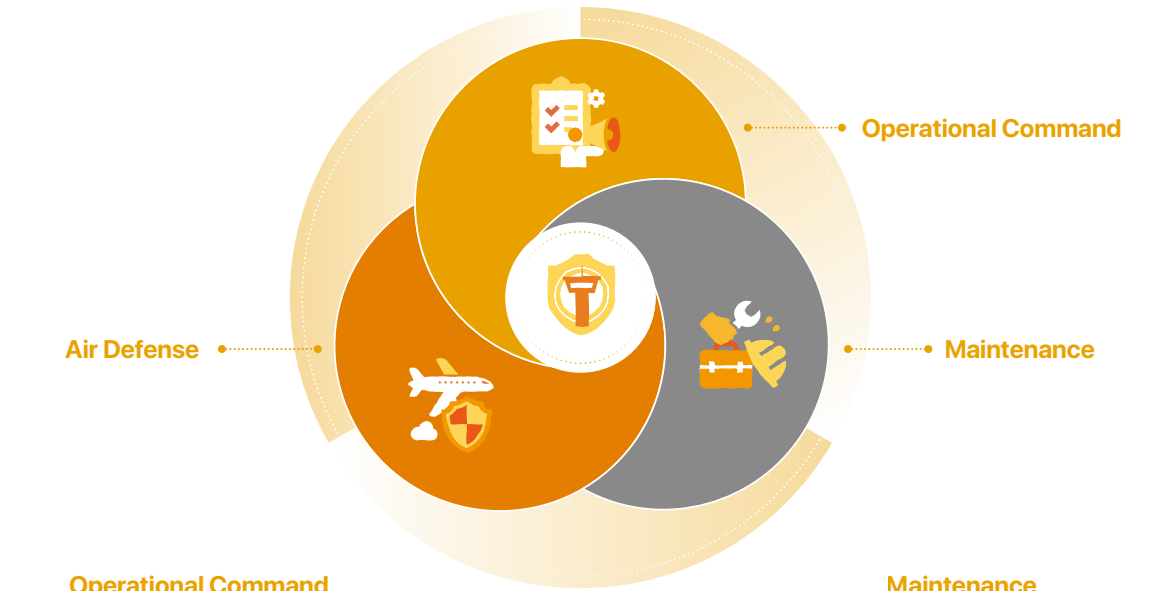
Fatigue Management

The Company senior managers implemented the regulations and requirements of the Civil Aviation Administration, introduced and activated the Fatigue Risk Management System (FRMS) which continuously monitored and controlled fatigue risks, limiting flight and duty time, reduced crew operating fatigue and reduced safety risks caused by pilot fatigue.

Operation Control

China Southern has continuously strengthened the identification and management of safety risks during flight operation, improved emergency response capabilities and the efficiency of fault diagnosis and handling, ensuring safe and stable flight operation.

- By the end of Year 2021 China Southern has obtained **23** national civil aircraft maintenance licenses
- Has **23** maintenance sites
- **19** maintenance hangars
- Fleet release reliability **ranks first** among the three major airlines
- Airbus A330, A350; Boeing B777, B787 fleet release reliability **ranked first** in the world
- The technical branch team has become the **only enterprise team** in the air transport industry that has been promoted to the Top 10 in the country since the launch of the China Industrial Internet Competition
- In the field of maintenance and repair, China Southern earned **eight** national, provincial and ministerial-level industry-level science and technology awards - making it the airline with the most awards in this field.



Operational Command

The Company regularly carried out risk assessment of new routes, compiled and issued safety risk reminders, and gave key warnings to potential challenges such as severe weather, small and medium-sized special airport operations, airspace adjustment and fire safety to ensure that dispatchers could grasp the operation risk reminder information of the day and deal with flight system alerts in a timely manner.

All these and many more procedures lead to impact the Company's security guarantees as officials adhered to incident investigation, safety inspection, operation safety supervision and statutory self-inspection and focused on supervision and rectification of issues such as dispatcher qualifications, released explanations for small and medium-sized special airports and fire safety to ensure that hidden dangers can be rectified in place.

Air Defense

The Company carried out joint air-ground exercises. On the basis of on-the-spot training and rehearsal, airline officials carried out joint air-ground drills to fully prepare for actual emergency response scenarios and effectively improve the response capability to deal with emergencies.

China Southern maintained safety and order on board all flights and pushed forward the construction of the airline's "safe civil aviation" which improved security sensitivity during and after important periods and events, strengthened the ability of crew members to exercise security rights and perform security duties in accordance with the law, further standardized the handling process of in-flight security incidents, and effectively maintained standard in-flight security order.

Maintenance

The Company established a health management platform which provided real-time and multi-directional monitoring of the health status of the engine during flight, development of sound and light warning devices for engine performance monitoring, real-time alarm function for important engine monitoring and warning which allowed for immediate response.

Extended model failure map as airline officials carried out engineering investigations on attendance failures, important failures and key events in the world fleet, continuously enriched and improved the "Fleet Medical Code", expanding the failure maps of various aircraft types, improved the efficiency of failure judgment and processing, and provided reliable capacity guarantees for on-site operations.

Technology Escort

China Southern Airlines escorted safe flights with technological innovation and constantly explored research and application of information technology in the field of safety.



Ensuring Passenger Safety

China Southern Airlines has always placed the safety and health of passengers first and formulated relevant standards and requirements for personnel protection, environmental disinfection, and food safety to comprehensively guarantee the safety and health of passengers during flight.

Food Safety

The Company continued to promote the ISO 9001, ISO 22000, HACCP system construction and certification of the aviation catering system, established a "three-level inspection system", carried out special rectification and improvement actions for food hygiene and safety to manage the entire production chain, and monitor food hygiene and safety risks to ensure air catering safety and quality.

Medical Support

The Company designated specialized aviation doctors to provide 24-hour online health consultation and review for sick passengers. During Year 2021, aviation physicians provided medical advice to 2,230 sick and/or people with a disability among which 139 ill passengers were deemed unfit to fly.

Cabin Safety

The Company strengthened safety risk management to deal with special situations such as potential lithium battery smoke and ensure safe and stable operation during peak seasons with high air turbulence; made service plans and ensured timely reporting and disposal of special information.

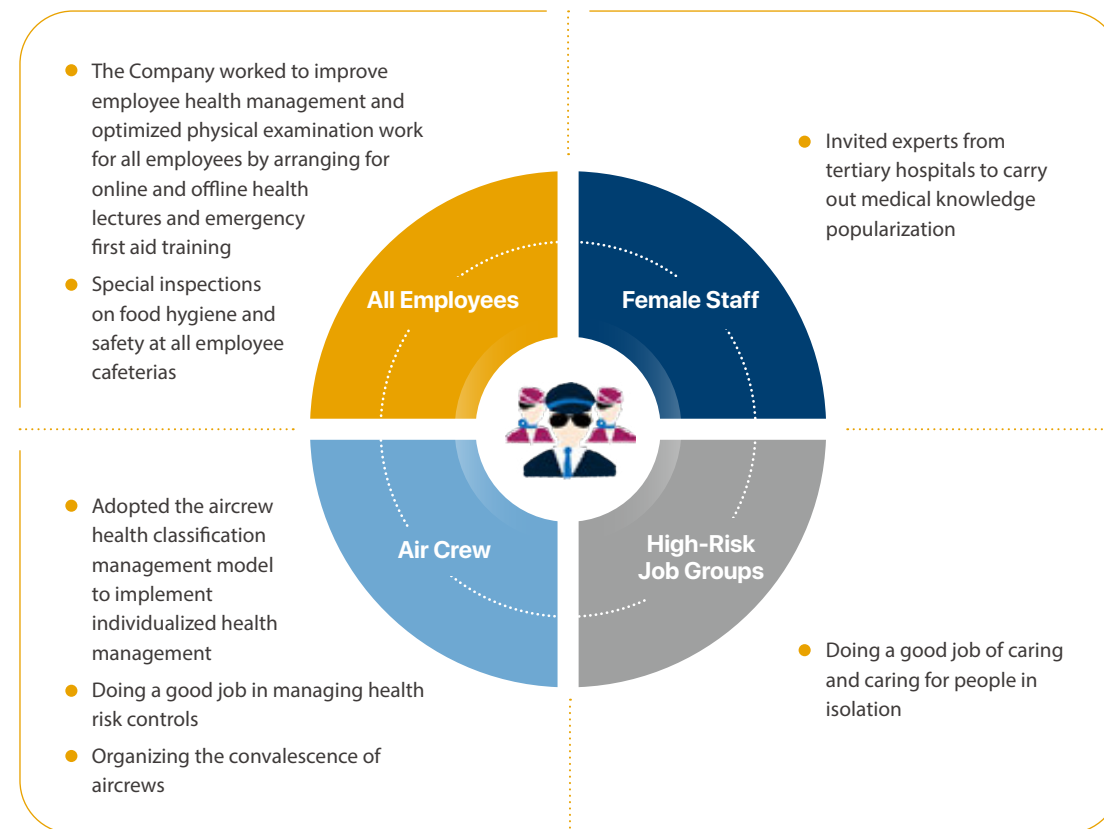


Managing Occupational Health

China Southern Airlines has always attached the greatest importance to the physical and mental health of every employee, strictly abiding by the Labor Law, the Law on the Prevention and Control of Occupational Diseases and other laws and regulations that enhance the identification and assessment of occupational health and safety risks for employees while providing mental health services to protect the physical and mental health of all employees.

Physical Health

The Company regularly carried out employee health examinations and offered training seminars to target health management according to different types of employees.



Mental Health

In-depth development of aircrew mental health promotion services, through psychological "salon group" counseling, one-on-one professional consultation and psychological crisis intervention to improve the mental health and well-being of all employees. A psychological counseling and care policy for quarantined persons was introduced, and an unlimited number of free psychological counseling hotlines and individual counseling services were provided.



Case : Actively Promoting Flight Health and Safety Management

In order to ensure the quality of life as well as the physical and mental health of aircrews and to ensure the safety of flight operations, China Southern Airlines actively promoted the construction of a flight health management system and incorporated health management into employees' entire career cycle.

- Improving System Management**

The Company revised and improved the "Pilot Health and Safety Operation Risk Management Regulations" and "Pilot Health Classification Management Regulations" to provide supporting guidelines for standardizing health and safety management.
- Building a Pyramid Model of Flight Safety Management System**

The Company strengthened health knowledge education and disease prevention reminders, improved the dynamic management of health interventions for key personnel, and optimized pilots' individualized health management.
- Pilots' Mental Health Promotion**

China Southern Airlines' senior leaders promoted the implementation of pilots' mental health promotion plan, the introduction of mental health awareness, studied pilots' psychological assessment and pilot psychological selection "three steps" psychological support work, and built "three care lines", namely organizational care line, family warmth line, professional support line ... and implemented the "three-piece set" practice of psychological anti-pandemic and improved the mental health of pilots throughout the chain.



Case : Caring for Isolation Personnel

In order to provide humanistic care and good service to the centralized isolation personnel, China Southern Airlines has established a leading group to take good care of the centralized isolation personnel, starting from the psychological health of the isolated employees, life service guarantee and pandemic prevention and control, built three working lines, with organizational care, family warmth and professional support as its core. Created a "home" atmosphere of isolation through measures such as enriching meals, festive condolences, family care, and purchasing fitness equipment. Mental health questionnaire surveys were carried out and 248 sessions of online group assistance, micro-classes and other mental health special

counseling sessions were conducted for quarantined persons, with 14,000 participants. 30,000 copies of 24-hour psychological counseling hotline reminder cards and EAP brochures were produced and distributed to all quarantined persons. These and many other positive efforts were made to help the quarantined people feel valued, cared for at all times from the moment they stay in the quarantined hotel. The joint expert team developed mental health promotion products, carried out continuous learning on 14 antennas and relieved the psychological pressure of quarantined personnel. During Year 2021, the Company provided 252 consultations for quarantined persons, with a total consultation hours of 360.17 hours.

Low Carbon Environmental Protection - Setting Sail Towards a Green Future

02



Contributed to the achievement of the UN 2030 Sustainable Development Goals



China Southern Airlines corporate culture has continually adhered to the guidance of Xi Jinping's ecological civilization thought, unwaveringly implementing the concept of green development, establishing and improving energy and environmental management systems while continuously promoting energy conservation and emission reductions ... to fight the good fight of pollution prevention and control and led the green and low-carbon development of the aviation industry as the Company builds a community with a shared future for aviation green development and makes contributions to building a beautiful China.

Improving Environmental Management

China Southern attaches great importance to the identification and prevention of environmental risks, and actively took countermeasures to mitigate, adapt and resist climate change by reducing the impact of business operations on climate change, and comprehensively improved the resource efficiency of business operations.

During Year 2021, the preparation of China Southern's emergency strategy for environmental crises was completed and included plans for environmental challenges, enterprise risk assessment reports and environmental and investigation reports on available resources during real world scenarios.

With reference to the TCFD recommendations, the climate-related financial information of China Southern is as follows.

Governance Governance Measures for Climate-Related Risks and Opportunities



- A leading team for ecological and environmental protection work was established with senior managers from the Company serving as team leader and the members of the party organization as deputy team leaders to organize, plan and supervise the energy conservation and emission reduction work, coordinate and resolve major problems and promote the implementation of varied measures.
- The Board of Directors of China Southern Airlines also participated in the determination of important environmental issues such as climate change, waste disposal and sustainable resource utilization ... as well as regularly summarizing, supervising and reviewing the performance of key performance indicators for energy conservation, carbon reduction and pollution control.

Strategy Actual and Potential Impacts of Climate-Related Risks and Opportunities on Business, Strategic and Financial Developments



- China Southern senior managers recognized that the issue of climate change was constantly evolving and attached great importance to identifying risks and opportunities brought about by climate change in order to reduce the environmental footprint of the Company's production and operations.
- Climate risks such as increased frequency, severity and uncertainty of extreme weather may lead to increased frequency of flight delays and cancellations, as well as global temperature and the rise of sea levels which may also have long-term strategic and operational implications for the entire aviation industry.

Risk Management Identifying, Assessing and Managing Climate-Related Risks



The Company carried out work in strict accordance with the requirements of environmental impact assessment and environmental protection "three simultaneous".

This included:

- Formulating energy conservation and emission reduction management methods, development and annual work plans, and incorporating energy conservation and emission reduction throughout the entire process of enterprise reform, structural adjustment and optimization and management improvement
- Building an environmental management system that integrated data reporting, pollution prevention and control, training, publicity and budget management, and conducted statistical analysis and reporting on a regular basis
- An accountability system was established to supervise and audit the energy conservation and emission reduction work of 24 secondary units every year
- Designated airlines officials served on the IATA Sustainability and Environment Advisory Committee, and actively participated in working groups such as carbon emissions and aviation sustainable fuels and carried out research on civil aviation carbon emission policy response strategies and actively explored the sale of excess carbon allowances, and
- Company officials paid close attention to the technological progress and commercial operation of sustainable aviation fuel and jointly studied airworthiness certification, sustainable certification, commercial operation and other issues with relevant domestic institutions.

Metrics and Goals Metrics and Targets for Assessing and Managing Climate-Related Risks and Opportunities



- The Company formulated the "China Southern Group Green Development Work Plan" to clarify the overall work goals of green development, and put forward three key work goals of energy conservation, emission reduction and environmental protection, "dual carbon" and plastic pollution control.
- In terms of energy conservation, emission reduction and environmental protection, the Company is pledged to strive to achieve a fuel consumption of no more than 0.28 kg per ton per kilometer by the end of the "14th Five-Year Plan" period, and prevent the occurrence of environmental pollution liability incidents.
- In terms of "Dual Carbon", according to the "Dual Carbon" path schedule of higher-level units such as the Civil Aviation Administration, "China Southern Group Peaking Carbon Dioxide Emission and Carbon Neutrality Targets and Achievement Path Report" was prepared.
- In terms of plastic restriction, the Company will no longer offer disposable non-degradable plastic straws, stirring sticks, meal/cup sets and packaging bags on international passenger flights by the end of Year 2022 and realize non-degradable plastic tape, disposable non-degradable plastic rain cloth, wrapping film and other cargo packaging use by the end of Year 2024 as supply usage has dropped significantly.



Implementing Energy Saving and Emission Reduction

Throughout Year 2021, China Southern senior leaders paid great attention to energy conservation and utilization, steadily promoted the replacement of clean energy, reduced energy resource consumption and waste discharge during production and operation to minimized the impact on the environment.

Saving Energy

- Through measures such as route optimization, aviation fuel management, "aviation fuel e-cloud" management, and aircraft weight reduction, green flight was comprehensively promoted, fuel consumption was reduced and energy utilization efficiency was improved.
- This provided a new emphasis on new energy resources, the use of electric ground service vehicles, increasing the proportion of clean energy use and gradually replaced carbon-burning gasoline vehicles with new energy efficient electric vehicles.

Conserving Water

- The Company also took great care with its precious water resources by transforming aircraft water supply trucks and promoted the water truck spray methods for aircraft disinfection, saving 5,408 tons of water throughout the year.
- This included dry cleaning to replace traditional wet cleaning of its aircraft to optimize the cleaning process, improving cleaning efficiency and reducing the adsorption of dust and dirt to reduce water consumption.

Water Saving Comparisons		
Model	Wet Wash Water Volume	Dry Cleaning Water
A380	100,000 liters	400 liters
A330	50,000 liters	200 liters
A321	30,000 liters	60 liters
A320	30,000 liters	60 liters
B787	50,000 liters	200 liters
A777	50,000 liters	200 liters
B767	50,000 liters	200 liters
B757	30,000 liters	90 liters
B747	100,000 liters	400 liters
B737	30,000 liters	60 liters

Green Packaging

The Company increased its scientific research investments in degradable alternatives, accelerated the development of advanced and applicable plastic alternatives and designed new packaging materials for paper cups and cutlery. The included:

- Actively promoting recyclable and foldable packaging products and reduce the supply of plastic products
- Sourced supplies that meet the criteria for the compostable alternative category
- Issued the "China Southern Group 2021-2025 Action Plan for Plastic Pollution Control" and formulated the goals for plastic pollution control and carried out the target decomposition and task arrangement, and
- By the end of Year 2021, China Southern Airlines had stopped all use of single-use non-degradable plastic straws, stirring sticks, meal/cup sets, and packaging bags in terminals, lounges and with domestic passenger flights.

Strengthening Pollution Prevention and Control

In accordance with the "Water Pollution Prevention and Control Law of the People's Republic of China" and the "Air Pollution Prevention and Control Law of the People's Republic of China" and other regulations, China Southern senior managers formulated a work plan for pollution prevention and control, and issued the "China Southern Group's 2021-2025 Plastic Pollution Control Work Plan" for staff to handle production and domestic waste in compliance with regulations, fully promoted the control of plastic pollution, and continuously improved pollution prevention and environmental protection management plans to reduce environmental impact.

During Year 2021, the budget for the disposal of three types of waste was 21.72 million.

Waste Gas Treatment

- The Company senior managers directed its engineering staff to construct glass fiber secondary purification filters which featured honeycomb activated carbon adsorption purification devices, bag filters and other treatment facilities. The generated waste gas was collected and treated and discharged after reaching specific standards.
- These actions strengthened aviation fuel management, increased investment in technological transformation, improved energy utilization efficiency, and minimized the impact of exhaust emissions on the environment and society.

Waste Water Treatment

Production Waste Water

The sewage treatment system facilities using the "oil separation + air flotation + sedimentation" treatment process was used for production waste water treatment. According to the requirements of the Company's environmental impact assessment, qualified testing units were hired to conduct sampling tests and the water could be discharged after reaching specific standards.

Medical Waste Water

The included disinfecting medical waste water generated during the COVID-19 pandemic and invite a third-party environmental sanitation testing agency to conduct monitoring to prevent environmental pollution caused by medical waste water.

Industrial Waste

The Company set up industrial waste water discharge outlets in accordance with environmental protection requirements and installed metering equipment on sewage treatment equipment. Special personnel were responsible and operated environmental protection treatment facilities of the sewage treatment station and track the sewage treatment volume in real time.

260.8 million cubic meters of waste gas treated

Treated 12,987 tons of industrial waste water

Treated 93,000 tons of production waste water

100% treatment rate of industrial waste water and production waste water



Waste Disposal

Non-Hazardous Waste

Staff and air crew collected paper towels, office and domestic waste and kitchen waste generated during flight activities in a centralized manner and handed them over to a professional management company qualified for recycling.

Hazardous Waste

This included the disposal process of waste disinfection, collection, temporary storage, transfer and handover of waste to a professional management company to reach 100% harmless treatment of in-flight waste on international flights and key controlled flights.

704.903 tons

of hazardous waste treated in maintenance

In-flight service non-hazardous waste disposal volume of

11,063 cubic meters

Noise Control

According to the requirements of the Law of the People's Republic of China on the Prevention and Control of Noise Pollution, China Southern organized a meeting on December 31 to start the noise pollution prevention and control work and discuss how to manage noise pollution. This included:

- Investing in the construction of noise control infrastructure and control noise emissions in strict accordance with national standards, and
- Introduction of a low-noise fleet, equipped with high-performance engines and narrowing the noise trajectory

Advocating Green Environmental Protection

China Southern Airlines advocates a low-carbon and environmentally-friendly way of life and has implemented:

- Green office methods such as a "paperless office" setting
- Reasonable setting of air-conditioning temperatures
- Closed water taps
- Organized environmental protection public welfare activities
- Promoted industry exchanges
- Actively disseminated green and low-carbon concepts, and
- Worked in harmony with varied stakeholders to protect green homes



"Dual carbon leads green flight; plastic limit starts from me" was the theme activity of National Energy Conservation Publicity Week



"Join 'Green Flight' to Create a Better Life" themed flight event



Case | Holding the first aviation environmental protection exchange meeting of Chinese mainland airlines

On May 7, China Southern and IATA North Asia jointly held the first aviation environmental protection exchange meeting for Chinese mainland airlines with 50 key decision makers from mainland airlines and related institutions in attendance. Important international topics such as "Air Transport Industry and Carbon Market" and "Sustainable Jet Fuel" were shared and discussed. At the meeting, China Southern representatives focused on sharing work experience in energy and environmental protection, such as strengthening top-level design, issuing guidance, identifying six major areas of airline environmental protection, promoting 10 important tasks, and proposed emission reduction targets to IATA and aid programs to formulate two environmental protection work proposals.

The conference provided a solid communication platform for China Southern Airlines to play a positive role in promoting the internationalization process of mainland Chinese airlines and assist other Chinese mainland airlines to learn more about and participate in the formulation of international carbon market rules.



Case | Launch of a Series of Themed Flights of "Biodiversity Conservation"

The 15th meeting of the Conference of the Parties to the Convention on Biological Diversity (COP15) was held in Kunming from October 11 to 15, 2021.

From September 24th to October 17th, China Southern, together with the China Environmental Protection Foundation, held a series of themed flights on "Biodiversity Conservation" from Beijing to Kunming, provided channels and platforms for the public to understand COP15 and biodiversity knowledge, and participated in biodiversity conservation practices to further enhanced public awareness of ecological civilization and environmental science literacy which aided in guiding and mobilizing all sectors of society to participate in biodiversity conservation, and created a good public opinion atmosphere for the successful holding of COP15.



Affinity and Refinement - Setting Sail for a Warm Future

03



Contributed to the achievement of the UN 2030 Sustainable Development Goals



China Southern continues to adhere to the principle of "People's Airlines for the People" by creating a "friendly and refined" service brand that provided passengers with friendly and refined air-to-ground services, convenient passenger and cargo ground handling services convenient and projected the love of flight to every passenger.

Guaranteeing Safe Flight Operations

China Southern has continued to promote its large-scale flight operations and carried out numerous projects to improve flight punctuality with operation efficiency increasing year by year as flight punctuality rate maintaining an industry-leading position.

Optimizing Flight Management

The Company continued to market the construction of large-scale flight operations, uniformly allocating core resources such as transport capacity and flight crew, strengthened cross-departmental coordination and linkage, and improved information transmission and response speed. This included optimal flight operations that is linked to China Southern Airlines flight guarantees and focused on rapid rollout and response, ground taxiing, internal and external coordination, quick stopovers and flight delays to work in harmony in ensuring normal flight service.

Launching Flight Regularity Enhancement Actions

The Company continued to optimize its route structure, adjusted flight plans according to the impact of the COVID-19 pandemic and market demand; optimized the boarding process in different time zones, refined the manual standards, managed late arriving passengers and the card control process for oversized luggage; optimized the flight closing section and launch period of aircraft relevant work flow as staff carried out site efficiency improvement work in different regions.

Creating a Digital Work Platform

The Company created a large-scale operation digital work platform, continued seeking new and exciting ways to improve its independent research and development capabilities and technological innovation level of the operation system; launched 19 applications such as flight dynamic query; China Southern weather and handheld flight tracking capabilities and promoted the launch of "China Southern Smart Travel" and "Mobile Flight Support Module" mobile apps. The flight group building function has been promoted on multiple routes to realize the entire flight operation process and multi-scenario coverage.

Smart Travel

China Southern provides passengers with a complete portfolio of smart travel services including ticket purchase, flight check-in, boarding, baggage refunds and modification services as it strives to offer passengers the best air travel experience.

Smart Baggage Service

The Company enhanced its information inquiry channels to reach out to all passengers through the exclusive China Southern e Travel app, mini programs, WeChat public account and SMS push and making the luggage transportation status completely transparent.

This also included oversized baggage to place a smartphone "palm view", "real-time view" and "one-click" declaration of abnormal baggage, and worked tirelessly to create a "one-stop" convenient service for all forms of baggage.

Baggage transportation error rate decreased by **6.15%** year-on-year

(Guangzhou + Beijing) hub transfer baggage missed rate of **9.85%**/10,000

The passenger coverage rate of smart luggage service was approximately **70%**

The information access rate of the whole baggage process was **71%**

More than **90%** of routes now offer baggage tracking services

The full-process baggage tracking function has served passengers' baggage more than **100** million times



During Year 2021, the flight regularity reached

89.89%

1.9 percentage points higher than the average level of civil aviation

The top three airlines ranked first among the major domestic airlines for six consecutive years



Case | The First "Luggage to Home" Service was Launched in China

On July 28, 2021, China Southern senior managers launched the new "luggage to home" product at six airports ... specifically at Guangzhou Baiyun, Beijing Daxing, Shenzhen Baoan, Wuhan Tianhe, Chongqing Jiangbei, and Chengdu Shuangliu International Airports, becoming the first company to provide "luggage door to door" baggage service and the first to launch the "air-subway" luggage intermodal service.

Through the China Southern mobile app, WeChat official account and other social media channels, The Company actively pushed the visibility of the baggage process to passengers. "Luggage to Home" is a logical extension of China Southern's transparent baggage tracking service which further enriches the civil aviation baggage transportation service model and brings a more efficient and convenient new baggage service experience to passengers.



"One ID" Travel Service

In conjunction with Guangzhou Baiyun International Airport, the "One ID" full-process face-scanning travel service was launched in which passengers no longer needed to present their ID cards, boarding passes or QR codes. Self-service check-in and other services propelled China Southern Airlines to a new stage in digital and contactless passenger check-in.

Note: Due to the needs of COVID-19 pandemic prevention and control, this face-scanning service was temporarily suspended during self-check-in.

"China Southern e-Travel"

"China Southern e-Travel" integrated the upstream and downstream industry resources of air travel, covering service needs such as "in-flight cuisine, accommodation, ground transportation, entertainment and shopping", and provided passengers with exceptional door-to-door services; launched the "Omni-channel ticket refund function in seconds" on domestic routes, realizing "no restrictions on the place where the ticket was purchased, rescheduled processing in seconds, and refunds arriving in seconds", providing convenient services for passengers traveling during the COVID-19 pandemic.



Honors

- Awarded as "2021 Excellent Case of Jointly Building a Community of Shared Future in Cyberspace"
- Earned the "Top Ten Innovative Projects" Award of the Central Enterprise E-commerce Alliance
- Captured the "Enterprise Informatization Construction Innovation Achievement" Award
- Won the first prize of "National Transportation Enterprise Management Modernization Innovation Achievement"



AI Intelligent Customer Service Platform

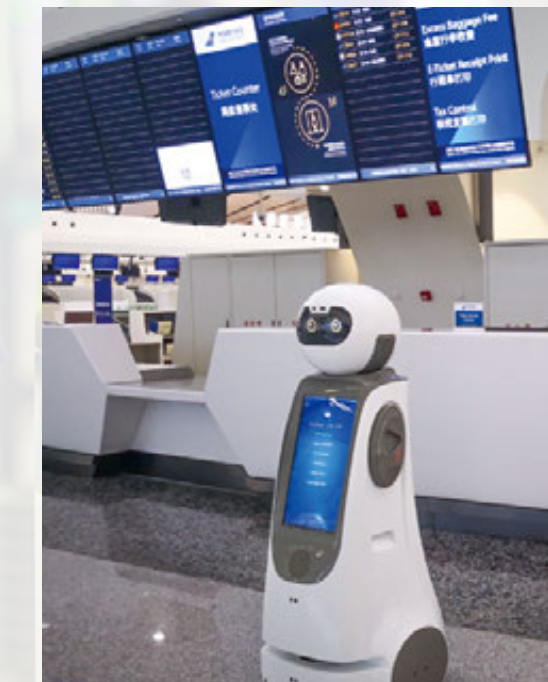
China Southern's intelligent "robot" customer service system was built to accurately perform semantic analysis, intention judgment and question-and-answer searches to realize a full robot anthropomorphism and dialogue interaction with passengers, guiding air travel consultation and handling services which ultimately improved service efficiency.

The number of visits to the intelligent customer service platform exceeded

7.3774 million

The number of visiting users exceeds

6.4341 million



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Providing Warm Service

China Southern continues to focus on its service concepts of “warm service, heart touching”, by building a large service pattern of “affinity and refinement, perfect system, synergy and efficiency, intelligence and precision, and value-driven”, continuously making upgrades to its service quality, accelerated the construction of China Southern's ecosystem, and optimized the travel experience of special needs passengers.

Upgraded Quality Service

Centering on the value concept of “customer-centric”, China Southern is focused on providing warm and attentive service and regularly carried out product staff training to improve its customer experience by empowering front line staff. To meet these goals, China Southern created and delivered six exclusive service brand business cards, including:

- “China Southern e-Travel” Business Card (one machine in hand, worry-free throughout the journey)
- “Customer Exclusive” Business Card (exclusive account manager providing one-stop exclusive service)
- “Luggage Privilege” Business Card (full-process baggage tracking, online baggage service, door-to-door service)
- “Transit Enjoy” Business card (transit butler service)
- “Warm Service 360” Business Card (two-class high-end full-service)
- “Food Fashion of China Southern” Business Card (in-flight cuisine concepts such as “Nutrition and Health” and “Hometown Taste”).

At this intersection of fighting back against COVID-19, the entire China Southern Airlines team stood tall to protect People's life safety by improving its brand of affinity and refinement so that passengers can enjoy the Company's warm and harmonious service during every flight.

Honors

Ranked 12th in Skytrax's “2021 Top 100 Global Airlines” list, ranking first among major domestic airlines

Earned “Green Flight 2020 CAPSE Innovative Service Award”

Obtained the AAA-level certification of the highest level of market quality credit, and

Awarded the “Best Airline Award” by the Civil Aviation Resource Network for the fourth consecutive year



Case : Opening up a “Channel of Life” for a Xinjiang Boy with a Broken Arm

On April 30, 2021, China Southern urgently transported a five-year-old Uyghur child with a broken arm in Hotan, Xinjiang, to Urumqi for treatment. To rescue the boy with the broken arm, China Southern instructed its departing flight crew to return to the gate and slide back the jetway and accept the injured child and his parents, regardless of conditions or cost which fully embodying the service concept of “people first, life first”.

This social hot spot publicity became one of the most widely reported news on China Southern in recent years, with the largest number of readings most social attention, and the largest number of likes ... and the cumulative total exposure of the central and major mainstream media exceeded 1.6 billion. This event won the first prize of the 2021 SASAC “Excellent Story of Central Enterprises” and a Top 10 placement case of social value. Currently, the film “Ordinary Hero”, adapted from this story and with cooperation of China Southern, has been listed as one of key theme films in during Year 2022.



Scan to learn more



Building China Southern Airlines' Ecosystem

China Southern senior leaders took advantage of the Company's main business brand and customer scale to build new platforms with new airline partners that jointly created new opportunities to promote the implementation of China Southern's ecosystem strategy and provide passengers with one-stop travel solutions.



Case : National Nutrition Week

From May 17 to 23, 2021, China Southern, together with the Guangdong Provincial Health and Health Commission and the Guangdong Provincial Nutrition Society, launched the “Rational Diet and Nutrition Benefiting Thousands of Homes” aerial publicity on the China Southern CZ3099 Guangzhou-Beijing Daxing flight which kicked off a week-long 2021 National Nutrition Week air campaign, advocating green flight and reasonable diet.

China Southern attaches great importance to the nutrition and health of passengers' in-flight meals, and the On Demand Dining cuisine introduced by China Southern such as large bowls of porridge and four-season health soup was widely welcomed by passengers.

Case : Immediate Domestic Ticket Refunds

During Year 2021, China Southern realized the automatic processing of domestic passenger tickets sold through all channels could be self-refunded and changed through the official airline channels. This new flexible configuration function improved passenger options as throughout the year, more than 11.76 million passengers were provided with online self-service refund and correction services.

Ninety five percent of all ticket refunds were shortened from the original three days - a new industry standard.

Case : Launch of the Tourism Product “Happy Travel in China”

On October 8, 2021, China Southern's “Happy Travel in China” product, with the theme of “unlimited flight, check in to a beautiful China”, provided passengers with a variety of new travel products to maximize their travel plans.

Established Platforms

The Company built a multi-party cooperation platform to achieve precise interaction of customers, products and data in the ecosystem.

Finding New Partner

This included expanded upstream and downstream partners, expanded cooperative enterprises around customer needs and offered customers with new air travel options.

Redeeming FFP Points

Expanded the application opportunities of the Company's award-winning Sky Pearl Club FFP mileage.

Strengthening capabilities to attract customers

Cooperated with partners to bring in streams of customers, continuously enhance customer relationship and gradually increase income from the main business, fulfilling all-win cooperated goals.

Information Integration

Worked to meet the travel needs of customers with an integrated flow of information about new Company products.

Serving Special Needs Passengers

China Southern senior leaders paid great attention to the travel needs of people with a disability and upgraded the “age-friendly” barrier-free access during flight boarding and disembarkation which included personal document inspection and inquiries for special needs passengers such as unaccompanied minors and the elderly. This included the launch of a new “customs clearance guidance” and other convenient service products to meet the travel needs of people with a disability.



Practicing the Original Intention and Doing Good Work

SPECIAL PLAN

Caring for Special Needs Travelers

Air travel for seniors, children, unaccompanied minors and people with a disability is something that families always care about. China Southern is focused on People’s “urgency and worries” and fully practice the concept of “serving the people wholeheartedly” with emphasis on the travel needs of special needs passengers by paying attention to every service detail and provide personalized services to make travel more convenient.

Stakeholder Voices



“It’s really convenient now, this electronic self-service can do everything quickly”.

-A senior flyer handling consignment

“Thanks to China Southern Airlines for helping me and my wife change our bookings, and the follow-up flight has gone smoothly!”

-Ms. Su, passenger

Upgrading “Age-Friendly” Barrier-Free Barriers

The Company pays the utmost care to its senior passengers and have created special service counters just for them!

The “Notice on Doing a Good Job in Facilitating Travel Services for the Elderly” was issued, requiring all working staff to set up service counters for senior passengers to provide services such as health code inspection, ticketing, check-in, ticket service, priority boarding and baggage inquiry.

This also included:

- Upgrades to the website experience of senior travelers and marketed a new “age-friendly” renovation of China Southern Airlines’ official website and the China Southern mobile app, to make it easier to understand and operate, and set up a special layout and auxiliary tools for the official website
- Large font size and color matching were provided as well as on-line tools such as page zoom, voice link reading and

support screen reading tools to solve the difficulty of using intelligent information technology for senior passengers

-Actively upgraded the ticketing service for senior travelers and for those who are not familiar with new smartphone technology, China Southern staff was always on hand to offer assistance

-A new “Jingxing Transit Card” was launched, using the airport internal boarding map behind the card, and the on-site check-in staff became “safety patrollers” who are always available to provide convenient travel guidance throughout the process.

-For senior travelers who arrive early at the airport are provided private tours of the public airport facilities, and

-While solving the challenges in using of intelligent information technology, China Southern staff provided extended time to enhance the travel experience of all senior passengers

Enhancing the Travel Experience of People with a Disability

China Southern senior managers stived to improve the ability of employees to serve people with a disability and offered staff presentations on the “Service Demands of People with a Disability”, so that all staff can understand the service needs of people with a disability.

The Company also developed cooperation with the guide dog base to gain an in-depth understanding of the work and habits of guide dogs, and created a charity service project of “Guide Dogs in the Air”, making the journey of visually impaired people more convenient.

Optimizing the Service Process for Unaccompanied Minors

Parents can apply for and purchase air tickets for unaccompanied minors through the China Southern app, mobile website and other electronic channels and can filled in the application once and have no worries throughout the whole process.

During Year 2021, the on-site processing time was reduced from 10-15 minutes to 5-8 minutes including seat reservation and information communication for parents and launched service measures such as “Kapok Open, Sunshine Follows” for unaccompanied minors who now enjoy five privileges such as special person care, special check-in counters, special security check channels and priority boarding.

During the COVID-19 pandemic, hand sanitizers were provided at all check-in counters for unaccompanied minors as well as at the rest area within the security check area. Hand disinfection and guidance assistance were implemented in the three links of check-in, waiting and boarding by specially designated personnel.

During check-in, parents were reminded to prepare their children’s anti-pandemic supplies and oversized luggage was checked so that children could travel without concern. Also at the security check area and during flight boarding, unaccompanied minors were guided to use the special airport passenger security check channels and take advantage of exclusive waiting areas for people with a disability and priority registration service channels to quickly board their flight.

Maintaining Customer Relations

Throughout Year 2021, China Southern earnestly protected the rights and privacy of all its customers, unblocked passenger feedback channels and carefully listened to customers' voices. This feedback included actively promoting after-sales service for refunds and changes and managing customer complaints in a timely manner to maintain a good relationship with all customers.

Passenger Rights Protection

China Southern senior managers established a complete information security mechanism and passenger service evaluation system, collected passengers' opinions through multiple channels and directed staff to handle customer complaints in a timely manner.

Customer Privacy Protection

China Southern attaches the greatest importance to the protection of passengers' personal information and encouraged all members of the Board of Directors to actively participate in customer data protection as well as concrete steps to ensure customer privacy and security through institutional guarantees, technical precautions and information auditing.



Board of Directors Participation

The Company's board-level committee attached great importance to network security and in Year 2021 established a network security and technology informatization leading group, headed by the Company's executive director, who regularly participated in and continually guides work related to privacy protection and data security.



Information Technology

The entire China Southern security management process was realized in the development process of the information system, and the online business system undergoes the strictest security testing. The Company's security team continuously improved the test coverage, closely tracking the latest security vulnerability situations and promptly handle various hidden challenges.



Strong System Guarantee

The Company strictly follows all requirements of the National Cybersecurity Law, Personal Information Protection Law, Data Protection Law and the international EU General Data Protection Regulation in the collection and use of passenger' personal information. This has led to the forming of internal "Network Security Management Measures", "Personal Privacy Data Protection Management Measures" and "Information Security Management System Documents" regulations to ensure data security.



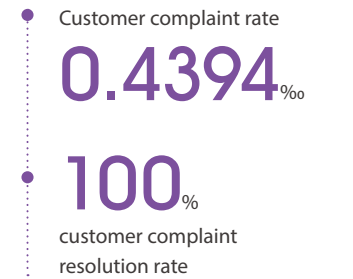
Information Security Audit

Key information systems must pass the level protection security assessment of authoritative institutions. Airline technicians actively implement the network security level protection requirements as the Company hired national authoritative network security testing agencies to conduct security testing of all business systems and concurrently closely cooperated with public security organs to combat potential telecommunication fraud and cyber-attacks.

Handling Customer Complaints

In order to improve the travel experience, China Southern staff has compiled a collection of complaint cases and established an "early-warning" mechanism that allowed for providing services and managing complaints by actively responding to refund requests and air travel changes during the COVID-19 pandemic.

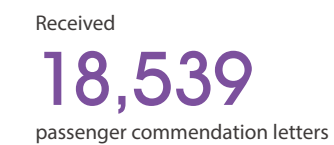
The Company established a special project team that provided a new automatic refund and change service and efficiently responded to passengers' needs to improve the overall customer experience. The general score of the Bureau's complaint management and control throughout the year was the best among China's three major airlines.



Satisfaction Survey

China Southern Airlines continually seeks the satisfaction of its travelers and the feedback of passengers' perception is of key importance. The Company attaches great importance to customer experience and dynamically tracked and analyzed passenger satisfaction in real time to learn how to consistently improve its services.

Satisfaction Project	Year 2021	Year-on-Year Increase
Overall Flight Experience	4.428	1.01%
Ticket Service	4.605	1.22%
Ground Service	4.563	2.08%
Cabin Service	4.673	1.92%
Food Quality	4.267	5.20%
Catering Services	4.561	6.23%
Inflight Entertainment	4.151	5.94%
In-flight Cleaning	4.541	2.03%
Intelligent Travel	4.494	5.14%



Quality Logistics Service

China Southern senior managers accelerated the pace of innovation in its freight/cargo products, provided multi-channel and intelligent freight transportation to meet the rising demand for high-quality air logistics of China's mid-to-high-end manufacturing industries, and concurrently fully guaranteed the global transportation service of China's COVID-19 vaccines ... to provide customers with high-quality and professional cargo transportation services.

Freight Products

Senior managers from China Southern's Cargo Division worked throughout the year to improve its product innovation and extended its service chain to successively launch six major products:

- China Southern Express
- China Southern Special Transport
- China Southern Special Transport
- China Southern Standard Transport, and
- China Southern Intermodal Transport to provide customers with the best logistics services

Smart Freight Service

Direct efforts were made to build China Southern's logistics e-line online sales platform, IoT global container management and control system, cargo operation control platform and full-process tracking management system to enhance the intelligence of China Southern's cargo services.

By integrating the indoor high-precision positioning technology of Bluetooth AOA with the BeiDou satellite positioning system, an indoor and outdoor integrated hybrid positioning container monitoring and dispatching system, based on the needs of the air cargo logistics business scenario, was built. In this way, the production factors such as goods, personnel, vehicles, containers and documents in the air cargo terminal could be digitally transformed, and the Internet of Things and 5G network technology could be used to realize the interconnection of everything, smart supervision and collaborative operation to realize a smart cargo terminal.

Senior managers from the China Southern Cargo Division created an online sales platform for China Southern Logistics e-line, covering numerous business scenarios such as online sales, product booking and omni-channel access. This served to offer customers electronic waybills, paperless transportation documents and appointment pick-up availability with one-stop "booking and picking-up one network" service for cargo owners.

One-stop Logistics Service



Integrated Smart Cargo Station

Numerous Cargo Information

One-Click Information Control

Through the combination of the Internet of Things, handheld mobile devices (PDA), fixed scanners and the actual business on site, with the application of barcode scanning and data exchange technology, the entire cargo process operation and process record of the cargo station and the apron were realized. Customers could take advantage of the processing process of goods in real time through the system and WeChat.

Using the concept of "big operation", the China Southern Cargo Division built a visual control center for the COC operation monitoring platforms, and made every effort to create a "one screen for cargo operation". To do so, the airline's Cargo Division utilized the Internet of Things, BeiDou and other technology applications, as well as mobile PDA to realize the whole process operation and process record of the cargo terminal and the apron, accelerated the digitalization of production factors, and completed the "flight, cargo, container, warehouse area operation, apron operation, vehicle personnel, map positioning, video surveillance", a total of eight types of freight logistics big data collection, to promote the paperless and electronic operation of cargo terminals, apron operations and personnel scheduling.

19 international cargo routes
Realized
7,023 passenger-to-cargo flights

Practicing the Original Intention and Doing Good Works

SPECIAL PLAN

I do Practical Work for Lychee Farmers

"The color of lychee changes in one day, and the taste changes in three or five days". Since June, lychees in various production areas in Guangdong entered the peak market period but the transportation out of the province has been hindered by the COVID-19 pandemic. The income of lychee farmers was seriously impacted which caused widespread concern in the society. China Southern quickly responded to the clarion call of "Doing Good Works for Lychee Farmers" with airline staff coordinating with all parties to build a "hump route" for lychee sale and making every effort to safeguard the income of lychee farmers.

Setting-Up a "Lychee VIP Line"

In order to meet the urgency of lychee farmers, China Southern established a Special Group for Lychee Transportation and urgently set up a "Special Lychee VIP Line". In response to the mixed billing of lychee and other express shipments the China Southern Airlines Logistics Co., Ltd., Guangzhou Cargo Station created new safeguard measures for lychee product to move from farm to province by cooperating with various agents which picked out lychee at the port of the aircraft to affix a special "urgent" label on key shipments by opening a green process for the assembled containers.

Implementing "Narrow to Wide" Flights

The Special Group for Lychee Transportation created and delivered the emergency coordination and implementation of 320 "narrow-to-wide" flights on 20 domestic routes departing from Guangzhou and Shenzhen to ensure that large containers of Guangdong lychees could be transported on a mass scale. During Year 2021, China Southern carried more than 54 tons of lychees through international routes from Guangzhou to Amsterdam, Frankfurt, London, Dubai, Bangkok, Kuala Lumpur, Jakarta and Vancouver to help Guangdong lychees "go global".

Realizing "Passenger-to-Cargo" Lychees Transportation

For the first time, China Southern successfully transported lychees from Guangzhou via Qingdao to Toronto on a "passenger-to-cargo" flight with the finest quality and freshness - opening up a new channel for lychees from Guangdong to depart from the province to the international community on the "Guangdong Lychee World Tour".

Great Efforts to Ensure the "Excellent Freshness" of Lychees

These special efforts by the entire China Southern Special Group for Lychee Transportation Team quickly moved these precious produce through a "premium fresh" guarantee program with cold chain services and assigned personnel to quickly handle handover and priority loading to ensure the freshest lychees were shipped. Concurrently, transportation information was released in advance every day to consignment shippers as lychees were received for on time arrival. After the lychees arrived at the designated destination station, product was tallied and handed over to the customers as soon as possible to convey the freshest taste.

"Escorting Lychee out of Guangdong" Was a Great Success

The 2021 Guangdong Lychee "12221" Market System Construction Summary Conference organized by the Guangdong Provincial Department of Agriculture and Rural Affairs was held in Guangzhou as the conference commended a group of outstanding units that have contributed to "I do practical things for Lychee".

China Southern earned a Special Contribution Award for "Escorting Lychee out of Guangdong, I do practical work for lychee with Guangdong Speed".

China Southern Logistics continued to make meaningful efforts to open a green channel to facilitate the delivery of agricultural products, assigned special personnel to solve problems in the transportation process, and built a direct channel for production and sales of agricultural products through "Xiaonan Direct Selection Platform" to cooperate with farmers in Guangdong and related industrial chains, continued to expand the influence of agricultural shipping and logistics, served the economic construction of Guangdong, and helped the domestic and international "dual circulation".



Innovation and Efficiency - Setting Sail for a Prosperous Future

04



Contributed to the achievement of the UN 2030 Sustainable Development Goals



China Southern continued to improve its management level, ensured the preservation and appreciation of state-owned assets, deepened cooperation with the government, enterprises, suppliers, etc., and joined hands with all parties to promote the sustainable development of the aviation industry and promoted the Company to steadily move towards a prosperous future.

Compliant and Stable Flight Operations

Risk Management

China Southern senior managers insist on operating in compliance with laws and regulations, continuously deepening the construction of the rule of law that enhances the airline's management system risk management and control to conducted clean government construction and supervision. This in turn aids the airline's intellectual property protection, and carried out in-depth cost control work to ensure the stable operation of the Company.

100%

review rate of major business decisions, rules and regulations and economic contracts

China Southern has always adhered to the goal of "strengthening internal control, preventing risks, and promoting compliance", improved comprehensive risk management, built "three lines of defense" for risk prevention and control, strictly controlled the legal review of major business decisions, paid close attention to the risk prevention and control of major projects and created a comprehensive, full-staff, full-process, and full-system prevention and control mechanism. China Southern Airlines' senior managers worked diligently to improve the compliance management working mechanism and independently developed and launched a compliance management system; strengthened compliance review and supervision; formed a closed loop of compliance management and effectively prevented and controlled violation risks.

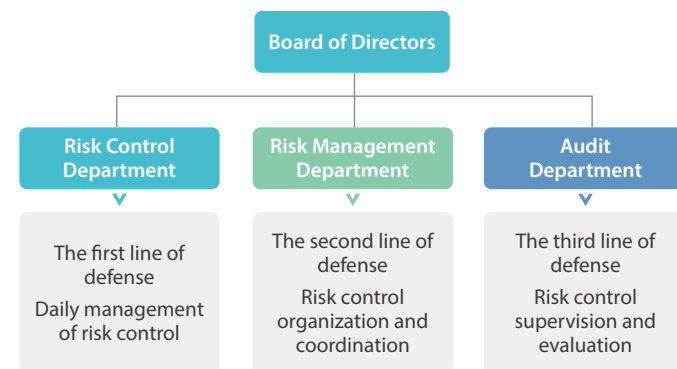
Perfecting Risk Management Systems

The Company formed a "1+N" risk control compliance management system that was supported by a series of management regulations, with the "Comprehensive Risk and Internal Control Management System" as the guideline, the "Implementation Measures for Internal Control System Evaluation", "Comprehensive Risk Management Regulations", "Internal Control Management Regulations" and "Illegal Operation and Investment Responsibility Investigation Implementation Measures (Trial)" as its pillars.

Building a "Three Lines of Defense" Risk Management Mechanism

This required the Company to establish a comprehensive risk management mechanism including the risk management organization and the three lines of defense for risk management. The highest decision-making body for risk control management was the Company's Board of Directors, responsible for the establishment, improvement and effective implementation of the Company's risk control system and mechanisms.

"Three Lines of Defense" Risk Management Mechanisms



Top-Level Decision-Making Risk Prevention and Control Processes

The Company implemented the "Three 100%" comprehensive review requirements of the SASAC by streamlining the work process, review requirements and embedding legal reviews into the Company's operation and management process to achieve the deep integration of legal review and business management.

Anti-Corruption

All staff conducted **2,831** anti-corruption training sessions

China Southern conscientiously implemented the deployment of the Fifth Plenary Session of the 19th Central Commission for Discipline Inspection and the requirements of the SASAC Party Conduct and Clean Government Construction and Anti-Corruption Work Conference, took the "top leader" and the leadership team as the focus of supervision, insisted on "do not dare to be corrupt, cannot be corrupt, and do not want to be corrupt, creating a clean and upright atmosphere".

The Company pushed forward the implementation of the "Opinions on Building a System and Mechanism of China Southern" to promote "Do not Dare to be Corrupt, Cannot be Corrupt and Do Not Want to be Corrupt" by the Party Organization of the Group which served to consolidate, expand and deepen special rectifications and carried out centralized rectification of challenges in the procurement field. Airline officials regularly carried out integrity education reminders, and kept a clear focus on grassroots practices to deal seriously in accordance with regulations, disciplines and laws.

The Company supervised the "top leaders" and the leading group, and applied specific measures for implementing the "Opinions of the Central Committee of the Communist Party of China on Strengthening the Supervision of the 'Top Leaders' and the Leading Group"; issued "Several Regulations on Promoting the Integration and Integration of Various Supervisions of China Southern to Enhance the Efficiency of Supervision and Governance" and used personal methods such as unplanned visits, investigations, inspections and heart-to-heart conversations to promote the implementation of supervision.

The Company issued relevant systems to rectify "four bad styles", and carried out a special survey on "implementing the spirit of the eight central regulations to correct the "four bad styles and create new working style". These actions served to cleaned up the deliberation of coordination bodies, and carried out special governance of official vehicles. The Company was diligent in implementing the requirements of "three distinctions" and establishing a list mechanism for business and investment exemptions, and encouraged cadres to perform their duties in a transparent manner and always act responsibly.

The Company clarified its reform of the grass-roots discipline inspection and supervision system, the grass-roots discipline inspection force and inspection force, and promoted the full coverage of training at different levels and categories through higher-level training, self-organized training and expert teaching. These and other actions served to improve the ability of discipline inspection, supervision and inspection personnel to perform their duties.



Intellectual Property Protection

China Southern attached great importance to intellectual property protection, continuously improved relevant systems, trademark management, and provided a firm guarantee for intellectual property protection.

Intellectual Property Protection Systems

According to the "Trademark Law of the People's Republic of China", "Patent Law of the People's Republic of China" and other laws and regulations, formulated the "General Book of Intellectual Property Management Manual" and "Trademark Management Sub-Volume", "Patent Management Sub-Volume", "Commercial Secret Management Sub-Volume" and "Computer Intellectual Property Management" Booklet, "Brand Management Booklet", "Internet Live Event Management Measures" and other intellectual property protection systems, the Company fully implemented unified management of intellectual property rights, division of labor between professional departments, and standardized management of the Company's trademarks, patents, software copyrights and other intellectual property rights and the Company's brand image.

A Complete Trademark Management System

Based on the trademark management system of "centralized examination and approval and decentralized management", the Company has formulated standardized trademark management measures, clarified the specific operation methods and procedures for trademark registration, use, management and protection, and assigned full-time and part-time trademark management personnel to provide organizational guarantee for trademark management, which effectively enhanced the brand value of China Southern.

Lean Cost Control

China Southern senior managers have resolutely fought the tough battle of "establishing a long-term mechanism for lean management and control of costs" by establishing a sustainable cost competitive advantage which continuously improved the level of refined management.

A Long-Term Mechanism for Lean Cost Control

China Southern Airlines stays close to the concept of "all costs can be reduced" by focusing on the Company's revenue sources as well as structural and strategic cost issues through the establishment of five mechanisms. The Company carried out five lean cost projects, built a lean cost management and control system which favored cost reductions to gradually established costs comparative advantage.

Creating a Golden Idea Benefit Project

The Company carried out a special activity entitled the "Building Golden Idea Benefit Project" which projected deep into core aviation resources to extend the industrial service chain as staff worked diligently to generate income, and extensively collected "golden ideas" such as measures, suggestions and typical case studies to increase income and reduce expenditures. A total of 2,342 "golden ideas" were collected, and 1,120 "golden ideas" were implemented that directly helped improve operational efficiency.

Resource Integration and Business Cooperation

During Year 2021, China Southern created and delivered:
 -The aviation medical identification center
 -Financial sharing center
 -Housing management department
 -Comprehensive business center, and
 -Employee service center that actively organized and integrated internal resources, coordinated and contacted external units through multiple channels and strove for resources and business cooperation to generate income

0 trademark infringement incidents in 2021

65 new authorized patents
 An increase of 80% year-on-year in 2020

Accumulated effective patents reached

318



Deepening Reforms

China Southern has solidly promoted a three-year action for the reform of state-owned enterprises, implementing the "Two Consistency" principle, and exceeded the planned three-year action task of the reform of state-owned enterprises by more than 70% ahead of schedule. These positive efforts served to strengthened the construction of governance bodies, promoted the tenure system and contractual management, carried out the benchmarking of world-class management improvement actions, promoted competition for employment, final adjustment and incompetent exit, upgraded the assessment system and steadily promoted the maintenance reform to inject development momentum into the enterprise.

Strengthening the Construction of Governance Bodies

These efforts required the revision and improvement of the Company's decision-making system and the leadership system of "two-way entry and cross-serving" was implemented for the dual-level Board of Directors of the group's shares and standardized the procedures and checklists for the party group (party committee) to study and discuss major business management matters as well as the downward penetration of governance reform. This served to clarify the boundaries of rights and responsibilities of various governance entities as the Company formulated a management system for the Board of Directors to authorize the management and continued to strengthen the leadership role of the party group (party committee) in guiding the direction.

Benchmarking of World-class Managers

China Southern pushed forward its task completion rate of improving the benchmarking its world-class management team to a substantial 93%. Zhuhai Motianyu and lean operation projects were selected as benchmarking enterprises and benchmarking projects respectively. At the 2020 World-Class Enterprise Evaluation Benchmarking Study conducted by the State-owned Assets Supervision and Administration Commission of the State Council, China Southern ranked first among 15 airlines in the comprehensive evaluation results.

Upgrading the Assessment System

The Company evaluated the assessment results of each secondary unit, set up an assessment system research project team, established an assessment counterpart liaison system for assessment tracking and comment and enhanced the iterative upgrade of the annual assessment system.

Promoting the Tenure System and Contractual Management

The airline completed the formulation of its tenure-based assessment plan and signing of contracts for key units, with a coverage rate of 90% of tenure-based and contractual management contracts.

Promoting Competitive Induction and Final Adjustments

China Southern deepened the reform of its cadre and personnel system. Among the newly appointed management cadres, 34.4% of the newly appointed cadres were recruited through competition and openly selected for employment as 7.6% of the cadres, directly under the management of the party organization, left the Company.

China Southern completed the reforms of its internal institutions of the functional departments of its Guangzhou Headquarters. All management personnel of the functional departments of the Headquarters stood to compete for their respective employment, and the number of internal institutions and management personnel was reduced by 44% and 43%, respectively.

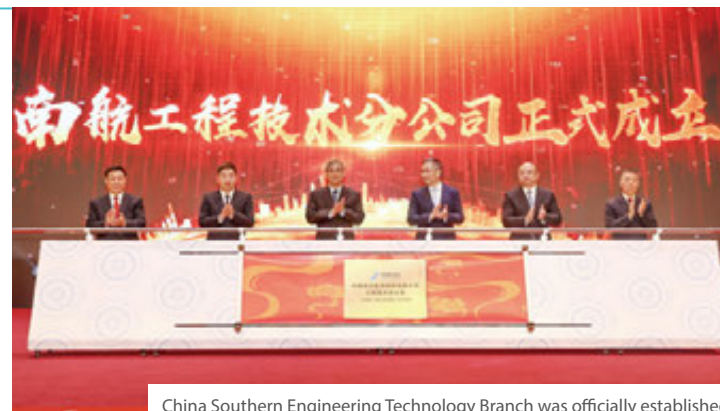
Promoting the Reform of Maintenance Management Systems and Mechanisms

China Southern Airlines senior officials were diligent in promoting the reform of the maintenance management systems and mechanisms to establish an engineering technology branch, and deeply its available integrate maintenance resources. In accordance with the development direction of "marketization, integration, industrialization and internationalization", China Southern established a market-oriented operation mechanism that featured integrated resource allocation, industrialized maintenance layout and international development space, an operation and management entity for the maintenance industry which jointly served to promote the high-quality development of the maintenance industry.



Case Fully Supporting the National Rural Revitalization Vocational Skills Competition

On September 15, 2021, China Southern Airlines Co., Ltd. Engineering Technology Branch was officially established, becoming the integrated operation and management entity of China Southern's aviation maintenance business and a major measure in the implementation of China Southern' maintenance reform. With Guangzhou Baiyun International Airport at the center, the Company has established maintenance bases in 18 large and medium-sized cities such as Beijing and Shanghai ... spanning more than 300 regional terminals and over 1,000 routes around the world and is committed to building itself into a pillar industry of the Company's aviation maintenance.



China Southern Engineering Technology Branch was officially established

Sustainable Supply Chain

Responsible Procurement

China Southern adhered to responsible procurement and continued to improve the supplier management mechanism that promoted suppliers to fulfill their own Corporate Social Responsibilities and built a sustainable supply chain.

China Southern strictly abided by the state as well as the Company's own management regulations on tendering and non-tendering procurement to ensure that procurement activities were conducted in a fair, just and open format. The Company actively cooperated with the implementation of the government's policy requirements on optimizing the business environment in an effort to safeguard the legitimate interests of the Company, purchasers and bidders in accordance with laws and regulations. Airline officials consciously strengthened the supervision, inspection and management of procurement business with emphasis on developing special training on legal risk prevention of procurement contracts that were implemented for honest procurement contract by adhering to green procurement that built a sustainable supply chain.

Honest Procurement

China Southern Airlines continually improves its procurement supervision.

The Company carried out "Honest Procurement" integrity education activities to enhance integrity awareness, risk awareness and normative awareness, ensuring suppliers' right to know and equal participation rights by seeking out the management of suppliers' adverse behaviors and special procurement inspections and further restricted suppliers with challenging business practices from participating in procurement activities.

Strengthening the standardized management of procurement. Identified environmental and social risks in each link of the supply chain, strengthened management risk and integrity risk control in the procurement field, and regulated cooperation with suppliers in terms of operation, society and environment.

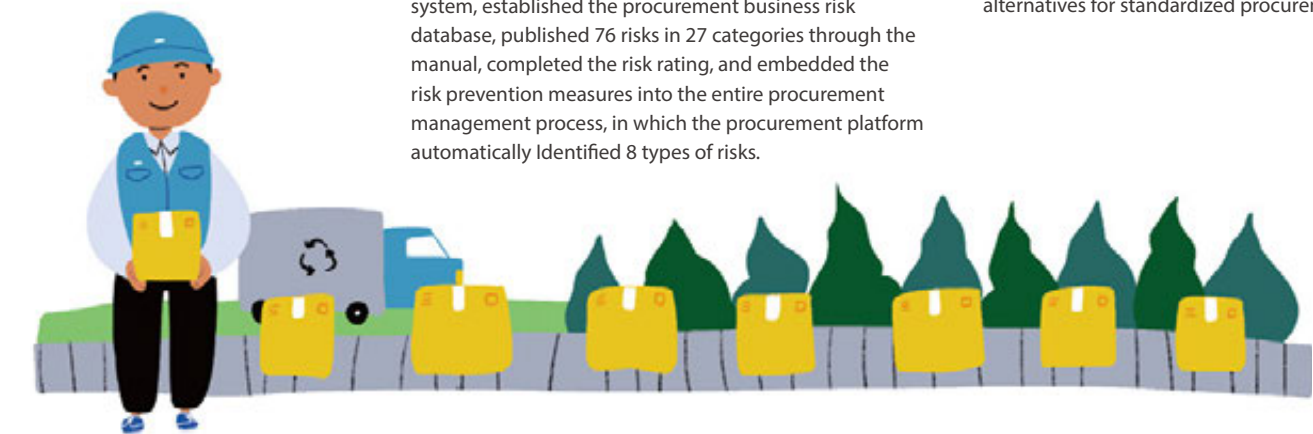
Improving the procurement risk prevention system. Formulated the procurement risk control sub-volume, built the procurement risk prevention and control system, established the procurement business risk database, published 76 risks in 27 categories through the manual, completed the risk rating, and embedded the risk prevention measures into the entire procurement management process, in which the procurement platform automatically Identified 8 types of risks.

Green Procurement

China Southern Airlines kept its commitment to purchase "green" materials.

According to the "China Southern Group's Management Standard for Prohibition and Restriction of Disposable Plastic Products", the airline company formulated a timetable for the complete replacement of degradable materials and implemented a bonus point system for suppliers using degradable and environmentally friendly materials during the procurement process to guide bidders to use new environmentally friendly materials and realize the gradual replacement of degradable materials.

The significantly clarified the standardized procurement measures. Airline officials actively responded to the deployment of the Group's plastic pollution prevention and control efforts and invited a number of suppliers to its Guangzhou Headquarters to discuss the use of specific items such as degradable raincoats ... as well as seeking the regularly participation in the Group's special work for plastic pollution control and sought out reasonable suggestions for the formulation of standards for degradable alternatives for standardized procurement.



Pushing Suppliers to Fulfill their Responsibilities

- Economic contract performance rate of **100%**
- The number of suppliers whose cooperation has been suspended due to unqualified Corporate Social Responsibility was **0**
- The number of suppliers included in the "List of Seriously Illegal and Untrustworthy Enterprises (Blacklist) Information" in business activities was **22**

The total number of suppliers reached **21,636**

During Year 2021, China Southern continued to promote the construction of a supplier management system, standardized supplier management and clarified its management requirements such as supplier storage, graded use, evaluation and rating and promoted suppliers to fulfill their own Corporate Social Responsibilities.

Supplier Selection

The Company established - and later improved - the standards for the selection of suppliers of varied categories, realized a closed-loop management of product quality through the three-acceptance links of factory inspection, optimization and improvement and delivery and production, and evaluated suppliers according to the acceptance data.

Supplier Hierarchical Management

This was combined with supplier complaints, reward management, restricted transaction supplier management, supplier activity performance management, graded management of suppliers, and divided suppliers into excellent, qualified, registered and restricted transaction suppliers and created a list of enterprises prohibited from trading.

Supplier Performance Assessment

The Company centered on the dimensions of "business, technology, delivery, quality and service" and other dimensions to carry out dynamic assessment and evaluation of contracts, acceptance, payments and after-sales implementation stages for project transaction suppliers to realize information-based dynamic evaluation to improve the supplier's "quality file".

Supplier Capacity Improvement

Under the duress of intensive COVID-19 restrictions, airline directors communicated regularly with suppliers through video conferences, website presentations, online questionnaires, text messages and other social media methods. The China Southern Procurement and Tendering website released the "Notes on Preparing Bidding Documents" to standardize the preparation of suppliers' bidding documents and remind them of common mistakes in bidding which aided in improving suppliers' capabilities.

Specific Supplier Data		
	Indicator	2021
Suppliers by Region	Central South / each	10,368
	Northeast / each	2,315
	East China / each	3,130
	North China / each	3,248
	Northwest / each	1,271
	Southwest / each	1,082
	Hong Kong, Macao and Taiwan / each	10
	Other areas/each	212
Total number of suppliers		21,636
The number/number of supplier evaluations carried out		21,636

Strengthening Exchanges and Cooperation

China Southern actively served China's national strategies by assisting regional coordinated development which strengthened exchanges and relationships between domestic and foreign industries and shared development results with the industry.

Supporting Regional Development

During Year 2021, China Southern leveraged its aviation advantages to serve regional development, actively integrated into the construction of the Guangdong-Hong Kong-Macao Greater Bay Area; served to integrated construction of the Yangtze River Delta and the construction of the Hainan Free Trade Port ... and promoted the domestic and international dual circulation ... a vital part of the implementation of China's national strategy.

Serving the Development of the Guangdong-Hong Kong-Macao Greater Bay Area



Increasing Investment in Transport Capacity

The Company further expanded China Southern's origin route network in the Greater Bay Area and opened new routes from Guangzhou to Wuhu/Heze/Ankang/Diqing/Dunhuang/Jiuzhai/Yibin/Shangrao/Zhangjiakou and Shenzhen to Ankang/Kashgar.

China Southern further encrypted the domestic trunk lines in the Greater Bay Area and continued to encrypt flight schedules in the routes of Chengdu/Chongqing/Hangzhou/Xi'an.



Enriching Aviation Products

In a concentrated effort to enriched the Bay Area Pass product system, China Southern focused on the travel challenges of passengers in the Bay Area such as origin airport pick-up and light rail products. The airline added specific marketing products such as hotel coupons, dining coupons, valet parking coupons and other products to meet the needs of high-value members in various travel scenarios. The Company likewise upgraded the flexible change products available to passengers in the Bay Area and enabled travelers to freely change their travel time and destination on the 30 main business routes of Guangzhou, Shenzhen and Zhuhai.



Optimizing Passenger Services

The Company opened self-service check-in kiosks at ticket offices directly under the auspices of China Southern Airlines in Guangzhou as well as launching passenger and baggage check-in services at the terminal buildings of 18 major cities throughout the Pearl River Delta.

The Integrated Construction of the Yangtze River Delta

An in-depth study of the overall design and framework structure of China Southern's ecosystem construction is the determination to build the Yangtze River Delta ecosystem project with the three major starting points of China-Taiwan system construction ... namely customer systems and service process construction. Airline officials carried out "demand collection, service confirmation, ticket booking, service guarantee, feedback collection", a critical five link test that provided strong support for the construction of the Yangtze River Delta ecosystem.



China Southern actively supported the Hainan Consumer Fair

Serving the Construction of Hainan Free Trade Port

The Company signed a strategic cooperation agreement with the Hainan Provincial Government to jointly carry out multi-field and in-depth cooperation that focused on the key direction of Hainan Province's economic development and the active participation in the construction of the Hainan Free Trade Port. These efforts increased transport capacity and overall investments in domestic and foreign airline networks which also increased upstream and downstream investment in the aviation industry.

Case | China Southern Service Supporting Hainan Consumer Fair

On May 7, the first Consumer Expo was opened in Haikou, Hainan. China Southern provided "Affinity and Refinement" Chinese-style boutique services for the Consumer Expo and exhibitors to ensure the smooth opening of the Consumer Expo. It was an important measure for China Southern to serve the national strategy for and construction of the Hainan Free Trade Port and help the national recovery from COVID-19 and growth of the international community.



Promoting Industry Development

Throughout Year 2021, China Southern actively participated in industry exchanges and furthered cooperation with government, enterprises and universities, and joined hands with airline partners around the globe for win-win development to jointly promote the continued growth of China's aviation industry.



Case | Participating in the 4th CIIE

On January 6, at the signing ceremony of the China Southern Group's trading sub-group at the 4th China International Import Expo, as a "core supporting enterprise" and "designated air carrier", China Southern senior managers signed purchase agreements with 14 large-scale international manufacturers and suppliers in the global aviation service field to further the growing industry exchanges.



Case | Participating in the 13th China Airshow

On September 28, the 13th China International Aviation and Aerospace Expo opened at the Zhuhai International Air Show Center in Guangdong. As the official strategic partner and special air carrier of the 2021 China Air Show, China Southern displayed its first painted aircraft jointly painted with the Zhuhai Municipal Government, vividly illustrating the Guangzhou-Beijing "dual hub" and China Southern Great Bay and Beijing Daxing district, as well as China Southern's "ecosphere", "green flight" and other key brand projects. China Southern officials also signed a number of cooperation agreements with domestic and international partners to support the aviation industry.



China Southern participated in the 13th China Air Show



Case | The First Batch of National Industry-Education Integration Enterprises

On July 22, 2021, the National Development and Reform Commission and the Ministry of Education jointly announced the list of industry-education integration enterprises and pilot cities for integration of industry and education. China Southern became one of the first 63 companies to enter the list, and was the only company in the air transport sector to successfully make the list.

To actively deepen school-enterprise cooperation, the Company contracted with 20 colleges and universities to carry out 24 training projects spanning professional positions such as pilots, flight attendants, and maintenance personnel.

When focusing on building innovative platforms, China Southern again took the industry lead in building a big data platform, accelerating the application of new technologies such as cloud computing, big data, artificial intelligence and blockchain use to establish the Pearl Innovation Studio and organized the "five small" innovation work.

The Company further explored the whole chain integration system by creating and delivering the China Southern's Guangzhou Industry-Education Integration Training Base and China Southern's North China Industry-Education Integration Training Base with emphasis on the establishment of a "production"-based, "learning" at the core and the "use"-oriented innovation service chain.

Moving Forward Hand in Hand - Setting Sail Toward a Wonderful Future

05



Contributing to the achievement of the UN 2030 Sustainable Development Goals



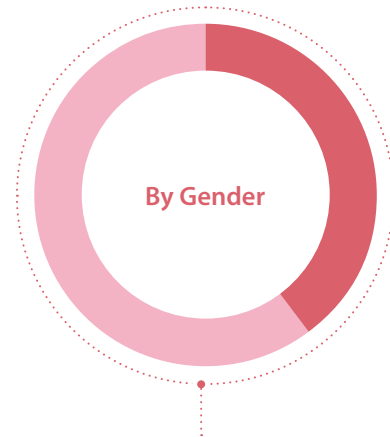
China Southern adhered to people-oriented, attached great importance to the growth and development of employees, carried out social welfare activities based on its own professional advantages, enthusiastically gave back to the society, helped rural revitalization, and joined hands with all sectors of society to create social value and set sail for a bright future.

Helping Employees Flourish

China Southern senior leaders worked diligently to protect the legitimate rights and interests of all employees in accordance with the law, helping to improve their professional skills while providing a broad development stage for employees to balance their work and life and helped employees realize their professional value.

Employee Rights

China Southern strictly abides by national labor laws and regulations, providing diversified and equal opportunities, avoiding forced labor and prohibits child labor while improving salary and welfare guarantees. The Company also expounds on its democratic management with comprehensive inspections and investigations on violations while respecting and protecting the privacy rights of all employees and fully protected their rights and interests.

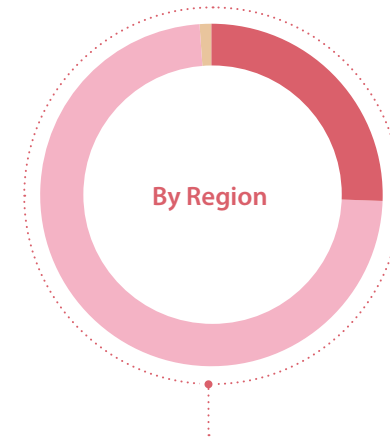


Female: 39,205
Male: 58,893

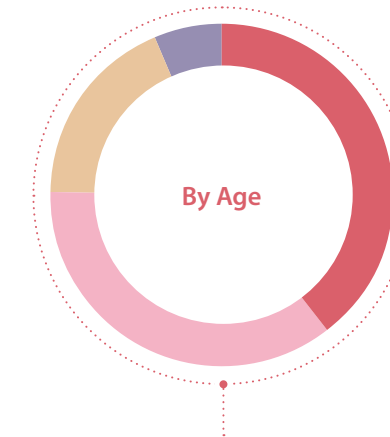
The total number of employees is
98,098



- Pilots: 11,305
- Flight Attendants (including part-time safety officers): 21,216
- Air Force Security Officers: 3,685
- Maintenance System: 15,979
- Flight System: 2,319
- Passenger System: 7,887
- Cargo System: 5,572
- Ground Service System: 11,475
- Information System: 1,788
- Financial System: 1,782
- Other: 15,090



- Guangzhou: 25,167
- Domestic (except Guangzhou): 72,029
- International: 902



- 30 and under: 38,941
- 31-40: 35,113
- 41-50: 17,985
- 51 and above: 6,059

Employee Training Data			
		Employee Training Coverage/ Person	Training Time - Per Employee/Hour
By Gender	Male	46,879	81.65
	Female	34,374	63.54
By Employment Type	High level	772	61.87
	Middle level	8,422	73.71
	Basic level	72,059	74.76

- Employee labor contract signing rate reached **100%**
- social security coverage for all employees **100%**

- 3,976** new employees recruited
- 697** foreign employees

- 25.3%** percentage of female managers

- 14.2** vacation days per employee

- 1** employee died due to work (sudden illness during work)

- 12,839** working days lost by employees due to work-related injuries

Diversity and Equal Opportunity

Adhered to the employment of diversity and anti-discrimination and protecting the rights of foreign employees, China Southern Airlines senior leaders put forth and signed the "Special Collective Contract for the Protection of the Rights and Interests of Female Workers" during Year 2021 to ensure that the recruitment, assessment, promotion, evaluation of professional and technical positions, enjoyment of benefits and implementation of the nation's national retirement system.

The Company respects employees from different countries, regions, creeds, races, genders and educational backgrounds. While continuously developing its domestic business, China Southern Airlines is committed to the localization of

its international market operations, and actively strove throughout Year 2021 to promote the training of local employees in overseas institutions and the localization of management talents, with a localized employment ratio of 84%.

Salary and benefits

China Southern adheres to equal pay and benefits for equal work and established and improved its salary system, as well as a post-based salary scheme which strengthened salary incentives for key positions and high-level talents, and provided employees with market-based salaries. A series of special subsidy policies such as front-line subsidies, isolation subsidies, centralized management subsidies, and communication subsidies were introduced during Year 2021 and the standards for meals during COVID-19 isolation periods and the standards

for condolences for quarantined personnel have been clarified to help employees solve their difficulties.

In addition to honoring national statutory holidays, employees can also enjoy: Paid annual leave, Family visit leave, Marriage leave, Birthday leave, and Female employees can take advantage of maternity and breastfeeding leave periods. Every year, China Southern provides employees with free health examinations; five paid insurance programs and two housing funds; supplemental medical insurance policies; upgraded multiple guarantees and a streamlined medical reimbursement policy. During Year 2021, the Company put forth a new supplementary medical insurance policy that increased the number of people covered by supplementary medical insurance to 123,000.

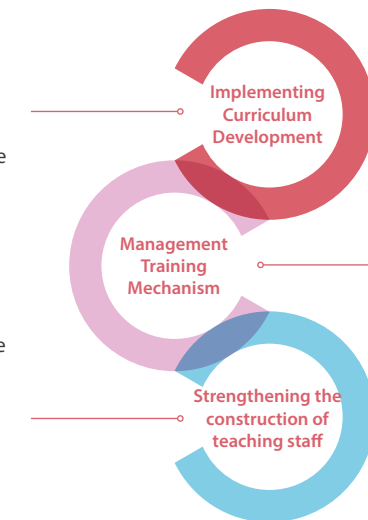
Employee Development

Throughout Year 2021, China Southern was committed to the career development channels of all employees, building a "strategic, pioneering, and platform-based" training system.

By carrying out training opportunities for its employees, the Company helped staff improve their professional skills to realize their personal value with additional services themed to internationally-posted staff with new opportunities to study in China as well as a wealth of available online training courses.

The Company completed the curriculum development of the "TTT Adjunct Faculty Teaching Enhancement Project", covering leadership, flight attendant, language and business courses.

Standardized the management of the Company's part-time teachers, and conducted training and assessments on flight attendant teachers, language teachers, and business teachers.



China Southern Airlines launched the first batch of management trainee programs and arranged for a global recruitment management trainee program. This first-time worldwide effort focused on management trainee competency models, assessment plans, training and development plans as well as improving Company supporting policies that enhanced the airline's brand recognition of its new management trainee program.

Democratic Management

Airline staff: Regularly held employee representative meetings, Printed/distributed a trial program entitled, "Opinions on the Proposal Work of China Southern Airlines Group Employee Representatives", Studied and formulated the "China Southern Group Employee Representative 2021 Proposal Work Project Plan", Launched the China Southern Employee Representative Proposal Work Platform, Actively carried out democratic management training courses, Organized and carried out inspections of employee representatives, Required employee representatives to inspect labor protection and employee rights collective contracts and the signing and implementation of labor contracts, and Continued to promote the democratic management of employees.



Conducting Diversity Training		
Training Type	Training Projects	Training Participants
Leadership Training	Young and middle-aged class, Qihang flight, Hongmiao class	153
	Special training courses on four major business systems	74
	Training course for senior and deputy management cadres	377
Full-Cycle Cadre Training	Party building training	580
	Management training	821
Crew Training	On-the-job training	37,021
	Territorial training	3,232
Language Training	Language training (including "Double Hundred English" program)	1,108
Business Training	Security Information Management Training Course	685
	International Lecture Hall	673
	Legal Lecture Hall	206
	Cloud T Project	60
Exam Appraisal	Pilot English Test	2,790
	Flight Attendant English Test	7,759
	Flight Attendant and Security Check Skills Appraisal Theory Test	737
	Flight Attendant and Security Check Skills Practical Test	1,304

Caring for All Employees

China Southern senior leaders truly care about the health and welfare of all 100,000+ employees and directed staff to create and deliver various recreational and sports activities for employees and to enriched employees' spare time. Concurrently, China Southern worked to strengthened the assistance available to female employees and employees facing varied challenges during the COVID-19 pandemic.

Work-Life Balance

Company directors focused on building the 1+e employee service system and shared service platform to improve the support facilities available in the flight crew dormitory area, adding new gymnasiums and supermarkets as well as special catering services as well as varied cultural and sports activities.



Staff reading activities

Caring for Female Employees

To fully support all female and model workers, the Company senior managers directed staff to provide reading activities of "A Century of Dreams, Happiness Sailing - Scholarly 38" and participate in the national online legal knowledge competition for "Love Female Workers, Law is Aside" ... which focused on the needs of pregnant and breastfeeding female employees who stuck to their posts throughout the COVID-19 crisis and worked together to solved time-sensitive issues for female employees.



"Love Female Workers, Law is Aside" Women's Volunteer Service Team Propaganda Knowledge of Law



The theme of "Revisiting the Red History, Celebrating the 100th Anniversary of the Founding of the Communist Party"



Employee Calligraphy Exhibition

During Year 2021, the Company mobilized more than **48,359** staff to participate in mutual fundraising

Provided critical illness assistance services for

882 employees

Hospital visits by more than

212 people
people received medical care



"Hundred Years of Dreams, Happiness" Setting Sail - Scholarly 38" Reading Activity

Helping Needy Employees

The Company mobilized employees via the "Management Regulations of China Southern Employee's Critical Illness Mutual Aid Fund" to voluntarily participate in the collection of critical illness mutual aid funds. These monies provided employees with critical illness mutual assistance services and allowed needed medical services for critically ill employees, their spouses and children.

Practicing the Original Intention and Doing Good Work

**SPECIAL PLAN
"Double-Flying"
Families**

Air crews are one of the most important human resources of China Southern Airlines and "double-flying families" are a special group among them. Compared with ordinary families, they face many challenges and sacrifices. China Southern senior leaders have always attached the greatest importance to the harmonious construction of the "double flying family." During Year 2021, the Company has taken it as a key livelihood project of "I do practical things for the masses", by starting the "Flying Together, Kapok Concentric" care project. From completed information surveys, question collection, analysis and sorting, interviews and research, introduction of measures and other online formats of EAP group support structures came important family-centric projects, including: "Double-Flying Family Care Camp", "Kapok Caring for "Double-Flying Family", "Meet You - Fly Together", "Double-Flying Family" Selection, The most beautiful "Double-Flying Family" Photo Exhibition, and A collection of family stories, as well as parent-child summer camps, seminars and condolences nearly 40 times, creating a good atmosphere of caring for "double-flying families". This led to the issuance of the "China Southern Double Flying Family" Care Project.

The Many Voices of the "Double-Flying Family"

China Southern currently has 1,510 "Double-Flying Families" that involve 3,020 employees. Through e-mails and interviews, airline staff conducted extensive research on the outstanding difficulties of the "Double-Flying Family", collecting a total of 101 questions in 23 categories in four aspects, including operation scheduling, vacation and rest, family support and service guarantee, and carried out 10 project investigations.

At 21 territorial units, airline staff encountered 109 project problems, solved 79 territorialization challenges, held more than 50 work coordination meetings, interviews and research symposiums, and conducted 1,103 person-times interviews. All survey and interview results showed that scheduling, vacations and childcare were the most concerning issues for "double-flying families".

Building a Normalized Care Mechanism

The three major matrix systems of flight, cabin, and security were suggested and opinions put forward with suggestions on common issues such as personnel duty scheduling, vacation and rest arrangements and employee caring as well as exploring the opportunity of a caring mechanism.



Senior Company officials set up a special project team which drafted a work plan and launched the "Flying Together, Kapok Concentric" project to solve specific issues and challenges.

Airline staff hosted "Double-Flying Family" project research meetings that allowed for the collection of discussions on operation scheduling, vacation and rest and effectively implemented the party organization's care and concern for the "Double-Flying Family" and the air crew.



Hainan Branch Launched "Double-Flying Family" Care Camp



Xinjiang Branch "Double-Flying" Happy Family Day



"Now, during the annual birthday holiday, parents or children's birthdays can be used instead of their own birthdays. Female flight attendants (over the age of 45 or breastfeeding) can choose their own flight time limit within a certain range every month. The current system is more flexible than that of a decade ago."

- Tang Minyuan, front-line employee



Henan Branch "Meet You, Fly Together" Double-Flying Family EAP Growth Camp

Practicing the Original Intention and Doing Good Works

**SPECIAL PLAN
Cultural Assistance**

During Year 2021, China's poverty alleviation battle achieved many comprehensive victories.

In accordance with relevant policy requirements of the State-owned Assets Supervision and Administration Commission of the State Council and the National Rural Revitalization Bureau, the China Southern Group, on the basis of completing the finishing work of poverty alleviation, began its fixed-point assistance work including "increasing targeted and characteristic cultural assistance, deepening poverty alleviation and promoting rural revitalization" into the first batch of list of key livelihood projects "I do practical things for the masses".

A series of cultural assistance activities have been carried out to effectively connect the achievements of consolidating and expanding poverty alleviation with rural revitalization.

Cultural Assistance Helping Thousands of Households

China Southern senior staff implemented a "Spread the Party's Voice into Ten Thousand Homes" cultural assistance project, donated five million to purchase 5,617 TV sets, and evenly distributed them to households without TV sets in Moyu and Pishan counties.

Cultural Assistance Lighting up Primary School

The Moyu China Southern Pearl Primary School, constructed with an investment of 58 million, was officially opened for use on September 14 and welcomed 1,206 new students, which greatly met the educational needs of local schools and academic degrees in Moyu County.

The Company directed staff to help set up a rural dance team and choir in Brakebexi Village, Xinjiang, a new village-level library and the

renovation of toilets and kitchens under a total investment of more than 2 million towards poverty alleviation in Xinjiang.

The Company supported the listing of Rural Revitalization Park in Guojia Town, Xingcheng City, Liaoning Province to build the park with features from local industries, education and training and the beloved rural lifestyle.

In the future, China Southern senior leaders will bravely assume the responsibility of a central enterprise, perfect the aviation-specific poverty alleviation model, gradually build China Southern's characteristic assistance model, effectively connect the consolidation and expansion of poverty alleviation achievements with rural revitalization, and resolutely complete fixed-point assistance tasks and make contribution to rural revitalization.

Special Flight

During Year 2021, China Southern actively carried out special flight missions and used its aviation advantages to assumed the responsibility of a central enterprise for the maintenance of social harmony.



Case Escorting the Son of a Volunteer Veteran Back Home

The ancestral home of one very special Volunteer Army veteran is Jieyang City, Guangdong Province. In 1951, he participated in the Volunteer Army's entry into the DPRK and later returned home with honors after a harrowing escape from a brutal battlefield death. Later, he again responded to his nation's call to support the construction of the Great Northwest and worked for the Lueyang Railway Bureau, Hanzhong City, Shaanxi Province until retirement.

On February 9 this year, the old man passed away and in order to satisfy his dying wish to return to his hometown, his children decided to send his ashes back in Guangdong. On February 18, China Southern escorted the urns of this volunteer veteran from Hanzhong to his hometown in Shenzhen. The staff of China Southern were deeply moved by hearing of heroic deeds for the Motherland. Airline staff sorted out all aspects of ticket purchase, check-in and boarding, and reached out to officials at Hanzhong Airport many times to provide seamless guarantees throughout the whole process, and assisted the families of the aged veteran to carry the ashes of the hero to board CZ3676 Hanzhong-Shenzhen flight "back home".



China Southern escorted the soul of a volunteer veteran to his hometown



"A big thank you to China Southern for terrific help so we could send our father, one of the volunteer armies, back home to us!"

- Mr. Li, son of a volunteer veteran

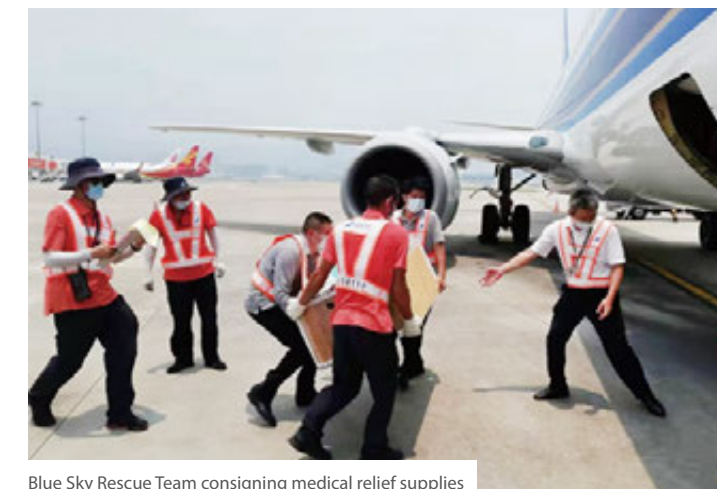


Case Fully Supporting the National Rural Revitalization Vocational Skills Competition

The National Rural Revitalization Vocational Skills Competition was held from September 26 to 28 in Urumqi, Xinjiang Uygur Autonomous Region. In the early stage of the competition, China Southern staff worked hard to overcome the impact of the COVID-19 pandemic to contact the Xinjiang branch to open up a green travel channel for the Guangdong delegation, and set up an exclusive arrival team from the China Southern Xinjiang branch to hold the "National Rural Revitalization Vocational Skills Competition" pick-up card. Airline officials arranged special staff members to arrange arrival greetings and the presentation of flowers at the door of the cabin. Additionally, China Southern staff from the Xinjiang Branch arranged for an exclusive vehicle to ensure the effortless participation of all members of the Guangdong delegation with "Affinity and Refinement" service.



China Southern Xinjiang Branch picked up the Guangdong delegation



Blue Sky Rescue Team consigning medical relief supplies

Case The Shenzhen Blue Sky Rescue Team on the Job in Henan!

On July 24, a group of 15 staff from the Shenzhen Blue Sky Rescue Team departed on the airline's CZ6478 to Henan Province to participate in flood relief. China Southern arranged special check-in counters and security check channels, priority checked baggage and guided the Team members to the boarding gate, securing the transportation of medical relief supplies including three lifeboats and medical supplies and rescue equipment totaling 480 kilograms. In addition to providing complimentary transportation services for public welfare goods, China Southern also opened a green channel and specially dispatched a ground services team to unload the rescue equipment upon arrival to ensure the smooth arrival of rescue materials in Henan.



Charity

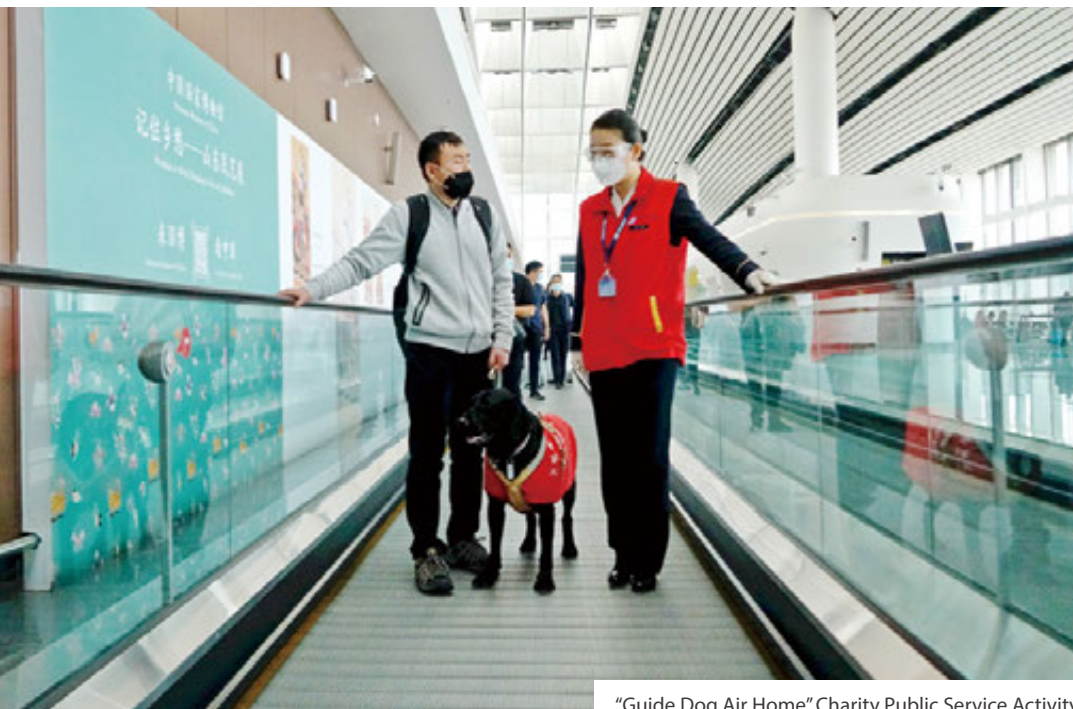
China Southern met and exceed the Corporate Social Responsibility of a substantial central enterprise by actively carried out numerous public welfare and charity activities, organized voluntary services, and gave back to the society with practical actions. During Year 2021, China Southern's award-winning "Ten Fen" Care Foundation donated 100,000 yuan to the "Love Knows No Borders" international charity sale event of the Ministry of Foreign Affairs, and 10,000 yuan to the "Guangdong Province Let Love Go Home Public Welfare Promotion Association" that provides meaningful caring for children during distress.

Honor

China Southern Volunteer Association was awarded the "Four 100" Best Volunteer Service Organization in the National Learning from Lei Feng Volunteer Service in 2020"



China Southern Training Center Launching Public Welfare Research Activities



"Guide Dog Air Home" Charity Public Service Activity

Practicing the original intention and Doing Good Works

SPECIAL PLAN

Carrying out Diverse Youth Volunteer Service Projects

China Southern has thoroughly implemented the spirit of General Secretary Xi Jinping's important instructions on learning from Lei Feng's volunteer service by cultivating China Southern's outstanding youth volunteer service projects where there was a positive atmosphere for volunteer service with service achievements that have inspired many young people to devote themselves to voluntary activities and contribute to the construction of a harmonious society.



"Highland Kapok Blooms" Student Aid Project



"Kapok Kids Fly" Project



Multidimensional Review

For the projects participating in the competition evaluation, the evaluation focused on six dimensions – "featured project content", "standard project management", "guaranteed project team", "response to social evaluation", "on-site display" and "response performance".



Marketing the "Affinity and Refinement" Brand

The categories of projects included warm winter action, major transportation guarantee, volunteer service in peak season, civil aviation knowledge into campus and other volunteer service projects with the special "Affinity and Refinement" characteristics of China Southern, as well as projects in rural revitalization, environmental protection, large-scale competitions, emergency rescue and other aspects.



Pilots "Send Students to Exams with Love" project



Impressive Volunteer Service Platform

The China Southern Group Volunteer Service Steering Committee was established to issue relevant implementation opinions and guidelines for volunteer service and to continuously strengthen the organization, team, project, mechanism and cultural construction of China Southern Airlines' volunteer service efforts.



Promoting Information Management

The China Southern Group Volunteer Service Steering Committee also put forth efforts to market its volunteer service platforms such as Volunteer Exchange and i-Volunteer within the Company's 100,000 staff and managers, and provided detailed information for volunteer registration, project development, and volunteer service time records.

Overseas Responsibility

China Southern took the initiative to undertake its international Corporate Social Responsibilities by adopted various measures to promote the development of local communities and helping to build a community with a shared future for mankind.



Case | Serving Auckland Community Residents

The “Chinese Community Service Center” established in 1998, is a charitable professional community service organization serving new Asian immigrants and Asian communities in Auckland, New Zealand. Starting from June 2021, the Auckland Sales Office participated in a weekly Chinese community service volunteer activity which included arranging COVID-19 vaccinations, mutual assistance and assisting help seekers to make hospital appointments. At the Chinese Community Service Volunteer Commendation Event in August 2021, five employees of the China Southern Auckland sales department were rated as outstanding volunteers of the year.



Serving Auckland Community Residents

Honor

China Southern's international publicity case “Culture Going Global, Beauty in Communion” won 4th Place in the SASAC 2021 Excellent Case of “Cross-Cultural Integration” in International Image Construction of Chinese Enterprises



Case | Promoting Economic Development in New Zealand

In the face of the sudden COVID-19 pandemic, New Zealand's economic development has been impacted. China Southern has always maintained the normal operations of the Guangzhou-Auckland route to ensure that passengers can return home, and the safe transportation of anti-pandemic materials, production and live materials. As the largest airline in the People's Republic of China, China Southern was and continues to be uniquely positioned to make significant contribution in maintaining trade between New Zealand and China during extremely challenging times, and fulfilled the promise of “Sino-New Zealand Ties” with practical actions.



Shipping supplies to New Zealand



Case | Sponsored New Zealand “Chinese Week”

New Zealand Chinese Week is a Chinese language learning activity initiated by local New Zealanders to encourage more local people to learn Chinese.

Since 2014, China Southern has supported this activity and during Year 2021, China Southern and officials from the Chinese Language Week jointly launched the “Five Days Five Phrases Challenge” online event. Chinese Language Week staff created a dedicated webpage page for the “Five Days Five Phrases Challenge” event on the official website, and launched an event on its Facebook and Instagram, which received 99,931 exposures and 61,064 people were participants.

Sponsoring New Zealand “Chinese Week”



Outlook

During Year 2022, under the guidance of Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, China Southern Airlines will thoroughly implement the general requirements for party building in the new era and the party's organizational line in the new era, and anchor the Company's "14th Five-Year" development goals and "5566" development goals to guarantee the high-quality development of China Southern with high-quality party building, highlighting the political, leadership and cohesive nature of party building which provides for a strong guarantee for building a world-class air transport enterprise and becoming a stronger and better state-owned enterprise which remains true to the original intention, keep in mind the mission and setting sail for a new journey to a beautiful blue sky.



Adhering to Safe Development

The Company has remained steadfast to its overriding principle of Safety First with emphasis preventing and resolving potential safety risks, improving safety quality and ensuring that the safety situation continues to be stable.

Adhering to High-Quality Development

The Company scientifically grasped the relationship between "quantity" and "quality" to enhance the awareness of input and output and correctly handle the relationship between scale, speed and efficiency which improved the efficiency of resource allocation.

Adhered to Innovative Development

The Company vigorously promoted technological, management, product and service innovations that worked in unison to accelerate the digital and intelligent transformation of China Southern Airlines.

Adhering to Cooperative Development

The Company continued to deepen its cooperation with domestic airlines to jointly cope with the current challenge of the COVID-19 situation; continued to explore pathways of international cooperation and accelerated the establishment of new international cooperative relations by strengthening the cooperation between the upstream and downstream of the industrial chain and accelerated the creation of the new China Southern ecosystem.

Adhering to Shared Development

The Company actively undertook the responsibility and mission of a central enterprise to bring returns to shareholders, benefits to employees, value for passengers, actively gave back to the society, as it strengthened energy conservation and emission reduction, consolidated the achievements of poverty alleviation and promoted the sharing of development achievements.

List of Policies and Regulations

ESG Indicators	Internal Policies of Year 2021	Relative Law and Regulations of Year 2021
A1 Emissions	Management measures for verification of the annual carbon emission data monitoring report of China Southern Airlines flight activities. China Southern Group Anti-pollution and Pollution Control Work Plan.	
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.	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 Air Pollution. Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste. Law of the People's Republic of China on the prevention and control of noise pollution. 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 the 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 peaking carbon dioxide emission and carbon neutrality goal and realization path.	
B1 Employment	Regulations on labor contract management of China Southern Airlines Co., Ltd. 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 the People's Republic of China.
B3 Development and Training	China Southern Airlines training master Plan (2018-2025). Regulations on the Management of Ground Positions. Administrative Measures for Crew Qualification Evaluation and Employment. Administrative Measures for Aviation Safety Officer Grades. Classification Management Measures for Captains.	

ESG Indicators	Internal Policies of Year 2021	Relative Law and Regulations of Year 2021
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. Regulations on employee punishment. 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.
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).	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 during Year 2021. Supervision measures for the group's implementation of the spirit of the eight provisions of the Central Committee. List of exemption items for operation and investment of China Southern Airlines.	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. Law of the People's Republic of China on administrative sanctions against public officials.
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. Guidelines of China Southern Airlines Group system on further strengthening the orderly participation of volunteer service teams in pandemic prevention and control and resumption of work and production. Notice on organizing and mobilizing volunteers to fully support and participate in pandemic prevention and control.	Charity law of the People's Republic of China. Voluntary Service Ordinance.

Performance Data

A. Environment					
ESG Indicator		Unit	2019	2020	2021
A1. Emissions					
A1.2	Carbon dioxide emissions (scope I) ^{1, 2}	10,000 tons	2,836.03	1,931.80	1,910.86
	Carbon dioxide emissions (Scope II) ^{1, 2}	10,000 tons	16.74	14.69	13.52
	Carbon dioxide emissions ^{1, 3}	10,000 tons	2,852.77	1,946.49	1,924.38
	Carbon dioxide emission per ton kilometer	Ton / 10,000 ton km	8.69	9.29	8.98
A1.3	Hazardous waste (maintenance)	ton	615.205	471.508	704.903
A1.4	Non-hazardous waste (onboard service)	m ³	7,909.5	8,896.0	11,063.0
A1.6	Waste gas treatment (maintenance)	10,000m ³	22,560	28,800	26,080
	Industrial waste water treatment (maintenance)	ton	16,477.0	11,025.9	12,987.0
	Treatment of aviation food production waste water	10,000 tons	22.4	8.6	9.3
	Treatment rate of aviation food production waste water	%	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	900.33	613.27	605.31
	Fuel consumption per ton kilometer	Ton / 10,000 ton km	2.76	2.95	2.85
	gasoline	ton	4,869.11	3,922.78	3,452.12
	diesel oil	ton	8,598.59	7,282.09	6,384.37
	coal	ton	550	0	0
	electric	10,000 kWh	28,190.80	27,873.09	25,651.38

A. Environment					
ESG Indicator		Unit	2019	2020	2021
A2.1	natural gas	10,000 m ³	2,537.49	965.80	930.83
	liquid gas	ton	195.14	167.17	215.68
A2.2	Total water consumption	10,000 tons	696.65	612.20	477.97
	Water consumption intensity ⁴	m ³ / 10000 yuan	0.4514	0.6585	0.4653
A2.5	Consumption of packaging materials (air food)	ton	881.03	566.66	419.99
B. Society					
ESG Indicator		Unit	2019	2020	2021
B1. Number of Employees: by gender, type of employment, age group and region					
B1.1	Number of Employees	Person	103,876	100,431	98,098
Gender	Male	Person	60,882	52,883	58,893
	Female	Person	42,994	47,548	39,205
Region	Guangzhou	Person	25,979	25,215	25,167
	Domestic (except Guangzhou)	Person	76,588	74,219	72,029
	International	Person	1,309	997	902
Education	Postgraduate and above	Person	4,404	4,399	4,283
	Undergraduate	Person	50,660	51,494	52,160
	Junior college	Person	31,194	29,780	28,201
	High school and below	Person	17,618	14,758	13,454
Age	Under 30	Person	49,954	43,831	38,941
	31-40 years old	Person	30,986	32,149	35,113
	41-50 years old	Person	18,033	19,079	17,985
	Over 51 years old	Person	4,903	5,372	6,059

B. Society					
ESG Indicator		Unit	2019	2020	2021
B2. Health and Safety					
B2.1	Work related deaths ⁵	Person	1	1	1
	Proportion of employees died at work	%	0.0010	0.0010	0.0010
B2.2	Working hours lost due to work	Working day	17,508	12,242	12,839
B3. Development and Training					
Proportion of Trainees: by Gender					
B3.1	Total number of trainees	person	63,665	68,630	81,253
	Male	person	35,049	38,397	46,879
	Female	person	28,616	30,233	34,374
Average Training Hours of Employees: by Gender					
B3.2	Average training hours of employees	hour	134.36	128.25	74.57
	Male	hour	153.55	128.81	81.65
	Female	hour	103.39	128.74	63.54
B5. Supply Chain Management					
Number of Suppliers: by Region					
B5.1	Total number of suppliers	Company	13,479	14,431	21,636
	Central South	Company	4,473	6,900	10,368

B. Society					
ESG Indicator		Unit	2019	2020	2021
B5.1	Northeast	Company	1,260	1,596	2,315
	East China	Company	1,323	1,926	3,130
	North China	Company	1,330	2,288	3,248
	Northwest	Company	861	834	1,271
	Southwest	Company	742	739	1,082
	Non-Mainland China	Company	3,490	148	222
B6. Product Responsibility					
B6.2	Number of Complaints Received about Products and Services				
	Complaint rate	%	0.3071	0.1320	0.4394
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					
Resources Used in the Focus Area					
B8.2	Number of volunteer service participants	Person time	3,500	15,000	18,000
	Working time	10,000 hours	3.6	1.5	1.8
	Perform important charter tasks	Shift	54	321	74
	Transport personnel for important charter flights	Person time	4,915	42,705	7,288

Note: Unless otherwise specified, the data coverage of this report is consistent with the 2021 Financial Report of China Southern Airlines.

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 during Years 2011 and 2012).

2. Category 1 carbon dioxide includes direct emissions from aviation kerosene, gasoline, diesel, coal, natural gas and liquefied gas; Category 2 includes indirect carbon dioxide emissions caused by outsourcing power.

3. Carbon dioxide emission = category I carbon dioxide + Category II carbon dioxide.

4. Water consumption intensity = total water consumption / total output value.

5. The number of work-related deaths in Year 2021 was the sudden illness of employees during work.

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.	P24-25, P50-54, P102, P104
	A1.1	Emission types and relevant emission data.	P24-25, P104
	A1.2	Direct (range 1) and energy indirect (range 2) total greenhouse gas emissions (in tons) and (if applicable) density (in units of production, per facility).	P24-25, P104
	A1.3	Total amount of hazardous waste generated (in tons) and (if applicable) density (in units of production and facilities).	P54, P104
	A1.4	Total amount of harmless waste generated (in tons) and (if applicable) density (in units of production and facilities).	P54, P104
	A1.5	Describe the emission targets set and the steps taken to achieve them.	P21-23, P51
	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.	P21-23, P51
Level A2: Resource use	General Disclosure	Policies for the efficient use of resources (including energy, water and other raw materials).	P20-25, P102, P104-105
	A2.1	Total direct and / or indirect energy consumption (i.e., electricity, gas or oil) and density (i.e., per unit of production, per facility) by type.	P24-25, P104
	A2.2	Total water consumption and density (i.e., per unit of production, per facility).	P105
	A2.3	Describe the energy efficiency goals set and the steps taken to achieve them.	P21-23, P51
	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.	P52-53
	A2.5	The total amount of packaging materials used in the finished product (in tons) and, if applicable, the percentage per production unit.	P105
Level A3: Environment and Natural Resources	General Disclosure	Policies to reduce the significant impact of Issuers on the environment and natural resources.	P20-25, P50-55
	A3.1	Describe the significant impacts of business activities on the environment and natural resources and actions taken to manage the impacts.	P20-25, P50-55
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.	P50-51, P102
	A4.1	Depict material climate-related issues that have and may have an impact on the issuer and corresponding actions to take.	P50-51, P102

B. Society — Employment and Labor Practices			
Main Category	Content	Location	
Level B1: Employment	General Disclosure	Information on: (1) policies on remuneration and dismissal, recruitment and promotion, working hours, holidays, equal opportunities, diversification, anti-discrimination and other treatment and benefits; and (2) compliance with relevant laws and regulations that have a significant impact on the issuer.	P84-86, P102
	B1.1	Total number of employees by gender, type of employment, age group and region.	P84-85
	B1.2	Turnover rate by gender, age group and region.	Involves commercial secrets, not disclosed yet
Level B2: Health and Safety	General Disclosure	Information on: (1) policies for providing a safe working environment and protecting employees from occupational hazards; and (2) compliance with relevant laws and regulations that have a significant impact on the issuer.	P31, P46-47, P88-91, P102
	B2.1	Number and rate of deaths due to work.	P85
	B2.2	Number of working days lost due to work injury.	P85
	B2.3	Describe the occupational health and safety measures adopted, as well as relevant implementation and monitoring measures.	P31, P46-47, P88-91, P102
Level B3: Development and Training	General Disclosure	Policies on improving employees' knowledge and skills in performing their duties. Describe training activities.	P38, P41, P46, P85, P87, P102
	B3.1	Percentage of trainees by gender and type of employees (i.e., senior management, middle management).	P85
	B3.2	Average number of training hours per employee by gender and type of employee.	P85
Level B4: Labor Standards	General Disclosure	Information on: (1) policies to prevent child labor or forced labor and (2) compliance with relevant laws and regulations that have a significant impact on the issuer.	P84, P86, P102
	B4.1	Describe measures to review recruitment practices to avoid child labor and forced labor.	P84
	B4.2	Describe the steps taken to eliminate violations when they are identified.	P84, P102

B. Society — Business Practice			
Main Category	Content	Location	
Level B5: Supply Chain Management	General Disclosure	Environmental and social risk policy of supply chain management.	P103
	B5.1	Number of suppliers by region.	P78
	B5.2	Describe the practice of employing suppliers, the number of suppliers to whom the practice is implemented, and the implementation and monitoring methods of the practice.	P77-78

B. Society — Business Practice		
Main Category	Content	Location
Level B5: Supply Chain Management	B5.3	Describe the management, implementation and monitoring methods for identifying environmental and social risks in each link of the supply chain. P77, P103
	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. P77, P103
Level B6: Product Responsibility	General Disclosure	Information on the health and safety, advertising, labelling and privacy of the products and services provided and remedies: (1) policies; and (2) compliance with relevant laws and regulations that have a significant impact on the issuer. P38-45, P66-67, P74, P103
	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. P66-67
	B6.3	Describe practices related to the maintenance and protection of intellectual property rights. P74
	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. P66
Level B7: Anti-Corruption	General Disclosure	Information on: (1) policies to prevent bribery, extortion, fraud and money laundering; and (2) compliance with relevant laws and regulations that have a significant impact on issuers. P73, P103
	B7.1	Number and outcome of corruption lawsuits brought and concluded against the issuer or its employees during the reporting period. P107
	B7.2	Describe preventive measures and reporting procedures, as well as relevant implementation and monitoring methods. P73
	B7.3	Describe the anti-corruption training provided to directors and employees. P73
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. P30-35, P69, P92-99, P103
	B8.1	Focus on areas of contribution (i.e. education, environmental issues, labor needs, health, culture, sports). P30-35, P69, P92-99
	B8.2	Resources (such as money or time) used in the area of focus. P30-35, P69, P92-99

Report Benchmarking

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	Adhering to Aviation Safety	103-2, 416-2
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Feedback Form

Dear Reader:

Hello and thank you for reading this Corporate Social Responsibility Report.

To further improve our work and make the next CSR Report more in line with your interests, please write to us!

Our address is: China Southern Airlines Company Limited, No.68 Qixin Road, Baiyun District, Guangzhou

Postal code: 51040

Your feedback and suggestions are greatly appreciated.

Your identity is:

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

Optional Question:

1. Are you satisfied with this report?

Yes No Normal

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

Yes No Normal

3. Do you think this Corporate Social Responsibility report truly reflects the content of China Southern's Corporate Social Responsibility work and its impact on stakeholders?

Yes No Normal

4. Can you easily find the information you are seeking in this report?

Yes No Normal

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

Yes No Normal

Open Question:

6. Are there any shortcomings of this report?

7. What would you like to see on a regular basis in this report?

8. What opinions and suggestions do you have on our future Corporate Social Responsibility work and reports?
