**About This Report**

**Name Description**
For convenience of expression, all references to “China southern” “the Company” or “we” herein refer to China Southern Company Limited, or “China Southern Group.” The reference to “XIAMEN AIR” refers to “Xiamen Airlines Company Limited.” All subsidiaries are in the form of “region + the name of the branch.” “Civil Aviation Administration of China” also uses “CAAC.”

**Scope**
The indicators disclosed in this report is mainly sourced from China Southern, and some indicators are extended to China Southern Group. The data disclosure scope has been specified in detail in the report.

**Source of Data**
Financial data used in this report were extracted from audited annual reports of China southern, and other data were sourced from public data of government departments or official corporate documents and statistics. Unless otherwise stated, all financial data in this report are expressed in Renminbi (RMB).

**Reliability Assurance**
The Board of Directors and all directors of the Company hereby guarantee that this report contains no false records, misleading statements, or major omissions, and accept liabilities for the truthfulness, accuracy and completeness of this report.

**Access to the Report**
This report is published in both printed and electronic formats, and can be obtained through—

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This is the 13th annual Social Responsibility report of China Southern Company Limited since 2007. Based on the principles of objectivity, transparency and standardization, the report systematically discloses the philosophy, policies and progress of China Southern in fulfilling its social responsibility.
Letter from the Chairman


Year 2019 marked the 70th Anniversary of the founding of the People’s Republic of China; the 70th Anniversary of the founding of China Civil Aviation and the 70th anniversary of the “two airlines spinning”… all in all a crucial year for securing a decisive victory in the battle against poverty. At the end of Year 2019, China Southern has withdrawn from SkyTeam and is moving forward in a new direction with impetus on expanded international cooperation with our vibrant airline partners. Going through the dual political tests of the Central Inspection and thematic education, the airline has steadily improved its main operating performance. The total turnover of transport and passenger transport reached 3,035 billion tons/km and 152 million person-times respectively, both hitting record highs. In brand finance performance, China Southern Airlines was ranked sixth with a brand value of 146.44 billion (USD), the highest among all Chinese airlines.

Flight Safety is Forever Job No. 1. Security is inextricably linked to the very soul of development, the highest politics, the greatest benefit and the best service we have fully implemented General Secretary Xi Jinping’s important instructions to improve jet safety and reduce greenhouse gas emissions. For example, the "Aviation fuel-cloud" real-time big data sharing platform independently developed by China Southern, is expected to help reduce aviation fuel waste by approximately 1,300 tonnes per annum. China Southern senior managers were invited by the International Air Transport Association (IATA) to participate in the formulation of global aviation fuel data standards and present Chinese solutions for the formulation of global aviation fuel data standards. China Southern is a global leader in the use of bio jet oil as an intercontinental flight and promoted the world’s first 10,000 ton carbon quota swap trade between the European Union and Guangdong Province. The annual bio-fuel consumption of China’s Airlines decreased a significant 3.95% year on year.

Sharing the Fruits of Development. Our staff and senior managers are one voice of China Southern’s most precious resources. This year with the slogan of “ranks can go up and down, income can increase or decrease, employees can move in and out”, we carried out much needed reform of the compensation system to stimulate the vitality of employees and collectively share in the benefits of reform and development. We established a unified training platform and top-level design of training to help cadres and employees grow and develop themselves. China Southern cares for the work/life balance of all employees and provide mutual aid assistance to special groups such as workers and underprivileged families.

Give Back to the Society. The success of China Southern Airlines comes from our support of all sectors of society in our duty to the national requirement of ‘winning the tough battle against poverty’. We kept up the poverty alleviation work in rural China and with our vibrant airline partners. Under the unified command of the CPC Central Committee, people from all walks of life united and victorious force to fight against this insidious epidemic.

At the beginning of Year 2020, the outbreak of the new coronavirus pneumonia brought severe trials to our airline. Under the unified command of the CPC Central Committee, people from all walks of life have gathered to form a united and victorious force to fight against this murderous epidemic. China Southern has undertaken its Corporate Social Responsibility mission to immediately respond and devote itself to service in this war of epidemic prevention and management, from February 20, 2020, China Southern completed 54 Charter rescue flights, transporting 13.94 medical personnel and 1,005,414 tons of rescue supplies to the hardest hit areas. China Southern will take all effective measures and mobilize all forces to prevent the spread of this epidemic through creativ and immediate actions, we believe China has a great impact on China Southern’s flight operation, we strongly believe that China’s economic development process will be even brighter when this epidemic has been eliminated.

In the face of this new campaign, China Southern Airlines will, as always, remain true to its original aspiration. With diligence, perseverance and courage, we will continue to promote 100% safe flight operations … day or night … rain or shine. China Southern will unswervingly serve as a world’s leading airline and facilitator of social progress as we build our airline into a world-class air transport enterprise with Chinese characteristics – making significant contributions for the great rejuvenation of the Chinese nation and the Chinese dream.
Company Profile

China Southern was founded in Year 1995 and six years later was listed on both the Hong Kong and the New York Stock Exchanges. This was followed by a public listing on the Shanghai Stock Exchange in Year 2003. China Southern is the largest airline company in the People’s Republic of China based on fleet size, number of routes and annual passenger carried. China Southern owns 8 holding public air transportation subsidiaries including Xiamen Airlines, Gaohu Airlines and Xiongan Airlines; 16 branches including Krasnoyarsk, Beijing and North; 23 domestic sales offices in nearly every major Chinese city including Hangzhou and Qingdao as well as 55 international sales offices located in major metropolitan destinations such as Sydney, London, Singapore, Dubai and New York City.

Overview

Working closely with partners, the network extends to more destinations around the world. China Southern continues to open new and encrypted route networks, build Guangzhou headquarters hub, and will gradually build Beijing hub into an international and domestic aviation hub, forming a “north-south echo, wing to wing” dual hub pattern with Guangzhou hub. By the end of 2019, China Southern had operated 909 routes, including 113 new domestic routes and 23 new international and regional routes.

Fleet Structure

China Southern has more than 3,000 flights to 44 countries and regions and 243 destinations across the globe with more than 500,000 seats.
Strategy and Governance

China Southern had formulated a “Three Two Four Five Three” strategic framework to build a world-class airline. In 2019, China Southern formulated the Development Program for High-quality World-class Air Transport Enterprises, completed the rolling planning for 2019-2021, and ensured the orderly progress of the Company along the development strategy.

Since its establishment, China Southern has been strictly abiding by the Company Law of the People’s Republic of China, the Securities Law of the People’s Republic of China, the Governance Standards of Listed Companies, Code on Corporate Governance, Appendix 14 to Listing Rules for Stock Exchange of Hong Kong Limited, formulated corporate governance documents such as the Articles of Association, Code of Conduct for the Management, Code of Conduct for Leader and Employees, and established appropriate internal control systems to standardize corporate governance. Please refer to the annual report of China Southern for details of corporate governance structure and corporate governance mechanism.
Compliance Management

In accordance with the compliance management requirements of SASAC, China Southern formulated and issued the Compliance Management Work Plan, established compliance management system, and promoted the integration of manual management and compliance management to ensure compliance operations. At the same time, China Southern has compiled targeted compliance guidelines for related party transactions, data security and privacy protection, labor and employment, anti-monopoly and other key areas to ensure the compliance and implementation of the company’s operation and globalization strategy. In addition, the Company’s legal-risk management is involved in the whole process of key reform projects, and the annual review of major operation decisions, rules and regulations and review of economic contracts covers the whole process of legal review of major projects.

Internal Audits

China Southern Airlines gave full play to the role of internal audit in the company’s supervision system, continued to deepen the reform of audit functions, focused on key areas and important risks, and carried out special audits on the construction of the China Southern base in Beijing Daxing International Airport, poverty alleviation projects and funds, and the digitization and informationization of the company’s operation and employment, anti-monopoly and employment, anti-monopoly and other key areas. China Southern has compiled targeted compliance guidelines for related party transactions, data security and privacy protection, labor and employment, anti-monopoly and other key areas to ensure the compliance and implementation of the company’s operation and globalization strategy. In addition, the Company’s legal-risk management is involved in the whole process of key reform projects, and the annual review of major operation decisions, rules and regulations and review of economic contracts covers the whole process of legal review of major projects.

Intellectual Property Rights

China Southern attaches great importance to the protection of brand equity. According to the Trademark Law of the People’s Republic of China, the Patent Law of the People’s Republic of China and other laws and regulations, the management of trademarks, patents and software copyrights were standardized through the series of regulations, such as “Intellectual Property Right Management Manual”, “Trademark Management Booklet”, “Pitent Management Booklet”, “Commercial Service Management Booklet” and other intellectual property rights protection system. At the same time, China Southern has established a complete set of trademark management system to clarify the specific operation methods and procedures of trademark registration, use, management and protection, and has set up full-time and part-time trademark management personnel to ensure that the company’s brand rights and interests are not infringed.

Anti-Corruption

China Southern always maintained a high-pressure situation of disciplinary violations, reported and punished employees for violations, and its 2019 Corporate Social Responsibility Report of China Southern Airlines Company Limited strengthened the concept of discipline of cadre and employee, and consciously built a “not Want to Corruption” ideological defense line. In terms of risk prevention and control of supplier integrity, China Southern has set up a procurement management department to implement unified and centralized procurement of the company, revised the “Management Measures for Procurement Evaluating Person” and minimized the risk of bid evaluation. The Regulations on Prohibiting Transaction with Enterprises Established by Relatives of Leading Cadres was promulgated to prohibit transaction with enterprises established by relatives of Leading Cadres. Suppliers shall sign “Letter of Tending” and “Commitment Letter of Bidding Integrity” and be required not to engage in transfer of benefits, bribery, embellishments and other behaviors that violate improper interests.

In addition, China Southern has set up a unified reporting channel and implemented a hierarchical responsibility system for complaint reporting. Discipline inspection and supervision agencies at all levels are responsible for receiving complaint concerning reports and problem clues on employees’ violations of discipline, and keep the information on reporters strictly confidential.
Guided by Xi Jinping thought on socialism with Chinese characteristics for a new era, China Southern has been working hard to strengthen party building, promote the in-depth integration of party building work with production and operation, and gather the powerful forces of entrepreneurship for the company’s high-quality development.

We carried out the education on the theme of “remain true to our original aspiration and keep our mission firmly in mind” in two batches in a solid and orderly manner, promoting rectification of inspections and thematic education, highlighting on the focus issues of passengers and employees.

We have cooperated with the team of disciplinary inspectors, made all-out efforts to rectify the problems clarified by Central Inspection and Supervision Group, and continued to promote the establishment of rectification programs to address both symptoms and root causes. The overall rectification rate exceeded 98%, and more than 50 policies were established and improved.

Reform is the source of vitality for development and progress. China Southern has always persisted in the reform, established the office of leading group for deepening reform, intensified the reform, actively carried out the “double hundred actions”, and promoted the reform of optimizing programs to address both symptoms and root causes. The overall rectification rate of 110 rectification measures exceeded 98%, and more than 50 policies were established and improved.

In order to adapt to international cooperation and market changes, equity investment, joint venture cooperation and inter-alliance cooperation have become a new trend in the development of international aviation market. In order to make a breakthrough in the international market, China Southern decided to withdraw from SKYTEAM after careful study, enter the international market, become a shareholder of China Southern, carrying out all-round cooperation and multi-level cooperation to actively develop new partners.

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Accepting and developing new partners. Code sharing and frequent flyer cooperation with American Airlines; code sharing cooperation with Thaiair for the first time to fill gaps in Nordic network routes; Established joint venture partnership with British Airways; Qatar Airways has become a shareholder of China Southern, carrying out all-round and multi-level cooperation to actively develop new partners.

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Opening a new path for international cooperation

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Awards and Honors

- Brand Finance: Ranked 15th World’s Best Airline
- Skytrax: 2019 Best First Class Lounge in China
- International Air Transport Association: The first airline in Asia to obtain a full process tracking compliance certification
- The Best Airline Civil Aviation Resource Network: International Air Transport Association
- Asian Quality Award: Asian Quality Network
- The Best Airline: Business Travel magazine Asia Quality Network
- Awarded the highest ranking "good" in the 2018 assessment on the effectiveness of targeted poverty alleviation work by the central agencies SASAC leading group for poverty alleviation and development.
- Poverty Alleviation Cases: Selected in Blue Paper on Central Corporate Social Responsibility (2019) research Group of State-owned Assets Supervision and Administration Commission of the State Council and Chinese Academy of Social Sciences
- Grade A in information disclosure: Shanghai Stock Exchange

Best Airline Award
Best Airline in China
Ranked 15th World’s Best Airline
Skytrax

Best Ticketing Service Award
The 5th CAPSE (civil aviation passenger service evaluation) aviation service award presentation ceremony

Progress in excellence in inflight entertainment
The 5th CAPSE (civil aviation passenger service evaluation) aviation service award presentation ceremony

No. 1 on the list of Central Enterprise Overseas Image Evaluation Index: No. 1 Overseas Social Media for Central Enterprises in Aviation

No. 1 Overseas Social Media for Central Enterprises in Aviation
Research Report on Central Enterprise Overseas Image Evaluation (2019) released by Overseas Data Research Center

About Us
2019 Key Performance

- **Passengers transported (million):** 152
- **Operating revenue (billion):** 154.322
- **Employees’ volunteer service hours (hours):** 36,000
- **Incident rate per 10 thousand flight hours:** 0.0088
- **Total transportation mileage (billion):** 32.625
- **Funds Invested in Poverty Alleviation (million):** 35.93
- **Freight and mail volume (million tons):** 1.7636
- **On-time rate of flights (%):** 83.32
- **Safe flight time (million hours):** 295.1
- **Carbon dioxide emissions (kg/tons km):** 0.869
- **Total Number of Employees:** 103,876
Focus on 2019

Construction of Daxing Airport Facilitates, Rapid Development of China Southern

On September 25, 2019, Beijing Daxing International Airport was officially opened. Daxing International Airport is the century project that General Secretary Xi Jinping personally decides, personally promotes, and personally announces the launch of flight operation. It is a new source of power for national development and a comprehensive transportation hub in the Beijing-Tianjin-Hebei region that supports the construction of Xiong’an New District. China Southern serves the national strategy with the most resolute and positive attitude. As the main base airline, China Southern will fully promote Beijing Daxing International Airport to become an international and domestic composite aviation hub, and create a future-oriented green, intelligent, new experience of technology travel that opens the era of China Southern’s Guangzhou-Beijing “dual hub.”

National strategy, a new driving force for national development

Daxing International Airport has set a number of world records and it hailed as the “New Seven Wonders.” In addition to the breathtaking buildings, Daxing Airport’s unique location advantage, airspace structure and functional design make it a “new country gate” and “a new source of power for national development.”

Location advantage, connecting Beijing, Tianjin and Hebei

It is located in the middle of Beijing-Tianjin-Hebei, 46 kilometers from Tianjin, 54 kilometers in a straight line, 54 kilometers from the sub-center of Beijing city, and 65 kilometers from Xiong’an New District. As a comprehensive transportation hub in Beijing-Tianjin-Hebei, it will greatly promote the development of Tianjin and Hebei.

Airspace advantages, shorter uptime

The unique airspace structure makes it unnecessary for China Southern flights at Daxing Airport to pass through the Beijing area and bypass, and the air flight time is shorter; the “three vertical and one horizontal” omnidirectional configuration runway designed according to the characteristics of air operations can reduce more ground taxi time.

More than 30 minutes

China Southern flights, to and from Daxing International Airport in the direction of South China, Southwest and East China, save taxi time and air flight time more than 30 minutes on average compared with the flights of Capital Airport.

Transportation advantage, convenient pit stop transfer

In order to make passenger travel more convenient, Daxing Airport has constructed an integrated transportation backbone network of “five verticals and two horizontals.” There are 16 tracks passing directly below the terminal building, which can realize three-dimensional transfers of aircraft, high-speed rail, and expressways. The radial design of the center of the six finger corridors of the airport allows passengers to board a plane for up to 8 minutes after walking from Terminal Center to the farthest boarding point after security check.

20 minutes

For Daxing Airport international flight, it only takes 20 minutes from the terminal to boarding, about 40 minutes less than T3 of Beijing Capital Airport.
China Southern actively responds to the national strategy to take a lead to station at Daxing International Airport. It is the main base airline with the largest resource share, the widest flight network coverage, and the largest number of passengers carried at Daxing Airport. It has also built the largest hangar in Asia, the largest operation control center in Asia, and the largest aviation food production base in Asia, helping Daxing Airport to become an international first-class and world-leading international aviation hub. The construction of Daxing Airport provides favorable conditions and resources for China Southern to build a Beijing hub, and a strategic opportunity to achieve high-quality development of the company.

Focus on 2019

Construction of Daxing Airport Facilitates, Rapid Development of China Southern

A pioneer and the largest main base company

China Southern is committed to creating a smart, convenient, comfortable and exclusive new travel experience for passengers. It is equipped with advanced technology, user-friendly and integrated aesthetic design service facilities to allow passengers to enjoy the quality of “full process, zero intervention, paperless” services, bringing new travel experiences for travelers.

Intelligent and exclusive enjoyment bringing new travel experience for passengers

“Full Process, Zero Intervention, Paperless” Services

- Self check-in
- Self-service shipping
- Intelligent guidance
- Baggage tracking
- Face recognition boarding
- True love service

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Exclusive and comfortable high-end services

China Southern is a leading airline in China, with a highly intelligent and efficient operation control center. Daxing Airport, which can accommodate 100 million passengers with full process service, such as check-in and self-check-in, in 1.8 million square meters (180,000 square meters), which can accommodate more than 300 aircraft. The large hangar in Daxing Airport is equipped with hot and cold dining tables, executive lounges, rest areas, and art corridors, etc. to provide passengers with exclusive service.

Focus on 2019

As of the end of March 2021, China Southern Airlines and its holding subsidiaries have undertaken about 43% of business traffic volume at Daxing Airport.

Completed 13 inaugural flights and the first batch of transit routes

More than 900 departures and arrivals at Daxing Airport in 2025

Asia’s largest hangar

With a total area of about 40,000 square meters, it can accommodate two A380, three B777, and three narrow-body aircraft at the same time. The maintenance is more scientific, efficient and intensive.

Asia’s largest operations control center

Covering an area of more than 3,000 square meters, it is the super-brain of China Southern at Daxing Airport. The collaborative office of operation control, hub-ground control and maintenance control that is the first among domestic airlines.

Asia’s largest aviation food production base

It covers an area of 53,000 square meters, with an average daily capacity of 100,000 units and a peak daily capacity of 180,000 units, which can meet the capacity demand in the next five years or even longer term.

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The construction of the Guangdong-Hong Kong-Macao Greater Bay Area is a major decision for the country to comprehensively deepen reform and expand opening up under the new situation. China Southern actively responds to the central government’s call, grasps the major opportunities in the construction of the Guangdong-Hong Kong-Macao Greater Bay Area, comprehensively deepens reforms, increases investment in transportation capacity, innovates products and services, firmly builds the Guangzhou international aviation hub, and continues to expand Shenzhen, Zhuhai, Macau and other urban route networks, provide world-class upstream and downstream solutions for the construction of world-class Bay Area, and contribute to the economic development of the Bay Area.

**The route to Guangzhou**

In recent years, China Southern has continued to open and encrypt the Guangzhou route network, and made every effort to build the “route to Guangzhou” international aviation hub. It has formed two sectors of Europe and Oceania as its core, with Southeast Asia, South Asia, and East Asia as its hinterland. The route network layout in Africa has helped Guangzhou form a “4-hour air traffic circle” with major cities in China and Southeast Asia, and a “12-hour air traffic circle” with major cities in the world. Guangzhou hub has become the most important gateway hub between mainland China and Oceania and Southeast Asia.

**Expanding the air route network and promoting connectivity between the Bay Area and the rest of the world**

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**Focus on 2019**

**Full Service Takeoff in the Bay Area**

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**Shenzhen routes**

International long-distance routes in Shenzhen such as Melbourne, Moscow, Sydney, and Dubai have been successfully opened and direct flights to Bangkok, Jakarta, Bali, Hanoi, Phuket and other Southeast Asia routes have been improved. The expand of Shenzhen international routes have been speed up to serve the construction of Shenzhen’s leading demonstration area.

**Macau routes**

Plan the layout of the Macau market, add Wuhan-Macau, Changsha-Macau and Chongqing-Macau routes to the winter and spring routes, and fully support Macau's development.

**Zhuhai routes**

The Zhuhai route network is optimized to reach major domestic cities including Beijing, Shanghai, and Hangzhou. The route network effectively covers provincial capital hub cities and tourist hotspot cities.

**Hong Kong routes**

The Company Operates 5 routes including Hong Kong-Beijing, Hong Kong-Wuhan, Hong Kong-Shenyang, Hong Kong-Yiwu, Hong Kong-Meiou to support the development of Hong Kong.

**Zhuhai routes**

The Zhuhai route network is optimized to reach major domestic cities including Beijing, Shanghai, and Hangzhou. The route network effectively covers provincial capital hub cities and tourist hotspot cities.

---

**Guangzhou International and regional routes**

50

**Guangzhou International and regional routes**

66

**Aircrafts launched in Guangzhou more than**

210
走进南航


In order to further accelerate the integration of aviation resources in the Guangdong-Hong Kong-Macau Greater Bay Area, on July 20, 2019, China Southern Group announced the formal implementation of equity diversification reform. Guangdong Province, Guangzhou City, and Shenzhen, through their identified investment entities, paid cash to China Southern Group with Capital increase of 10 billion yuan and total capital increase of 30 billion yuan. China Southern Group’s equity diversification reform is the first innovation sample in the country that adopts a central-enterprise and local cooperation model to promote equity diversification reform at the central enterprise group level. This reform will significantly reduce the company’s asset-liability ratio, provide a strong financial guarantee for the development of China Southern, and further improve the modern enterprise system, and continue to move towards the goal of building a world-class air transport company. China Southern Airlines Group mainly used the capital increase for air transportation to serve the country’s Belt and Road Initiative and Guangdong-Hong Kong-Macau Greater Bay Area strategy. It strongly supported the development of civil aviation in Guangzhou and Shenzhen. It also took into account investment in cities in Zhuhai, Huizhou, Shantou, Zhangjiang, and Meizhou, comprehensively promoted the construction of a strong province of civil aviation in Guangdong. This reform has strengthened the deep cooperation between China Southern and two core airports of Guangzhou Baiyun and Shenzhen Baoan, as well as the integration efforts of China Southern in South China and the Guangdong-Hong Kong-Macau Greater Bay Area to better serve the construction of the Bay Area.

China Southern has launched an exclusive product and service system in the Greater Bay Area to provide passengers with greater choice of ticket purchases, better travel experiences, and more flexible membership rights, making travel more convenient for passengers.

Launching “Bay Area Pass” products. It includes the China Southern Express and free transfer products from other places. Passengers of China Southern Express departing from Guangzhou and Shenzhen can enjoy preferential changes to 10 routes including Beijing, Shanghai Hongqiao, Xi’an, Haikou, etc. by submitting an application no less than 4 hours before flight departure. Free transfers at different places provide passengers with more discounts for transfers from other places in Guangzhou, Shenzhen, Zhuhai, Hong Kong, and Macao to or from the same destination.

Launching ground-to-air combined transport services. Provide special door-to-door transfers for passengers from six cities of Shenzhen, Zhuhai, Jiangmen, Zhanjiang, Dongguan, and Foshan to Baiyun Airport, allowing travelers to travel without worry.
Targeted poverty alleviation is an important guarantee for completing the building of a moderately prosperous society in all respects and realizing the “Chinese dream” of the great rejuvenation of the Chinese nation. China Southern Airlines has actively implemented the Party’s poverty alleviation requirements of the party central committee and the State Council, giving full play to the advantages of aviation business. Combined with the actual support, it has explored the development of a poverty alleviation model featuring "aviation guidance, industry-driven development, education, care and assistance, and sunshine poverty alleviation", and has taken concrete actions to help the local poor enter a moderately prosperous society in all respects with the Chinese people by 2020.

Targeted poverty alleviation is an important guarantee for completing the building of a moderately prosperous society in all respects and realizing the “Chinese dream” of the great rejuvenation of the Chinese nation. China Southern Airlines has actively implemented the Party’s poverty alleviation requirements of the party central committee and the State Council, giving full play to the advantages of aviation business. Combined with the actual support, it has explored the development of a poverty alleviation model featuring "aviation guidance, industry-driven development, education, care and assistance, and sunshine poverty alleviation", and has taken concrete actions to help the local poor enter a moderately prosperous society in all respects with the Chinese people by 2020.

China Southern has made full use of its advantages in the market of civil aviation links to continuously improve the construction of “air poverty alleviation road”, opening up air channels for poor areas to get rid of poverty and become rich.

### Expand air network
Three routes for poverty alleviation have been opened, namely, Lhasa - Zhengzhou, Lhasa - Kunming, and Lhasa - Chengdu. Routes have been expanded among 19 provinces and cities, those providing aid to Xinjiang and those receiving aid, and the route network has been improved as well.

### Optimize the development environment
China Southern has formulated preferential policies for poverty alleviation enterprises and products in designated poverty alleviation counties, attracted investment enterprises to enter, and optimized the local industry development environment.

### Build "China Southern First-Class Pearl School"
China Southern attaches great importance to the development of education in poverty-stricken areas. Through the development of basic education, skills training, and support for cultural and sports undertakings, focusing on intelligence development and ambition cultivation, China Southern continuously brings upward growth to the poor areas.

### Promote the "Poverty Alleviation Products to the Blue Sky Project"
Considering the actual situation of regions receiving aid, China Southern develops industries to promote poverty alleviation in accordance with the poverty alleviation ideas of “market lead industries, industry leads employment, employment promotes poverty alleviation, and poverty alleviation promotes stabilization!”.

### Carry out industrial poverty alleviation
China Southern assisted in introducing companies to build forest and fruit processing plants, labor insurance glove factories in Pishan County, clothing and footwear cooperatives in Moyu County in Xinjiang, Lijiang, Jilin, Hebei, Hebei, Liaoning, Guangxi, Guizhou, more than 10 industrial projects such as the cultivation of ager, ginkgo, chrysanthemum, rice, naval orange, the breeding of chicken, goose, and sheep were carried out, to help the local poor out of poverty with long-term mechanisms.

### Assist in attracting investment
China Southern assisted in attracting investment involved cadres have been sent to the developed region for investment promotion, introducing 6 enterprises for Pishan County with capital of 125 million yuan and 56 implemented projects for Moyu County with a capital of 260 million yuan.

### Improve local basic education level
For 15 consecutive years, China Southern has funded the construction of Pishan County’s China Southern Pearl Primary School and Moyu County’s China Southern Pearl Kindergarten. It plans to invest 58 million yuan in her years to build a new China Southern Pearl Primary School in Moyu County. of which 21 billion yuan was paid in 2019 to improve local basic education level.

### Actively broaden views
China Southern organized 22 outstanding teachers and 10 youth from designated counties to Guangzhou and Urumqi to conduct skills training camps and summer camps to improve teaching quality and enhance students’ knowledge.

### Support the cultural and sports undertakings
China Southern has supported the football team in go in to participate in the competition for 6 consecutive years, helping it win the national championship many times. At the same time, in cooperation with the Ministry of Education, the National Youth-Campus Football “Tarry Sky” training camp was established in Moyu County to promote the development of youth football.
In 2019, China Southern United Corporation actively responded to the country’s call for precision poverty alleviation, extended its assistance footprint to a number of state-level poverty-stricken counties, and took practical actions to join hands with the poor to strive for prosperity.

Poverty Alleviation Sites of China Southern
- Pishan County, Moyu County, Xinjiang Uygur Autonomous Region
- Huaiji County, Guangdong Province
- Xingcheng city and Pulandian District, Liaoning Province
- Hunchun County and Dianjun District, Hubei Province
- Ledong Li Autonomous County, Hainan Province
- Fuchuan Yao Autonomous County, Guangxi Zhuang Autonomous Region
- Panzhou City, Guizhou Province
- Zhenping County and Sheqi County, Henan Province
- Taonan City, Jilin Province
- Xinning County, Hunan Province
- Xiushan Tujia and Miao Autonomous County, Chongqing

Poverty Alleviation Footprint

<table>
<thead>
<tr>
<th>Direct funding (RMB 10,000)</th>
<th>3,593</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poverty relief number of people from registered poor households (person)</td>
<td>3,045</td>
</tr>
<tr>
<td>dispatched poverty alleviation officials on secondment</td>
<td>77</td>
</tr>
<tr>
<td>Poverty relief via industry development (Poverty Alleviation via Agriculture and Forestry)</td>
<td>13</td>
</tr>
<tr>
<td>Poverty alleviation projects launched</td>
<td>16,440</td>
</tr>
<tr>
<td>Industry funding for poverty relief (RMB 10,000)</td>
<td>480</td>
</tr>
<tr>
<td>Poverty relief number of people from registered poor households (person)</td>
<td>3,045</td>
</tr>
<tr>
<td>Poverty relief via transfer employment</td>
<td>30</td>
</tr>
<tr>
<td>Funding in vocational skills training (RMB 10,000)</td>
<td>16,440</td>
</tr>
<tr>
<td>Training of grassroots cadres (person-times)</td>
<td>408</td>
</tr>
<tr>
<td>Vocational skill training (person)</td>
<td>408</td>
</tr>
<tr>
<td>Poverty relief via education</td>
<td>80</td>
</tr>
<tr>
<td>Number of people from registered poor households who become employed with company’s assistance</td>
<td>3,278</td>
</tr>
<tr>
<td>Poverty relief via health support</td>
<td>200</td>
</tr>
<tr>
<td>Investment amount of educational resources to improve poor areas (RMB 10,000)</td>
<td>2,570</td>
</tr>
<tr>
<td>Other projects</td>
<td>233</td>
</tr>
<tr>
<td>Project number</td>
<td>8</td>
</tr>
<tr>
<td>Funding amount (RMB 10,000)</td>
<td>233</td>
</tr>
</tbody>
</table>

China Southern was awarded the highest ranking “good” in the 2018 assessment on the effectiveness of targeted poverty alleviation work by the central agencies.

China Southern pays great attention to the groups who become poor due to illness and return to poverty due to illness, and helps improve the medical and health conditions of the poor by providing financial support and assisting in improving medical infrastructure.

Support the “Emergency and Difficultly Relief” mission
In 2019, we invested 2 million yuan to support Moyu County’s “Emergency and Difficultly Relief” initiative, and donated a total of 6 million yuan to help more than 800 poor families with serious illness.

Promote the implementation of medical insurance policies
China Southern promoted the implementation of the supplementary medical insurance policy for the desperately impoverished population in Moyu County, ensuring that 100% of the poor people who have registered in the program are insured, and guaranteed the full coverage of "diagnosis and treatment before payment" and "one-stop settlement services" for poor patients.

Improve medical and health conditions
The construction of 16 standardized township hospitals and 362 standardized administrative village clinics in Moyu County were completed to help improve medical infrastructure conditions.

In 2019, China Southern United Corporation actively responded to the country’s call for precision poverty alleviation, extended its assistance footprint to a number of state-level poverty-stricken counties, and took practical actions to join hands with the poor to strive for prosperity.

Poverty Alleviation Sites of China Southern
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China Southern was awarded the highest ranking “good” in the 2018 assessment on the effectiveness of targeted poverty alleviation work by the central agencies.

Focus on 2019

Targeted Poverty Alleviation-Jointly Building a Moderately Prosperous Society

Focus on 2019

Targeted Poverty Alleviation-Jointly Building a Moderately Prosperous Society

Focus on 2019

Targeted Poverty Alleviation-Jointly Building a Moderately Prosperous Society
At the beginning of 2020, a sudden battle to prevent and control new-type coronavirus infection in pneumonia started suddenly in China. The epidemic is ruthless whereas there is love on earth. After the epidemic attack, China Southern, as the central enterprise with high responsibility, responded to it at the fastest speed, making full use of aviation advantages, using all resources and strengths, racing against time, racing against the epidemic, and setting up the fastest channel for air war against epidemic through rescue charters, and devoted all its efforts to winning the battle against epidemic with all sectors of society.

The shortage of medical supplies in Hubei affects the heart of the world. China Southern took advantage of its overseas regional marketing center and sales department’s territorial advantages, searched for sources of goods in various ways, purchased medical supplies in various ways, and opened green channels for procurement, customs clearance, and logistics to ensure the donated materials delivered to Hubei as soon as possible. On February 9, China Southern Airlines Group donated 10,000 sets of protective clothing and 10,000 surgical masks to Hubei Province through the State-owned Assets Supervision and Administration Commission of the State Council, and 20,000 medical masks to the Hubei Bureau of Civil Aviation.

Time is life. In order to ensure that medical personnel and medical supplies can go to the front line of the epidemic prevention as soon as possible, China Southern made every effort to provide emergency rescue support and urgently transported medical team members and supplies from Guangdong, Guangxi, Liaoning, Jilin, Chongqing, Heilongjiang, Guizhou, Xinjiang, and Henan to Hubei and the front as soon as possible. At the same time, China Southern opened a green transportation channel for the transfer of aid materials for the epidemic, and provided free air transportation and priority to guarantee the domestic and overseas aid materials donated by the public.

Donate scarce medical supplies

Rescue charter flights to Hubei

Transport overseas compatriots home

Safeguard passenger life

Special rights tribute to medical workers

In the case of the suspension of foreign airlines, China Southern took an active role in carrying out charter flights to overseas cities such as Phuket, Thailand, and received Chinese travelers to return to China. By Feb. 29, 2020, China Southern has transported 432 Hubei travelers.

China Southern always puts the safety and health of passengers first. After the epidemic broke out, China Southern issued the policy of refund and changes as soon as possible in accordance with the requirements of the Civil Aviation Administration and other departments. It issued a total of 4 external announcements and 6 internal operating guidelines to quickly process ticket refunds and changes. At the same time, according to the requirements of the Civil Aviation Administration, the on-board meal supply standard was adjusted to effectively reduce the close contact of personnel, and the aircraft cabin was fully disinfected to ensure that the cabin was clean enough to block the spread of the epidemic in the cabin to the greatest extent.

In order to pay tribute to the front-line medical workers, China Southern launched the exclusive service of “Honorary Medical Card” for medical workers. In addition to providing regular membership benefits for medical workers who are new members of the Pearl club, there are also three major benefits such as bonus miles, exclusive coupons, and benefits for up to 7 immediate relatives. The actions aim at expressing our great gratitude to medical staff for their efforts.
走进南航


在前线

面对汹涌的疫情，没有旁观者。在这场“抗疫”战役中，中国人民同舟共济，以自己的方式为防控疫情贡献力量。

在大年初五，我接到了一个特殊的航班任务：我需要在晚上2点降落并早上4:30起飞，需要进行四次换乘和两段休息，还要在航站楼等待。可能航班会被取消……我回答：“没问题，我飞。”

完成第一天的飞行任务，尽管疲惫，但在疫情面前，使命在我肩上。如果还有特殊的任务，我还会说：“我还会继续飞。”

首批新疆援助医疗队乘坐南航的包机前往武汉。两名机务人员需要跟随飞机，在航班落地后进行维护和放行。我毫不犹豫地提交了申请。我的妻子非常担心我，反对我。在家庭的担忧和责任的呼唤之间，我最终说服了妻子：“防护措施已经到位，我和医疗队一起去。不要担心，我会平安归来，飞机也平安归来。”

当我看到征集令的时候，我立即申请加入这场战役。最简单的想法是，我是一名党员，是一名土生土长的武汉人。我有责任为我的家乡做点什么。面对疫情，每个人都应坚守岗位，尽自己的一份力量。”

杨思伊

飞行部，湖南分公司

张洪林

航空维修基地，新疆分公司

王长顺

中国南方航空公司董事长

马旭华

中国南方航空公司总经理

2019年

聚焦于2019

聚焦于抗击疫情期间的使命

在新年的夜晚，赶往武汉营救

在2020年1月24日，人们沉浸在节日的氛围中，湖北分公司指挥中心的罗海忠在接到紧急通知：中国南方航空将执行一项运送医疗人员的包机任务，从广州飞往武汉，支援武汉。这是中国南方航空执行的首例医疗支援包机任务，也是武汉天河机场接收的首批医疗支援包机之一。

罗海忠立即发布了通知。在不到40分钟内，各个部门的工作人员，包括地勤、货运、维修、运输、信息服务等，都迅速到达。与此同时，在广州，中国南方航空还最早选派人员做好前期准备工作。

1月25日，除夕夜，航班CZ5241在10点从广州出发，搭载128名广东医护人员和3.4吨物资，于00:14顺利抵达武汉天河机场。在武汉，罗海忠已经做好了准备，在机场协调下，将飞机停靠在隔离区附近的路口。“最好能够让医护人员直接从飞机上下来，直接坐上大巴，都去前线。”罗海忠说。“我们要尽可能多的节省时间，让他们能够早点上战场。”

张洪林

航空维修基地，新疆分公司

杨思伊

飞行部，湖南分公司

罗海忠

指挥中心，湖北分公司

李海忠

南航总经理

王长顺

中国南方航空公司董事长

马旭华

中国南方航空公司总经理

2019年

聚焦于抗击疫情期间的使命

中国南方航空人在没有犹豫的情况下，赶往武汉

在面对汹涌的疫情时，没有观望者。面对疫情，中国南方航空人将自己置于自己的岗位上，以自己的方式为防控疫情贡献力量。
Responsibility Management

CSR Governance

In accordance with the requirements by SASAC, Hong Kong stock exchange and Shanghai stock exchange for the work of social responsibility, China Southern have formulated the "General Handbook of CSR Management" (in two separate volumes), established the social responsibility management architecture, made clear the responsibilities of relevant departments and further enhanced CSR management ability.

The CSR Guidance Committee, with its chairman and general manager as the head, the social responsibility work leader and the board secretary as the deputy head, is in charge of making the basic requirements for CSR, guiding the establishment of CSR-related policies, implementing the basic requirements for CSR and summarizing the CSR-related work of the company.

The CSR management office, set up at the public relations department, is responsible for implementing the resolutions of the Guidance Committee on social responsibility, formulating the social responsibility system, clarifying the goals, policies and measures of CSR, managing the achievement of CSR indicators, and organizing the preparation and issuance of social responsibility reports.

The CSR working group, composed of all the functional departments of the headquarters and subordinate units, is responsible for the management and information disclosure of the corresponding social responsibility issues, formulating the management objectives and measures of the issues, regularly monitoring the progress of the issues, and ensuring the quality and quantity of the preparation of social responsibility reports.

Response to UN Sustainable Development Goals

In response to the United Nations’ 2030 Agenda for Sustainable Development, China Southern has identified eight priority actions from the 17 sustainable development goals, given full play to its industry advantages and resource expertise to contribute to the cause of global sustainable development.

1. NO POVERTY

5. GENDER EQUALITY

8. DECENT WORK AND ECONOMIC GROWTH

12. RESPONSIBLE CONSUMPTION AND PRODUCTION

3. CLEAN WATER AND SANITATION

13. CLIMATE ACTION

15. LIFE ON LAND

6. CLIMATE ACTION

7. LIFE ON LAND

10. REDUCED Inequalities

11. SUSTAINABLE Cities and communities

14. LIFE below ground

16. PEACE AND JUSTICE

2. HEALTHY LIVES AND WELL-BEING

4. QUALITY EDUCATION

9. LIFE ON LAND

Responsibility Management

CSR Operation Structure

CSR Working Office

CSR Working Group (Publicity Division)

Social Responsibility Steering Committee

CSR Working Office

CSR Working Group (Publicity Division)
In order to further improve the pertinence of information disclosure in the report, China Southern conducts analysis of material aspects, identifies key material aspects, and responds to the appeal and expectations of stakeholders through different communication channels and platforms.

**Analysis of Material Aspects**

Identify China Southern’s social responsibility aspects list in accordance with GRI (ESG) MSCI social responsibility aspects, as well as the latest development trends of the aviation industry.

**Step 1: Aspects Identification**
- Survey in the form of “stakeholder communication” and “management workshops” and invite company stakeholders and senior managers to rate the aspects.
- Screen aspects for relevant “significance to business operation” and “significance to stakeholders” and identify material aspects.
- Identify material aspects via comprehensive review by the airline’s senior management team and experts; disclose the management methods and indicators of material aspects in a reasonable manner in the report.

**Step 2: Aspects Survey**
- Identify material aspects via comprehensive review by the airline’s senior management team and experts; disclose the management methods and indicators of material aspects in a reasonable manner in the report.

**Step 3: Aspects Selection**
- Survey the form of “stakeholder communication” and “management workshops” and invite company stakeholders and senior managers to rate the aspects.
- Screen aspects for relevant “significance to business operation” and “significance to stakeholders” and identify material aspects.

**Step 4: Aspects Review**
- Identify China Southern’s social responsibility aspects list, in accordance with GRI (ESG) MSCI social responsibility aspects, as well as the latest development trends of the aviation industry.

**Identification Flow of China Southern Material Aspects**

<table>
<thead>
<tr>
<th>Step</th>
<th>Aspects Identification</th>
<th>Aspects Survey</th>
<th>Aspects Selection</th>
<th>Aspects Review</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Implementing targeted poverty alleviation</td>
<td>Implementing targeted poverty alleviation</td>
<td>Implementing targeted poverty alleviation</td>
<td>Implementing targeted poverty alleviation</td>
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<td>2</td>
<td>Safeguarding safe flight</td>
<td>Safeguarding safe flight</td>
<td>Safeguarding safe flight</td>
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<tr>
<td>3</td>
<td>Respecting human rights</td>
<td>Respecting human rights</td>
<td>Respecting human rights</td>
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<tr>
<td>4</td>
<td>Satisfaction with passengers</td>
<td>Satisfaction with passengers</td>
<td>Satisfaction with passengers</td>
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<tr>
<td>5</td>
<td>Reporting climate change</td>
<td>Reporting climate change</td>
<td>Reporting climate change</td>
<td>Reporting climate change</td>
</tr>
<tr>
<td>6</td>
<td>Attentiveness to waste disposal</td>
<td>Attentiveness to waste disposal</td>
<td>Attentiveness to waste disposal</td>
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</tr>
<tr>
<td>7</td>
<td>Reducing flight delays</td>
<td>Reducing flight delays</td>
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<tr>
<td>8</td>
<td>Ensuring flight safety</td>
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<td>9</td>
<td>Ensuring flight safety</td>
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<tr>
<td>10</td>
<td>Supporting employee training and education</td>
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<tr>
<td>11</td>
<td>Ensuring employment equality and opportunity and treatment</td>
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<td>Ensuring employment equality and opportunity and treatment</td>
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<tr>
<td>12</td>
<td>Diversified employee representants</td>
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<td>Diversified employee representants</td>
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<tr>
<td>13</td>
<td>Promoting “belt and road initiative” responsibility</td>
<td>Promoting “belt and road initiative” responsibility</td>
<td>Promoting “belt and road initiative” responsibility</td>
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<td>14</td>
<td>Promoting suppliers to fulfill their social responsibilities</td>
<td>Promoting suppliers to fulfill their social responsibilities</td>
<td>Promoting suppliers to fulfill their social responsibilities</td>
<td>Promoting suppliers to fulfill their social responsibilities</td>
</tr>
</tbody>
</table>

**List of CSR Material Aspects of China Southern**

1. Implementing targeted poverty alleviation
2. Safeguarding safe flight
3. Respecting human rights
4. Satisfaction with passengers
5. Reporting climate change
6. Attentiveness to waste disposal
7. Reducing flight delays
8. Ensuring flight safety
9. Supporting employee training and education
10. Ensuring employment equality and opportunity and treatment
11. Diversified employee representants
12. Promoting “belt and road initiative” responsibility
13. Promoting suppliers to fulfill their social responsibilities

**Communication with the Stakeholders**

China Southern has always been committed to building a diversified communication mechanism, actively and extensively communicating with stakeholders through multiple channels and ways, and continuously improving its ability to fulfill its responsibilities based on the appeals of stakeholders.

**Investors**
- Expectations and requirements:
  - Corporate governance
  - Risk Control
  - Financial information
- Means of communication:
  - Web
  - Shareholder meetings
  - Press conferences
  - Reports

**Government**
- Expectations and requirements:
  - Elected operations
  - Increase in tax contributions
  - Climate change
  - Ecological preservation and pollution reduction
- Means of communication:
  - Website
  - Reports
  - Stakeholder communication

**Environment**
- Expectations and requirements:
  - Energy saving and emission reduction
  - Noise reduction
  - Climate change
- Means of communication:
  - Website
  - Reports
  - Stakeholder communication

**Customers**
- Expectations and requirements:
  - Consumer safety
  - Quick response to customer complaints and suggestions
- Means of communication:
  - Website
  - Reports
  - Stakeholder communication

**Employees**
- Expectations and requirements:
  - Continuous learning
  - Improving employee satisfaction and benefits
  - Open and fair and healthy public relations
- Means of communication:
  - Website
  - Reports
  - Stakeholder communication

**Other players in the industry**
- Expectations and requirements:
  - Establishment and friendly cooperation
  - Industry and international industry development
- Means of communication:
  - Website
  - Reports

**Suppliers**
- Expectations and requirements:
  - Improving targeted poverty alleviation
  - Voluntary services
- Means of communication:
  - Website
  - Reports
  - Stakeholder communication

**Media**
- Expectations and requirements:
  - Establishing information disclosure platforms
  - Timely expressing the voice of the media
  - Website
- Means of communication:
  - Website
  - Reports
  - Stakeholder communication

**Financial Institutions**
- Expectations and requirements:
  - Establishing targeted poverty alleviation
  - ESG investment analysis
- Means of communication:
  - Website
  - Reports
  - Stakeholder communication

**Community**
- Expectations and requirements:
  - Supporting local economic development
  - Voluntary services
- Means of communication:
  - Website
  - Reports
  - Stakeholder communication

**List of Key Material Aspects of China Southern**

- Implementing targeted poverty alleviation
- Safeguarding safe flight
- Respecting human rights
- Satisfaction with passengers
- Reporting climate change
- Attentiveness to waste disposal
- Reducing flight delays
- Ensuring flight safety
- Supporting employee training and education
- Ensuring employment equality and opportunity and treatment
- Diversified employee representants
- Promoting “belt and road initiative” responsibility
- Promoting suppliers to fulfill their social responsibilities
Public Open Day events

First quarter: Birdview Guangdong, Hong Kong and Macau from Helicopter

On March 25, more than 30 people from media and public representatives were invited to take the China Southern navigation helicopter to birdview the Hong Kong-Zhuhai-Macau Bridge and the Guangdong-Hong Kong-Macau Greater Bay Area from the air to experience the great changes of the motherland.

Second quarter: Walk into Daxing Airport construction site

On June 29, more than 50 citizens and reporters walked into Daxing Airport, visited the “Three Asia’s Largest” Projects of China Southern, the locomotive maintenance hangar, the Transportation Control Center, and aviation food production base, and experienced China’s speed and quality.

Third quarter: Experience the first flight of Daxing

On September 25, a total of 162 people from hundreds of media and citizen representatives experienced Daxing Airport’s “five vertical and two horizontal” three-dimensional transportation network, took the first flight of Daxing International Airport, and learned about China Southern’s Guangzhou-Beijing “dual hub” planning and construction.

Fourth quarter: Explore China Southern’s Daxing base in new flight season

On October 26th and 27th, 120 media and citizen representatives visited China Southern’s largest aviation food production base of Asia, its largest operations control center of Asia, China Southern’s exclusive check-in area and passenger lounge, etc.

“Social Responsibility Day”

On April 22, on the CZ3121 (Guangzhou-Beijing) flight “China Southern Social Responsibility”, China Southern released a social responsibility report at an altitude of 10,000 meters to introduce to the public the spread of China Southern’s social responsibility concepts and progress.

“State-owned Enterprise Open Class” activity

On May 22, China Southern and South China University of Technology together held a special public lecture “Leaders on the Podium” in South China University of Technology. Wang Changshun, Board Chairman of China Southern, delivered a lecture and exchanged the history and innovation of China Southern with university students.
Safety is the lifeblood of airlines and the cornerstone of stable operations. It is also the primary goal for all China Southern staff to work together. China Southern adheres to the safety concept of “happy work, safety, and happiness,” establishes a zero mindset, always treat safety with a reassuring attitude, continuously improves the safety management system, strictly implements various safety measures, and makes every effort to ensure every flight and every passenger security. With unremitting efforts, China Southern continued to maintain the No. 1 safety record of China Civil Aviation in 2019.
Safety governance structure

An aviation safety committee is set up under the board of directors of China Southern. As the company’s highest safety management agency, it is responsible for researching, decision-making, managing and supervising the implementation of important safety policies of the company. The company’s chairman/general manager, as the company’s first security responsible person, has set a deputy general manager for safety and set up a safety management function department to establish a security management organizational structure covering all majors and levels to achieve full coverage of safety management responsibilities.

Safety system construction

According to the characteristics of the large fleet size and complex structure, China Southern initiated the construction of seven major safety systems centered on safety responsibility, regulations and manuals, training, process control, risk management and control, safety culture, and technological innovation, and promoted the company’s safety management to be institutionalized, structured, systematic, and informatized.

Construction of safety system

In 2019, China Southern introduced regulations such as the Management Regulations for Dishonesty, the Management Regulations for Cockpit Sound Monitoring, and the Regulations for Comprehensive Smoking Banning of Aircraft to strengthen institutional supervision. At the same time, the “Aviation Safety Management Manual” was comprehensively revised, precision assessments were implemented, safety assessment terms were significantly streamlined, key links were focused, and safety systems were continuously improved.

Safety risk management

China Southern has established a monitoring mechanism for “daily reports, weekly reviews, monthly summaries, and quarterly rankings” of safety risks. It regularly organizes operational seminars to analyze risk vulnerabilities using typical error cases, and improves awareness and capabilities of safety risk prevention. In 2019, in response to safety risks such as complex weather, aircraft failures, bird strikes, and air turbulence, timely prompts of safety risks were issued to curb the frequent occurrence of similar unsafe events.

In order to encourage employees to respect the rules and safety in awe, China Southern has established a distinctive “red paper” and “blue paper” system in flight, aircraft maintenance, operation control, cabin, and security systems. “Red paper” is an illegal violation file while “Blue Paper” is a file of ability and quality, forming a personal discipline file of employees, which is closely linked to salary, cadre selection, evaluation of superiors, transfer to new plane models, and personnel mobility, etc. This system can educate staff throughout the full cycle of professional career.
Aviation Safety

Safety Guarantee in Key Aspects

Pilot capacity building

According to the Civil Aviation Law, Operational Certification Rules for Large Aircraft Public Air Transport Carriers, and the Civil Aircraft Pilot Certification Rule, China Southern actively carried out pilot capacity building for both newly-hired pilots and experienced pilots. In 2019, China Southern innovated the training model, promoted online training through online learning platforms, and the means of remote CBT training, standardized training programs (STP), and CRM training, focusing on the theoretical foundation of pilots and strengthening the construction of “three basic skills”. Organized 11 sessions of “Flight Lecture Hall” video training to improve the comprehensive ability of pilots in dealing with special situations. Taking co-pilot upgrade simulator training as a pilot, explored ability-based training courses to improve the training’s pertinence and practicality, Promoted the training courses of RNP CAT II, CAT III, HUD, strengthened the cultivation of pilots’ ability to operate around the clock.

Air security

China Southern completed the revision of the “Aviation Security Management Manual”, “Aviation Security Personnel Work Manual”, as well as the “Aviation Security Personnel Training Management Manual” and “Aviation Security Personnel Training Outline”, and standardized the safety management with the manual rules and regulations. At the same time, China Southern carried out the “Safe Flight” operation, carefully implemented the “Ten Measures for Strictly Controlling the Safety Order on Board Aircraft” of the Public Security Bureau of the Civil Aviation Administration of China, and severely punished the behaviors of disturbing the cabin order on board. A total of 113 incidents were handed over to the public security organs on board, of which 112 were issued a one-month early-warning to flight crews to achieve smooth flight operations without any occurrence of wrong route flight.

Crew Scheduling and fatigue management

China Southern has formulated Operation Manual to standardize the crew scheduling and the pilot fatigue management, according to which pilots perform each flight mission in the best physical condition. The company issued a “three new” route plan, which aimed at reducing crew fatigue, thus reducing the proportion of flight crews performing crew overnight ratios, increasing the crew overnight process, optimizing flight crew work cards to reduce the risk of illegal operation. In 2019, China Southern’s operation control departments carefully implemented the “Three New” route plan. In particular, in order to ensure the quality of maintenance, China Southern continued to promote the comprehensive application of “production arrangements, construction procedures, work standards” safety management procedures, requiring maintenance personnel to strictly follow the standard procedures to ensure that they perform根据 manuals and work cards to reduce the risk of illegal operation. In 2019, China Southern continued to promote the “active defensive” safety management, carefully implemented the “ten measures for strictly controlling the safety order on board aircraft” of the Public Security Bureau of the Civil Aviation Administration of China, and severely punished the behaviors of disturbing the cabin order on board, A total of 113 incidents were handed over to the public security organs on board, of which 112 were issued a one-month early-warning to flight crews to achieve smooth flight operations without any occurrence of wrong route flight.

Maintenance safety

In order to ensure the quality of maintenance, China Southern continued to promote the comprehensive application of “production arrangements, construction procedures, work standards” safety management procedures, requiring maintenance personnel to strictly follow the standard procedures to ensure that they perform according to manuals and work cards to reduce the risk of illegal operation. In 2019, China Southern completed the route revision work as required. The revised route accounted for 35% of the company’s total routes. The company issued a “three new” route plan to standardize the management of flight crews to achieve smooth flight operations without any occurrence of wrong route flight.

Operational Command safety

In 2019, China Southern’s operation command system focused on strengthening the management and control of operational risks such as style qualification, IT system risks, and “three new” routes. In particular, in order to ensure the smooth operation of Beijing Airport, the Civil Aviation Administration of China conducted the largest airspace adjustment in the domestic airspace mainly in North China. China Southern completed the route revision work as required. The revised route accounted for 35% of the company’s total routes. The company issued a “three new” route plan to standardize the management of flight crews to achieve smooth flight operations without any occurrence of wrong route flight.

Fatigue management

In order to ensure the quality of maintenance, China Southern continued to promote the comprehensive application of “production arrangements, construction procedures, work standards” safety management procedures, requiring maintenance personnel to strictly follow the standard procedures to ensure that they perform according to manuals and work cards to reduce the risk of illegal operation. In 2019, China Southern completed the route revision work as required. The revised route accounted for 35% of the company’s total routes. The company issued a “three new” route plan to standardize the management of flight crews to achieve smooth flight operations without any occurrence of wrong route flight.

Fatigue management. Integrate the crew oversight process, optimize the route structure, reduce the crew’s overnight ratio, increase the proportion of flight crews performing the same aircraft flight missions, reduce crew fatigue, thus reduce the safety risk caused by pilot fatigue.
Advanced science, technology and equipment are important supports for civil aviation safety and a guarantee for improving operational efficiency. China Southern continued to strengthen its scientific and technological innovation capabilities, continuously promoted innovation in flight technology, and ensured safety with technology.

### Technology Guarantee flight safety

**Operation command**
- The introduction of the LIDO flight-planning system has improved the automation level of the transportation control system, and completed the development of the “alarm function on companion between planning and pilot report route,” which enables comprehensive monitoring changes of flight plan routes.
- The SMS system was initially established. Data processing functions of crosswinds during the take-off phase, short runways, comparisons between navigation database with planned routes, low temperature routes, and air bump risk nodes were developed, and monitoring information and three new route databases were accessed to achieve eight major flight monitoring alarms and “three new” route risk alarms.

**Maintenance**
- China Southern jointly developed the component engine management system with AVIC, which integrates oil monitoring, brake oil / magnetic plug inspection, flight management, and repair management to optimise the function of engine data collection, storage, analysis and etc.
- China Southern developed the aircraft maintenance dispatch system AMAS, which further extended the remote diagnosis system function, making faster and easier aircraft data information acquisition, more efficient troubleshooting decisions, fast deployment of aviation materials and personnel, and greatly improved the efficiency and quality of aircraft maintenance.

**Security**
- Develop a comprehensive security management system and a mobile “Guard Mobile” APP used by security personnel to help perform precise duties.
- Develop a security flight tracking system to achieve real-time monitoring of key flights.
- Develop a visual command system to achieve real-time video command between air and ground.

The electronic display screens of the China Southern Aircraft Maintenance Control Center is full of dots of various colors. “Each dot is an aircraft, and different colors represent different health conditions of the aircraft. If any aircraft failure occurs, we can group it in real time and propose solutions to maintain it in time after the aircraft has landed,” Liu Yuhui introduced.

This was not the case 20 years ago. At that time, engine performance monitoring was relied on pilots to manually copy in flight logbooks, which were subsequently entered into computer systems. At the same time, the aircraft does not know if there is a fault or where it is after it reaches the ground. Only then can it begin to judge, analyze, prepare aviation materials and maintain, which will easily cause the delay of the next shift and cannot meet the needs of rapid development.

### CASE STUDY

**Developer of long-range aircraft “pulse diagnosis” system boarded the National Day parade float**

On October 1, 2019, during the celebration of the 70th anniversary of the founding of the People’s Republic of China, China Southern engineer Liu Yuhui boarded the “Hunting spring” square array float. He was also the only civil aviation person invited by the State-owned Assets Supervision and Administration Commission of the State Council. Liu Yuhui once led the research and development of the “Aircraft Remote Diagnosis Real-time Tracking System”, breaking foreign technical blockades, achieving remote “diagnosis of the pulse” for aircraft, and receiving the “Second Prize for Scientific and Technological Progress” of the General Administration of Civil Aviation.

At that time, there were existing fault monitoring systems in the world, but the fees were very expensive, which made China Southern determined to develop its own fault monitoring system. So Liu Yuhui set foot on the road of research and development without any hesitation. At that time, the domestic research and development of aviation information technology was still blank. Liu Yuhui led the team to overcome various difficulties and challenges. At the end of 2001, the prototype of China Southern’s “Aircraft Remote Diagnoses Real-Time Tracking System” based on Boeing 777 aircraft was completed. The operation provided the “China Solution”.

Support the development of large passenger aircraft in China

From 2010 to 2012, COMAC went more than 10 engineers to China Southern’s “Aircraft Information Room” to study on the research and development of domestic large passenger aircraft. Over the past two years, Liu Yuhui’s team imparted systematic knowledge to engineers of COMAC without any reservations. Together, he compiled more than 450,000 words of monographs and contributed to the self-developed large passenger planes in 2015.

“Only when China is strong and becomes a true ‘aircraft power’ and wins the commanding heights of the industry, can we get rid of the dilemma of ‘tasted by others’” said Liu Yuhui. Independent innovation is the only way for China Southern and even China’s aviation industry to embark on high-quality development. China Southern has been always on the road.
### Passenger Health and Safety

The number of passenger receiving health consultations throughout the year was 1,465, of which 136 were advised to suspend flight.

### Occupational Health and Safety

Safety and health are the prerequisites for personal growth and happiness. China Southern attachment to the physical and mental health of each employee, strictly abide by laws and regulations such as the Labor Law, the Prevention and Control of Occupational Diseases law, continuously strengthens the identification and assessment of employees’ occupational health and safety risks, and adopts targeted health education and management measures to ensure employees are physically and mentally healthy.

Medical assistance. Establish a 24-hour on-call health consultation system for passengers, provide them with health medical consultation services before boarding, and ensure the health of passengers from the source. For passengers with sudden injuries and illnesses on board, China Southern requires an on-duty service departments to cooperate with each other, actively participate in handling, and make every effort to ensure that passengers receive medical assistance in the first time.

#### Safety Performance

Under the guidance of the company’s safety concept and relying on the cooperation of employees in various positions, in 2019, China Southern maintained the No. 1 safety record of China Civil Aviation.

- Safe flight hours (10,000 hours): 295.1
- Cumulative safe flight hours (10,000 hours): 2,638.6
- Consecutive months for flight safety: 242
- Consecutive months for air aviation safety: 307
- Incident rate per ten thousand flight hours: 0.0088
- General incident rate per ten thousand aircrafts: 0
- Aircraft ground incident rate per ten Thousand aircrafts: 0

### Key Indicators

<table>
<thead>
<tr>
<th>Year</th>
<th>Safe Flight Hours (10,000 hours)</th>
<th>Cumulative Safe Flight Hours (10,000 hours)</th>
<th>Consecutive Months for Flight Safety</th>
<th>Consecutive Months for Air Aviation Safety</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>281.6</td>
<td>2,082.4</td>
<td>220</td>
<td>304</td>
</tr>
<tr>
<td>2018</td>
<td>295.1</td>
<td>2,638.6</td>
<td>242</td>
<td>307</td>
</tr>
<tr>
<td>2019</td>
<td>306.8</td>
<td>2,945.4</td>
<td>282</td>
<td>337</td>
</tr>
</tbody>
</table>

### Analysis

- **2016**: A total of 0.0376 accidents per 10,000 flight hours were recorded, with 0.0054 accidents per 10,000 aircrafts.
- **2017**: The accident rate decreased slightly to 0.0306 accidents per 10,000 flight hours, with 0.0101 accidents per 10,000 aircrafts.
- **2018**: The accident rate further decreased to 0.0274 accidents per 10,000 flight hours, with 0.0047 accidents per 10,000 aircrafts.
- **2019**: The accident rate continued to decrease to 0.0219 accidents per 10,000 flight hours, with 0.0038 accidents per 10,000 aircrafts.

### Notes

- The data above only include incidents produced at the Company, excluding those by manufacturers, accidents. Industrial data come from Report on Statistic Analysis of Safety Data of Civil Aviation Industry issued by CAAC.
Against the background of green and low-carbon development becoming a global consensus, as a "big player" in carbon emissions, how to reduce the consumption of energy and resources while minimizing the impact on the environment and in the meantime maintaining the rapid growth of air transport is a common challenge facing the industry. China Southern actively explores the application and practice of new environmental protection technologies and methods in the management, operation and flight processes, witnesses its own impact on the environment and creates more opportunities and possibilities for the sustainable development of the earth’s ecology.
Management of Environmental Impact

### Emission of Greenhouse Gases

#### Category 1: Carbon dioxide emission (10,000 tons)

<table>
<thead>
<tr>
<th>Year</th>
<th>Emission (10,000 tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>2,527.94</td>
</tr>
<tr>
<td>2018</td>
<td>2,490.13</td>
</tr>
<tr>
<td>2019</td>
<td>2,862.63</td>
</tr>
</tbody>
</table>

#### Category 2: Carbon dioxide emission (kg/Cton-kilometer)

<table>
<thead>
<tr>
<th>Year</th>
<th>Emission (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>0.916</td>
</tr>
<tr>
<td>2018</td>
<td>0.888</td>
</tr>
<tr>
<td>2019</td>
<td>0.859</td>
</tr>
</tbody>
</table>

### Water Consumption

#### Total water consumption (10,000 tons)

<table>
<thead>
<tr>
<th>Year</th>
<th>Consumption (10,000 tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>768.44</td>
</tr>
<tr>
<td>2018</td>
<td>764.75</td>
</tr>
<tr>
<td>2019</td>
<td>696.65</td>
</tr>
</tbody>
</table>

#### Water intensity (m³/10,000 yuan)

<table>
<thead>
<tr>
<th>Year</th>
<th>Intensity</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>0.5325</td>
</tr>
<tr>
<td>2018</td>
<td>0.6946</td>
</tr>
<tr>
<td>2019</td>
<td>0.4514</td>
</tr>
</tbody>
</table>

### Energy Consumption

#### Fuel (10,000 tons)

<table>
<thead>
<tr>
<th>Year</th>
<th>Consumption (10,000 tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>794.91</td>
</tr>
<tr>
<td>2018</td>
<td>854.01</td>
</tr>
<tr>
<td>2019</td>
<td>500.33</td>
</tr>
</tbody>
</table>

#### Gasoline (tons)

<table>
<thead>
<tr>
<th>Year</th>
<th>Consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>5,553.65</td>
</tr>
<tr>
<td>2018</td>
<td>5,012.96</td>
</tr>
<tr>
<td>2019</td>
<td>4,469.71</td>
</tr>
</tbody>
</table>

#### Diesel (tons)

<table>
<thead>
<tr>
<th>Year</th>
<th>Consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>7,407.13</td>
</tr>
<tr>
<td>2018</td>
<td>10,199.24</td>
</tr>
<tr>
<td>2019</td>
<td>8,598.59</td>
</tr>
</tbody>
</table>

#### Coal (tons)

<table>
<thead>
<tr>
<th>Year</th>
<th>Consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>3,450.00</td>
</tr>
<tr>
<td>2018</td>
<td>2,100.00</td>
</tr>
<tr>
<td>2019</td>
<td>550.00</td>
</tr>
</tbody>
</table>

### Waste Treatment

#### Treatment capacity and treatment rate (%)

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2019</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazardous waste</td>
<td>675.200 tons</td>
<td>100</td>
</tr>
<tr>
<td>non-Hazardous waste (On-board services)</td>
<td>7,500.0 m³</td>
<td>100</td>
</tr>
</tbody>
</table>

### Consumption of Packaging Materials

#### Total consumption of packaging materials in the process of aviation food production (tons)

<table>
<thead>
<tr>
<th>Year</th>
<th>Consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>811.88</td>
</tr>
</tbody>
</table>
Response to Climate Change

Greenhouse gas emissions are an important cause of global climate change, and extreme weather caused by climate change has also affected the sustainable development of the aviation industry to a certain extent. Facing global climate change issues, China Southern actively responds to international and domestic aviation carbon emission reduction regulations, actively manages its own carbon footprint, and takes practical actions to help achieve the Paris Agreement’s carbon reduction targets.

In 2019, China Southern and the International Air Transport Association (IATA) launched a strategic cooperation in environmental assessment projects and was elected as a member of IATA’s newly established Sustainability and Environmental Advisory Committee. In July of the same year, the Aviation Environmental Protection Committee of the China Air Transport Association was formally established. China Southern actively joined and responded to the relevant requirements of the “Resolution on Aviation Carbon Reduction” to promote the green development of civil aviation.

Green Flight

China Southern has formulated the “Energy Saving and Emission Reduction Management Manual” and “Energy and Environmental Management Business Process” and other systems to comprehensively improve the efficiency of aviation fuel use and achieve green flight through technical optimization, management improvement, and big data analysis.

CASE STUDY
China southern used bio-jet fuel for intercontinental flight for the first time

On February 23, a new A320neo aircraft numbered B-305E flew from Toulouse, France, to Astana, Kazakhstan, and arrived at Guangzhou Baiyun International Airport to join the China Southern fleet. The first segment of the intercontinental flight used 10% blended aviation bio-fuel, which was the first time that China Southern used bio-fuel to perform flight missions.

The bio jet fuel refilled on this flight is made from sugarcane, which reduces carbon emissions by about 73% compared to traditional jet fuel, and has greater emission reduction benefits. In addition, the aviation fuel used this time has been certified for airworthiness, and has no negative impact on food security, water resources protection, soil protection, etc., with low carbon emissions and sustainability. China Southern has played a significant role in promoting the use of green aviation fuel in the civil aviation industry.
Management promotion

Set up the professional fuel-saving project teams including flight fuel-saving, ground fuel, aircraft weight, flight plan reliability, and aviation fuel informationalization, and formulate 19 fuel-saving measures to promote the company’s fuel-saving and oil-control.

Data Assisted Fuel Saving

Based on the Internet of Things and cloud technology, China Southern independently developed the “Fuel e-Cloud” and MNM system for carbon emissions data of flight activities to achieve fine-grained control of aviation fuel and carbon emission data, and provide reference information for further improvement of fuel efficiency.

Case - Development of “Fuel e-Cloud” provides a Chinese solution for the development of jet fuel data international standards

Based on the Internet of Things and cloud technology, China Southern independently developed the “Fuel e-Cloud” real-time data sharing platform to provide digital tools for refined management of fuels. On this platform, the refueling status of each aircraft of China Southern can be viewed in real-time. After refueling, the data will be uploaded to the platform within 10 seconds and displayed on the pilot’s electronic flight bag, and the fuel cost of the flight will be automatically generated.

With the “Fuel e-Cloud” platform, China Southern reduced refueling guarantee time by about 17% with the complete connection of flight and refueling information, thus improving the flight regularity. At the same time, it also promoted the establishment of fuel-saving culture, combined with evaluation and comparison, which promotes pilots to effectively reduce the amount of overscheduled refueling, estimated to reduce the waste of aviation fuel by about 1,500 tons per year.

In July 2019, IATA invited China Southern to join the “aviation fuel data standards group” to participate in the formulation of international aviation fuel data standards, and providing Chinese solutions to the data standards of global airlines.

Participation in Carbon Trading

As a pioneer of carbon trading pilot in China, China Southern fulfilled its obligations to participate in the EU carbon trading for flights commuting between two destinations within the EU and carbon market in Guangdong province in 2018 in April and June, according to the requirements of carbon trading between CAAC and EU. In participating in the Guangdong carbon quota swap trade, China Southern has a surplus quota of more than 400,000 tons in 2018.
Pollution Prevention

- Exhaust gas
  - Through measures such as strengthening aviation fuel management, increasing investment in technological transformation, and improving energy efficiency, the impact of exhaust emissions on the environment and employees is minimized. In 2019, China Southern handled a total of 225.6 million cubic meters of exhaust gas.

- Wastewater
  - After being collected by a professional sewage truck, it will be disposed of by a qualified sewage treatment plant.
  - Industrial wastewater generated during aircraft maintenance and aircraft cleaning is collected and sent to a wastewater treatment station for treatment by GAMECO Guangzhou Aircraft Maintenance Engineering Co., Ltd. In the year, 16,477 tons of industrial wastewater were treated.
  - Wastewater and exhaust gas generated during air transportation will result in some pollution. Complying with the regulations such as the “Air Pollution Control Law of the People's Republic of China” and the “Water Pollution Control Law of the People's Republic of China” and other regulations, China Southern treated on-board sewage, industrial wastewater and domestic sewage generated during ground handling operations and had measurable environmental impact reduction.

- Domestic sewage
  - Regarding the domestic sewage produced in the process of aviation food production, standardized sewage discharge outlets are set up and managed by special personnel. In the whole year, 224,000 tons of wastewater generated by aviation food production were treated by Guangzhou Nanland Waste Water Treatment Co., Ltd., and the treatment rate was 100%.

- Hazardous waste
  - Hazardous waste such as waste kerosene, waste medicines, and waste lamps generated during aircraft maintenance, air service, and ground office are classified and collected in accordance with the “National Hazardous Waste Name List” and finally delivered to qualified hazardous waste treatment companies to conduct professional waste management. In 2019, China Southern handled a total of 615.205 tons of hazardous waste, with a recycling company to promote the recycling of resources. In 2019, China Southern handled 7,909.5 cubic meters of non-hazardous waste, with a recycling rate of 100%.

Wastewater and exhaust gas generated during air transportation will result in some pollution. Complying with the regulations such as the “Water Pollution Control Law of the People’s Republic of China” and the “Air Pollution Control Law of the People’s Republic of China” and other regulations, China Southern treated on-board sewage, industrial wastewater and domestic sewage generated during ground handling operations and had measurable environmental impact reduction.

Resource Conservation

- Non-hazardous waste treatment
  - China Southern collects non-hazardous wastes such as cabin food packaging materials, recyclable magazines, kitchen waste, office and domestic wastes during the event, and then transfer them to a qualified recycling company to promote the recycling of resources. In 2019, China Southern handled 7,909.5 cubic meters of non-hazardous waste on board, with a treatment rate of 100%.

- Water conservation
  - By implementing accurate cabin water refilling and adopting aircraft dry-cleaning technology, water consumption on board and aircraft clean water can be saved.

- Saving paper
  - In passenger transportation services, electronic boarding passes, electronic invoices, and electronic luggage tags are promoted with the use of electronic platforms such as “China Southern” to reduce paper printing. In freight services, continuous promotion of electronic freight orders can save paper freight orders 171,000 pieces per month, and the amount of domestic electronic freight orders saved is first in the world.

Water, paper, plastic, wood and other resources are inevitably consumed in the course of aviation flight and ground services. China Southern attaches great importance to resource conservation and utilization efficiency improvement in all aspects of operation to promote resource conservation.
Energy conservation and emission reduction require the concerted efforts of the whole society. Faced with a large population of customers, China Southern uses its expertise to guide more stakeholders to participate in energy conservation and emission reduction actions and jointly participate in the sustainable development process of mankind.

Spread of Green Ideas

China Southern has actively responded to Shanghai’s garbage classification. Since August 22, it has fully implemented garbage classification on arriving flights. According to the “Guidelines for the Classification and Distribution of Domestics Garbage in Shanghai,” dry and wet waste is sorted before landing at the airport. Recyclable dry waste of cans, plastic bottles and other wastes are performed. After centralized recovery on the ground, recyclable waste is reused. Inflight recycling of dry waste of cans, plastic bottles and other wastes are performed. After centralized recovery on the ground, recyclable waste is reused. Inflight recycling of dry waste of cans, plastic bottles and other wastes are performed.

June 17-23 is the National Energy Saving Publicity Week. China Southern carried out healthy riding activities for internal employees, and held an award-winning quiz on the basic knowledge of energy saving and emission reduction to strengthen the awareness of energy conservation and environmental protection. At the same time, an award-winning quiz on the basic knowledge of energy saving and emission reduction to strengthen the awareness of energy conservation and environmental protection. At the same time, an award-winning quiz on the basic knowledge of energy saving and emission reduction to strengthen the awareness of energy conservation and environmental protection.

In response to the waste of onboard meals, China Southern launched a green flight project in 2019, calling on passengers who do not need to dine to give up onboard meals in advance to achieve green flight. For passengers participating in green flight projects, China Southern awards 300-500 miles to passengers. As of December 25, 2019, China Southern has opened green flights on 650 flights, sending precise invitation text messages to more than 30,000 passengers every day, with a total of 215,000 passengers having successfully participated in green flights, reducing 215,000 meals on board.
Every time a passenger chooses a CSA flight, they have unlimited trust in CSA, which is an inexhaustible driving force for CSA to continuously optimize its services. China Southern is committed to providing "affinity + refinement" intimate, warm and delicate air and ground services, as well as professional, efficient, safe and efficient passenger and cargo services, delivering warmth and joy in each service and creating value for passengers.
China Southern always adheres to the “customer first” sincere service concept, starting from the needs of passengers, constantly optimizing the details of each service to bring a beautiful air journey to passengers all over the world.

**Passenger Services**

Flight normality is an indicator of concern for travelling passengers, and an important manifestation of China Southern’s operating efficiency and service quality. China Southern has formulated and continually improved the systems of “normality management” and “risk flight monitoring and guarantee management system,” and has initiated a series of projects to ensure the normality assessment and risk flight monitoring and guarantee management. By continuing to promote the “2019 flight normalization improvement project plan” and other systems, China Southern has increased operational efficiency, improved the systems of “normality management” and “risk flight monitoring and guarantee management,” greatly shortened the average taxi time to take into account flight connection, exit and landing rates, and effectively shorten the opening door to closing door, the flight transit took only 57 minutes, less than half the 120 minutes standard of the CAAC, and one of the fast transit stops in recent years. The implementation of rapid transit greatly improved the overall efficiency of flight operation.

**Improve flight normality**

China Southern has started overall operation construction since 2018. By establishing a centralized operation platform and establishing a unified operation management and control model, China Southern has improved the company’s decision-making capabilities, and improved flight efficiency and service support capabilities, and improved flight normality.

Centralized operation. AOC, a centralized operation platform for headquarters, and GOC, a subsidiary’s centralized operation platform for subsidiary companies, were established to greatly improve joint decision-making efficiency through two platforms and coordinate and resolve issues such as flight delays.

Unified scheduling. Unified flight planning resources and capacity, set up operation schedule and dispatch centers, make flat operation management, greatly shorten the information chain, and timely handle abnormal air flight conditions.

**Continue to promote the construction of overall operations**

China Southern has comprehensively sorted out service processes to improve the efficiency of collaboration and reduce flight delays on key links affecting the normality of flights.

Close door early. Sort out the ground service process, and improve cooperation efficiency of various units such as maintenance, ground service and transportation.

Quick launch. This include- tow the aircraft outward from the jetway and optimize the taxi path to improve operational efficiency by cooperating with apron control.

Two-way coordination. Coordinate airport ground support resources and air traffic control resources, actively participate in the formulation of the “A-CDM Cooperative Operation Rules”, complete the entry of seats in the traffic control rooms of various regions in the country, and establish a stable coordination mechanism.

From 120 minutes to 57 minutes, the A380 quickly passed the station.

The Airbus A380 is the largest passenger aircraft in the world. Every time the A380 lands, the race against time starts. In order to provide better service for the next voyage, the aircraft needs to complete baggage transportation, cargo handling, meal distribution, regular cleaning, maintenance, and aviation security inspections at the airport. The time here is counted in minute.

<table>
<thead>
<tr>
<th>Year</th>
<th>Non-weather severe delay (%)</th>
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<td>2017</td>
<td>0.44</td>
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<td>0.43</td>
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<tr>
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In order to ensure the rapid transit of the A380, China Southern issued the “Implementation plan for A380 aircraft rapid transit stop within 90 minutes.” On June 19, 2019, the CZ3109 flight started a rapid transit stop. From opening door to closing door, the flight transit took only 57 minutes, less than half the 120 minutes standard of the CAAC, and one of the fast transit stops in recent years. The implementation of rapid transit greatly improved the overall efficiency of flight operation.

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CASE

China Southern flight normality rate ranks first among the three major domestic airlines.
Upgrade Smart Travel

From self-service ticket purchase, seat selection, refund and change to self-service consignment service, and self-service check-in, China Southern continuously improves every travel aspect. While changing the travel habits of passengers, it brings “one machine in hand, the whole process worry-free” smart travel experience.

In 2019, China Southern continued to optimize the “China Southern e-platform” platform function, the main ticket purchase flow, upgrades, first-line sales assistance systems, paid seat selection, electronic boarding passes, 100% pre-selected seats, paid lounges, green flight, electronic invoices, automatic refund and change, which make travel truly “just grab, worry-free” smart travel experience.

The China Southern App supports passengers to start automatic ticket grabbing through the China Southern App after the domestic flight ticket is sold out. When there are available seats on the selected flight, the system will automatically notify passengers at no additional charge.

In order to enhance the sense of reality of passenger seat selection, China Southern is the first company in the world to launch a VR (Virtual Reality) cabin roaming function. 360° panoramic technology is used to allow passengers to “select the cabin seat” immediately and enjoy new visual effects and a more intuitive seat selection experience.

China Southern cooperates with airport authorities to implement the “One Pass Customs Clearance” service. Passengers who purchase air tickets through second-generation ID cards can directly carry out luggage check-in, security check-in and boarding procedures with their ID cards, without the need to present boarding passes. Off-code is enabled to enable passengers to quickly board from the “home entrance” to the “cabin door.”

Where did my luggage go?” “How long can I get my luggage?” These questions are information that many travelers want to know when traveling. China Southern uses Full Baggage Tracking System to achieve precise positioning and real-time checking of luggage, allowing passengers to “trace” their luggage.

From September 1, 2019, China Southern is the first airline in China to make the function of self-service inquiry and active push of passenger baggage information in the whole process of baggage transport. China Southern can directly carry out self-service baggage inquiry and active push of baggage transportation.

Before the baggage claim turntable, passengers can look up the transportation of their checked luggage. Sky Pearl Club members can receive real-time baggage status through the “One Pass Customs Clearance” service inquiry and active push of baggage transportation.

CASE STUDY

Baggage tracking through the whole process, let luggage “talk”

Know your luggage information

From September 1, 2019, China Southern has fully put into use radio frequency identification (RFID) baggage tags in Guangzhou’s T2 terminal. When passengers check in their luggage, information will be written into the chip embedded in the baggage tag. The speed of baggage transportation is near instantaneous as is the information collection for the write process of baggage transportation.

Real-time push of luggage status

China Southern is the first airline in China to use the IATA Baggage Tracking Hub for the entire process of baggage transportation. As is the information collection for the write process of baggage transportation, passengers can quickly board from the “home entrance” to the “cabin door.”

I often depart from Guangzhou. Now I can use the China Southern App to select seats and check-in passes in advance, which is particularly convenient. I can also control the flight time more freely by air and save 5 to 10 minutes without checking in at the counter.

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——Miss Li, Frequent Traveler

Baggage arrival time reminder

Starting from August 14, China Southern added a pre-arrival time reminder service to all baggage transfers displays (No. 31-40) in the arrival area of domestic flights at the Guangzhou hub for the first time. Before the baggage claim turntable of the flight, passengers can look up to know when their checked luggage is expected to arrive at the turntable, reducing the anxiety of waiting for luggage.
Creating a Beautiful Journey

China Southern launched the “Family Service 360” service. Friendly warm professional service, friendly precise communication and exquisite details, as well as putting ourselves right in passengers’ shoes render the passengers with the warmth of a spring breeze and kindred love, an atmosphere of mutual trust and numerous touching moments.

Three key phrases ——
Friendly ice-breaking communication
service process perfection and warm service and guidance at farewell

Six details presented ——
friendly and spontaneous kindness
warm and delighted words, preference prediction, pleasant environment, fine dining and consistent good service

More abundant
Promote a new version of the top TV theme planning program, enrich the content of the music channel, plan the exclusive premiere of the excellent documentary "Four Springs" and launch classic themes such as "China Southern and Your Family Fun" to enrich the travel itinerary.

Cleaner
Innovative cabin cleaning kits were launched and used on Beijing-Guangzhou route and 7 international routes. The ground floor cleaning standards were promoted and the "Outside Station Lounge Cleaning Checklist" was implemented, which was well received by passengers.

Unaccompanied passenger service. Provide unattended children and unaccompanied elders with special services such as waiting area, reading books, exclusive TV channels for children, and directing boarding by special persons on domestic flights taking off from Guangzhou. In 2019, the China Southern App innovatively launched the ticket purchase function for unaccompanied children.

More delicious
China Southern cooperated with Michelin chefs to develop high-quality meals and promote them to all routes that deliver Western-style meals. Customers who love Chinese food can also choose fist products such as “China Southern Big Stuffed Bun” and “China Southern Big Bowl Porridge” to taste authentic, exquisite on-board meals with Lingnan characteristics.

Special Passenger Services

China Southern has formulated the “China Southern Air Transport Service Plan for Disabled Persons” and “China Southern Full Process Service Specification For Wheelchair Passengers.” to regulate the management of special passenger services and provide more personalized, specialized and professional services for special passengers.

Wheelchair service. Provide wheelchair services for passengers with mobility impairments to cover the places of the apron, passenger elevators, cabins and onboard, as well as check-in electric wheelchair services.

Special meals. Provide special meal reservation at departure station, and provide special meal reservation service through “China Southern e-flight” to meet the needs of different tastes.
China Southern relies on its developed route network to provide customers with dense freight coverage across China and Asia, connecting major cities in Europe, America, Australia, and Africa, and providing efficient, fast, and reliable air freight conditions for goods around the world.

China Southern cherishes the good relationship with customers, and with the increasingly perfected system and actions in place, it protects the rights and privacy of customers, responds to customer needs and feedback, and improves the overall service level.

Freight Services

Freightler fleet size of 14 aircraft.

12 international all-cargo routes.

Weekly freighter volume of 50 flights.

China Southern Express

“China Southern Express” products meet the service requirements of domestic aviation high-end freight product transportation by “ten advantages”. These are transportation commitment, MF service, priority booking, early delivery, extended time limit, SMS tracking, fast delivery, free change, dedicated line inquiry and customer-customized.

Temperature control services

China Southern’s “Temperature Control Products” service relies on high-efficiency air transportation, and uses cold-chain packaging or airworthy temperature-control containers, together with high-level cabins and ground service. Safe and reliable aviation cold chain service is provided for cargo sensitive to temperature, such as the fresh, the perishable or drugs. In 2019, China Southern completed the system construction, personnel training, and hardware renovation in accordance with the Temperature-controlled Drug Transport Specifications. In January 2020, China Southern Airlines successfully passed the International Aviation Association CEIV Pharma Certification and ensured that the compliance of temperature-controlled drugs throughout the air transport operation and their stable quality to prevent incidents of drug failure or even endangering the health and safety of patients taking drugs.

Freighter fleet size of 14 aircraft.

China Southern has developed a special transportation plan for Sanofi Pasteur’s penta vaccine and influenza vaccine. In order to meet the temperature conditions of 2-8°C during the entire transportation, China Southern provides exclusive services in terms of guaranteeing processes, information transmission, facilities and equipment, and emergency disposal. In addition, China Southern has designated certain person to follow up with customers during the entire transportation process to achieve zero-error service, and became the designated Chinese import air carrier of Sanofi Pasteur vaccine. So far, the two sides have cooperated to transport more than 1,000 tons of imported vaccine products.

Customer Relationship

Customer Rights Protection

China Southern has formulated the “Transportation Service Management Manual”, “Transportation Service Management System”, “Transportation Service Management System” and “Transportation Service Product Management” to effectively protect the rights and interests of passengers.

CASE

In 2019, China Southern officially implemented a “staircase fee” for domestic airline ticket refund and modification fees. Tickets were reclassified in more steps, and the rules were clearer: “Earlier refunds, lower fees” and “the higher the class, the lower the fee”. The principle of “no refunds, no changes, no transfers” no longer exists, which better meets the needs of passengers for flexible refunds.
China Southern strictly complies with the requirements of the Cyber Security Law of the People’s Republic of China and the General Data Protection Regulation (GDPR) of the European Union, and has formulated the “Administrative Measures for the Protection of Personal Privacy Data.” In 2019, China Southern officially launched the measures of GDPR and responded promptly to its requirements, taking practical actions to protect user privacy. There were no complaints about violations of customer privacy and loss of customer data due to the security problems of information system throughout the year.

China Southern has continuously optimized and improved the Customer Care Management Information System, clarified the complaint management system, established a complaint warning and process improvement mechanism, and implemented closed-loop management of complaints. China Southern attaches great importance to passenger opinions, makes full use of internal and external evaluation data such as passenger full-process satisfaction evaluation and special evaluation to find service problems and continuously improves passenger satisfaction. China Southern listened to and responded to passengers’ opinions and needs through text messages, apps, surveys and other forms, and actively paid attention to the evaluation of services by external companies.

Customer Privacy Protection

Technical Support

Establish a complete network security protection system to ensure the safe operation of the system after going online, and work closely with the Ministry of Public Security’s Cyber Security Reporting Center, Patching Vulnerability Platform, National Information Security Evaluation Center to rectify, repair risks or vulnerabilities to ensure the safe operation of information systems and prevent consumer information leakage.

Management guarantee

Formulate various systems for network security, standards and operating procedures for information security, refine network security assessment and evaluation standards, standardize network security incidents and error handling methods, promote the implementation of network security management responsibilities, and ensure security management.

Customer Complaint Management

Optimize management processes. Establish a closed-loop service management mechanism for early warning and process optimization, change passive processing to active prevention, analyze customer complaints and major service incidents every month, and turn service shortcomings into springboards for improving service quality.

Reduce processing time. The mobile version of the customer care management system was launched to implement the pop-up reminder function for overdue complaints and speed up the complaint processing speed. Concurrently, senior managers made quick approval for all passenger compensation.

Comprehensive linkage improvement. Establish an overdue complaint improvement project team, implement segmented area management and responsibilities to certain people. Focus on improving passenger service experience, centralized complaints, service pain points and difficulties. Coordinate efforts of all parties to improve and reduce passenger complaint rates from the source.

Organization guarantee

Set up a data protection officer (DPO), and set up a project work team with multiple departments to take full responsibility for data protection and compliance operations. In 2019, China Southern held training on new trends in GDPR law enforcement, organized more than 200 people within the company to study European data protection law enforcement activities and cases, and strengthened employees’ data protection awareness and capabilities.

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The creativity of employees is an inexhaustible motive force for achieving sustainable development. As a high capital-intensive, high-tech, high-risk service industry, aviation companies have a greater dependence on human resources. In the process of international development, China Southern brings together talents from all corners of the world with an inclusive concept, providing employees with broad development space and opportunities, constantly inspiring the sense of ownership and innovation, and realizing the common efforts and growth of employees and the Company.
China Southern strictly abides by the “Labor Law of the People’s Republic of China” and other regulations, and gradually improves the human resource management system and employment policies. All important employment policies have been reviewed by the legal department for compliance and submitted to the company’s decision-making bodies and the staff representative conference for review so as to protect all legal rights and interests of employees. In 2019, there were no major incidents that violated human rights and legal rights of employees.

In 2019, China Southern’s labor contract signing rate and employee social security coverage rate are 100%.

### Staff Structure *

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### Rights and Interests Protection

#### Fair Employment

China Southern actively adheres to international conventions on labor and human rights, advocates equal and non-discriminatory employment policies, and provides inclusive, fair promotion opportunities for employees of different genders, ages, education, nationalities, races, regions, religious beliefs and cultural backgrounds, eliminates all forms of forced labor, and protects employees’ rights to work and rest.

- In terms of staff recruitment, China Southern conducts its human resource recruitment in accordance with the principles of open, fair, and just recruitment, and does not use gender, age, etc. as recruitment criteria.
- With regard to employee dismissals, in strict accordance with the provisions of the Labor Law and on the recession or termination of labor contracts, the Company has formulated the “Regulations on the Management of Labor Contracts of the Company” to make specific restrictions on recession or termination of employees’ labor contracts.
- In terms of compliance employment, China Southern signed a “collective contract” and a “Special Collective Contract for Labor Safety and Health” with employees to protect employees’ legal rights and interests in promotion, departure, working hours, compensation and benefits, and signed a “Special Collective Contract for the Protection of Female Employees’ Rights and Interests” which clearly states that gender equality must be adhered to in terms of recruitment, assessment, and promotion.
- In terms of preventing violations, China Southern has established a human resources evaluation system, which regularly inspects and evaluates human resources work, investigates and deals with human resource issues found.
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<tr>
<td>41-50 years old</td>
<td>17.36%</td>
</tr>
<tr>
<td>51 years old or above</td>
<td>4.72%</td>
</tr>
</tbody>
</table>

Note: Employee data is based on consolidated financial statements of China Southern.
China Southern adheres to the principle of marketization, adapts to labor market conditions and needs of the company's development strategy, provides employees with a competitive salary level in the industry, and fully attracts and motivates outstanding talents. Adhering to value creation as the guidance, linked to post value and performance contribution, formulates salary management methods for air and ground staff, establishes and improves a dynamic employee salary growth mechanism, provides employees with good benefits, and enhances their sense of belonging, happiness and gain.

### Compensation and Benefits

#### Diversified benefits

**Compensation and Benefits**

- **Ten insurance and two benefits**
  - Basic endowment insurance
  - Basic medical insurance
  - Supplementary medical insurance
  - Work injury insurance
  - Maternity insurance
  - Unemployment insurance
  - Personal accident insurance
  - Pilot disability insurance
  - Employee liability insurance
  - Special personal insurance
  - Enterprise annuity
  - Housing provident fund.

- **Holiday benefits**
  - Statutory holidays, holidays for some employees (Women’s Day, Children’s Day, Youth Day, ethnic minority holidays), paid annual leave, family leave, marriage leave, menstrual leave, maternity leave, nursing leave, paternity leave, work injury leave, sick leave, funeral leave, one-child care leave, birthday leave, etc.

- **Health Checkup**
  - Provide a free health checkup for employees once a year.

**Case**

- Reform of compensation policy, sharing reform and development bonus with employees

In 2019, in accordance with the overall goals of “ranks can go up and down, income can increase or decrease, employees can move in and out”, China Southern comprehensively launched the reforms of the employment, labor and distribution systems, and established the new position specification system, performance evaluation, compensation management, and total payroll management mechanisms. At the same time, China Southern took the opportunity to reform the employment compensation system, perfected the construction of incentive mechanisms, and further stimulated the enthusiasm, initiative and creativity of all employees.

#### Training of young cadres

- Carry out the “Ten, One Hundred, One Thousand” plan, organize mid-level youth classes and basic training classes for cadres in different stages, and strive to build a highly qualified and professional young cadre team with politically competent, highly skilled, professionally competent and worthy of heavy responsibilities. Throughout the year, two mid-level youth classes and two basic training classes were held to train 104 outstanding young cadres.

- Training of highly skilled personnel.
  - The “Hundred Talents Plan” was launched. In 2019, the warehousing and project approval of personnel in the maintenance and cabin system was carried out. The personnel in the maintenance and cabin system were supported to carry out industry-university-research projects with special funds, and the training of highly skilled personnel was promoted in an orderly manner.

### Employee Development

**Training of highly-skilled personnel.**

- The “Hundred Talents Plan” was launched. In 2019, the warehousing and project approval of personnel in the maintenance and cabin system was carried out. The personnel in the maintenance and cabin system were supported to carry out industry-university-research projects with special funds, and the training of highly skilled personnel was promoted in an orderly manner.

**Training of young cadres.**

- Carry out the “Ten, One Hundred, One Thousand” plan, organize mid-level youth classes and basic training classes for cadres in different stages, and strive to build a highly qualified and professional young cadre team with politically competent, highly skilled, professionally competent and worthy of heavy responsibilities. Throughout the year, two mid-level youth classes and two basic training classes were held to train 104 outstanding young cadres.

**Special training for staffs.**

- Throughout the year, 1,016 in-house training sessions for pilots, flight attendants, and security personnel were conducted. A total of 25 English training courses were organized, and 44 business training courses were conducted. Training for 888 new employees was completed, and 184 new PC courses and 1,278 micro-lecture chapters were added to the online training, which constantly improved employees’ professional capabilities.

**CASE**

- Reform of compensation policy, sharing reform and development bonus with employees

In 2019, in accordance with the overall goals of “ranks can go up and down, income can increase or decrease, employees can move in and out”, China Southern comprehensively launched the reforms of the employment, labor and distribution systems, and established the new position specification system, performance evaluation, compensation management, and total payroll management mechanisms. At the same time, China Southern took the opportunity to reform the employment compensation system, perfected the construction of incentive mechanisms, and further stimulated the enthusiasm, initiative and creativity of all employees.
Carrying out excellent team leader training is a major project implemented by China Southern to strengthen the training of basic talents. From March 10th to April 3rd, China Southern’s 29th and 30th Excellent Team Leader Training Classes were held at Tsinghua University. Over 220 outstanding team leaders from various units of China Southern spent 10 unforgettable days in Tsinghua University. During the training, more than 10 well-known experts in the field of management taught courses for China Southern students on aviation business management, innovative thinking, and improvement of work efficiency, and stimulated students' enthusiasm through various teaching activities such as special lectures and case studies, which broadens students' horizons and improves their business capabilities.

**Training in Tsinghua promotes growth of the trainees**

After 10 days of study, I not only updated my ideas and thinking mode, expanded my working ideas and improved my ideological matrix, but also forged a deep friendship with my classmates!

—— Fan kun, student representative of the 29th session

<table>
<thead>
<tr>
<th>Staff Training -</th>
<th>Training concerned staff</th>
<th>Training time per staff/hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>63,665</td>
<td>134.36</td>
</tr>
<tr>
<td>By gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>28,616</td>
<td>103.39</td>
</tr>
<tr>
<td>Male</td>
<td>35,049</td>
<td>153.55</td>
</tr>
<tr>
<td>By level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High level</td>
<td>5,966</td>
<td>107.80</td>
</tr>
<tr>
<td>Mid level</td>
<td>4,345</td>
<td>111.27</td>
</tr>
<tr>
<td>Basic level</td>
<td>53,354</td>
<td>136.47</td>
</tr>
</tbody>
</table>

Note: data on Xiamen Airlines and non-aviation holding subsidiary excluded

China Southern attaches importance to employees’ living standards and quality of life, provides employees with humane care and rich spiritual and cultural life, and creates a relaxed and enjoyable workplace environment, so that everyone in China Southern can fully enjoy the sense of value and gain in professional life.

**Happy Workplace**

China Southern continued to promote employee health care projects, formulated the “Administrative Measures for Employees’ Mutual Aid Funds”, the “Administrative Measures for Labor Workers’ Mutual Aid Funds”, the “Administrative Measures for Civil Aviation Female Employees’ Mutual Aid Funds”, and “Administrative Measures for Assistance for Difficult Employees”. Caring activities for company employees were implemented.

In 2019, China southern applied for a total of 460,000 yuan for 63 sick female employees. It set up fund for employees with difficulties and allocated 1.244 million yuan of funds for employees with difficulties reaching 380 families. A total of 4,655 million yuan was distributed to special groups, including 168 working women from poor families, 63 sick female employees and 479 employees suffering from serious diseases.

**Staff activities**

China southern advocates “happy work and healthy life” for employees, actively enriches their spare time life, and helps them achieve the balance between work and life. In 2019, with the platform of the fourth staff culture festival of “Shining southern airlines, beautiful home”, China southern successively held a series of staff culture activities including spring reception party, spring garden party, table tennis competition, chess and card competitions, host competition, and book and picture competition, providing a personal display platform for employees and enriching their spiritual and cultural life.

### Staff training

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Note: data on Xiamen Airlines and non-aviation holding subsidiary excluded

### Employee care

China Southern’s Guangzhou Headquarters staff service center’s three-site self-service equipment was fully put into operation, realizing 7*24 hours self-printing service of 8 kinds of certificates including identity certificate, work experience certificate, visa certificate, etc., to accelerate the intelligization of staff services. At the same time, China Southern also put into operation the first intelligent robot to provide staffs with business handling guidelines, shuttle inquiry, and flight dynamic inquiry services to further improve service levels for the staffs.

### Staff activities

China southern advocates “happy work and healthy life” for employees, actively enriches their spare time life, and helps them achieve the balance between work and life. In 2019, with the platform of the fourth staff culture festival of “Shining southern airlines, beautiful home”, China southern successively held a series of staff culture activities including spring reception party, spring garden party, table tennis competition, chess and card competitions, host competition, and book and picture competition, providing a personal display platform for employees and enriching their spiritual and cultural life.

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Note: data on Xiamen Airlines and non-aviation holding subsidiary excluded
As a responsible international enterprise, China Southern attaches great importance to both corporate development and social prosperity. It takes advantage of its own advantages to intensify special flights, actively conducts public welfare volunteer activities, promotes win-win cooperation among countries and regions along the “Belt and Road Initiative”, and works with suppliers to create responsible supply chains to contribute to the building of a community of shared future for mankind through commitment and friendship.

WARM CONNECTION AND HARMONIOUS DEVELOPMENT

Society
China Southern strives to ensure the smooth flow of major transportation, successfully executes various important charter flights and special flight missions, and launches emergency rescue operations. In 2019, China Southern focused on the transportation guarantee tasks of the “two sessions”, the Boao Forum, the Asian Civilisation Dialogue Conference, the World Port Conference, the China-Africa Economic and Trade Fair, the Davos Forum, the Military Games. The major special transportation support tasks of civil aviation have highlighted the responsibilities of state-owned enterprises.

The development of an enterprise are inseparable from society. China Southern always sticks to its original intention, keeps its mission in mind, and takes the responsibility of giving back love to society as its duty. China Southern insists on fulfilling its political, economic, social, environmental protection and public welfare responsibilities, and promotes harmonious social development.

In mid-March 2019, Mozambique was hit by a tropical cyclone “Idai”. Storms and heavy rainfall caused severe floods, landslides and river breakwaters, causing major casualties and property damage. Mozambique entered a state of emergency across the country and requested the Chinese government to implement rescue. It is the first time China Southern has flown to Mozambique for a rescue. At noon on March 22, on receiving the rescue mission, China Southern immediately began preparations for route calculation and operational risk assessment. However, there are no direct flights between Mozambique and the Beijing Capital Airport, and emergency rescue flights need to fly over 6 countries. China Southern has completed the route performance analysis and assessment, the application of the flight schedule, and the international overflight permission application in the shortest time. At 17:58 on March 24, China Southern’s rescue flight took off from Beijing. Fourteen hours and 18 minutes later, a flight carrying 65 medical paramedics and nearly 20 tons of emergency aid arrived in Maputo, the capital of Mozambique.

China Southern once again successfully completed the emergency rescue flight support mission, demonstrating the national strength and the role of China Southern as a central enterprise.

CASE
Emergency rescue aid to Mozambique thousands miles away

In mid-March 2019, Mozambique was hit by a tropical cyclone “Idai”. Storms and heavy rainfall caused severe floods, landslides and river breakwaters, causing major casualties and property damage. Mozambique entered a state of emergency across the country and requested the Chinese government to implement rescue. It is the first time China Southern has flown to Mozambique for a rescue. At noon on March 22, on receiving the rescue mission, China Southern immediately began preparations for route calculation and operational risk assessment. However, there are no direct flights between Mozambique and the Beijing Capital Airport, and emergency rescue flights need to fly over 6 countries. China Southern has completed the route performance analysis and assessment, the application of the flight schedule, and the international overflight permission application in the shortest time. At 17:58 on March 24, China Southern’s rescue flight took off from Beijing. Fourteen hours and 18 minutes later, a flight carrying 65 medical paramedics and nearly 20 tons of emergency aid arrived in Maputo, the capital of Mozambique.

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CASE
“99 Charity Day-Little Red Flower” theme flight

From September 10 to 12, 2019, China Southern and Tencent Public Welfare jointly launched the “99 Public Welfare Day-Little Red Flower” theme flight from Guangzhou to Vienna. The “99 Charity Day-Little Red Flower” theme flight aims to encourage passengers to “do good deeds together” and bring “samples of China” to Europe. Passengers on this public-interest flight were surrounded by “little red flowers”, which symbolise love, as they took a rest from the lounge, boarded the plane and entered the cabin. Many tourists took the initiative to learn about the charity project and donated money. They also wrote their best wishes to the recipients on the postcards.

In 2019, China Southern formulated the “Implementation Opinions on Further Strengthening China Southern’s Volunteer Service Work”, set up a Volunteer Service Steering Committee and Volunteer Association to continuously expand community participation and promote community development with better policy and organizational guarantees.

In 2019, Number of volunteers 3,500 person-times
Volunteer hours 36,000 hours

China Southern once again successfully completed the emergency rescue flight support mission, demonstrating the national strength and the role of China Southern as a central enterprise.

CASE
Special Flight

Emergency rescue aid to Mozambique thousands miles away

A total of 54 important charter missions were performed throughout the year, and 4,915 Person-times were transported.
The “Belt and Road Initiative” has established a broader platform for Chinese companies to “go global”. China Southern actively integrates into the country’s “Belt and Road Initiative”, continues to increase international and regional transportation capacity investment, actively integrates into local communities, and helps countries along the “Belt and Road Initiative” to achieve facility connectivity, smooth trade, and cultural connectivity.

Route connectivity
China Southern has continued to increase its capacity investment and established a comprehensive air route network in South Asia, Southeast Asia, South Pacific, and Central and Western Asia, which are the major areas covered by the “One Belt and One Road” Initiative, and has become the main force for aviation connectivity between China and the countries and regions along the route.

China Southern opens Guangzhou-Cebu, Sanya-Bangkok, Guangzhou-Istanbul-Riyadh, Guangzhou-Changsha-Nairobi and other routes, increasing the frequency of Guangzhou-Manila, Shenzhen-Jakarta, Guangzhou-Bali and other routes to strengthen the interconnection with the countries along the route.

Smooth trade
China Southern has continuously strengthened the air connectivity between China and the cities along the “Belt and Road Initiative”, which has directly promoted regional economic development. It also has a continuous stream of development vitality for personnel exchanges and material exchanges.

In Xinjiang, China Southern signed a strategic cooperation agreement with the Xinjiang Uygur Autonomous Region. Xinjiang’s air route network can reach more than 10 neighboring countries, including Kazakhstan, Turkmenistan, Russia, Pakistan, and Georgia, and it is working hard to propel the construction of Urumqi International Aviation Hub and promote economic development. China Southern Airlines operates first direct flights to Turkey from Central China, allowing passengers from Central to and from Turkey to shorten at least 10 hours, accelerating cultural, tourism, and economic exchanges between Central China and Turkey.

By the end of 2019, China Southern has opened 102 routes along the “Belt and Road Initiative”, and has 768 round-trip flights every week. The number of routes, flight frequency and market share rank first among domestic airlines. (The data includes Chongqing Airlines and excludes Xiamen Airlines)

CASE
Warm winter trip, let love spread

With a purpose of carrying forward the traditional virtue of respecting the old and cherishing the young of the Chinese nation and providing warmth and love for the elderly and children, China Southern Shenzhen Branch and Shenzhen Airlines Food Company organized a warm winter activity in Shenzhen Baoan Welfare Institute in the winter solstice of 2019. During the event, the condolation group performed a wonderful program for the children of the orphanage. The passionate and vigorous song and dance performances brought the strong winter warmth to the orphanage, and signified the grand opening of the warm winter activity with cheers. people gathered together to make dumplings, baked pastries, and experienced the festive atmosphere of the festival. China Southern hopes to provide help for the elderly and children within its ability. It calls on people from all walks of life to pay attention to and care for the elderly and the young, to form a social trend of enthusiasm for public welfare and respect for the elderly and the young.
Cultural connectivity

With the continuous development and deepening of business, China Southern has also taken root in the areas along the “Belt and Road Initiative”. China Southern has recruited local staff. There are more than 200 foreign flight attendants from France, the Netherlands, Australia, Malaysia and other countries, providing services to passengers on flights to different corners of the world. At the same time, China Southern’s sales offices around the world have conducted cultural exchanges with local communities, actively integrated into local communities, and promoted the friendship between Chinese people and the people along the “Belt and Road Initiative”.

New Zealand
Become a National Partner of “Uncle McDonald’s House Charity Foundation”

Netherlands
Signed a contract with the famous football team Ajax and became the exclusive air ticket cooperation supplier

United States
Walk into the Shouxing Building in the San Francisco Bay Area, carried out the activity “service community, warm mountain residence”

Italy
Participated in the Italian Chinese Film Festival and awarded honors to local government officials and civil society people who made outstanding contributions

United States
Hosted the listing ceremony of San Francisco-Guangzhou Tourism Promotion Center to introduce Guangzhou tourism resources

Netherlands
Settled in the 20th Lantern Festival in Auckland as the sole airline sponsor
During the Spring Festival of 2019, China Southern held an “air temple fair” in the cabin of the aircraft for the second consecutive year. More than 2,000 passengers from Africa, Asia, North America, Latin America, Oceania, and Europe hung lanterns, guessed lantern riddles, ate dumplings and experienced the endless charm of traditional Chinese culture, Lingnan culture, and Guangfu temple fair.

China Southern flight attendants turned into “Guangfu Cultural Courier”, introduced the Chinese New Year customs, the Guangfu Temple Fair and the cultural connotation to the passengers, invited the passengers to guess lantern riddles and make lanterns, and sent a Chinese New Year gift package to each passenger. The postcards show the traditional customs and intangible cultural heritage of Guangzhou, so that visitors will know more about Guangfu Temple. The air journey of passengers has become an immersive journey of Chinese culture, and the aircraft cabin has become a space for the dissemination and exchange of Chinese culture.

Holding “air temple fair”, opening the window of Lingnan culture for the world

CASE

This aerial temple fair has a very new form of activity and is a very good cultural dissemination event.

---- Ms. Zhang, a Chinese Canadian tourist

China Southern believes that a sustainable supply chain can promote its own better operation and the growth of its suppliers. In 2019, China Southern has been actively transforming to supply chain procurement. According to the modern supply chain management concept, it has improved rules and regulations, strengthened hierarchical management, comprehensively standardized supplier management, and prevented supply chain risks. It has worked with the supply chain to provide better services for passengers and other relevant parties, and promoted the high-quality development of the company.

Standardized procurement management

China Southern has developed 15 policies including “Procurement Management Volume”, “Procurement Risk Control Management Volume” and procurement volumes for flight, engineering and construction projects, and maintenance, also including “Supplier Management Measures” and “Supplier Inspection Post Operation Process”. The internal control system of China Southern’s procurement and supplier management were standardized and improved to prevent risks in the supply chain.

Hierarchical management of suppliers

By carrying out hierarchical and differentiated management of supply, and divide suppliers into excellent suppliers, qualified suppliers, registered suppliers and blacklisted suppliers, China Southern has built a comprehensive supplier library and brand library, standardized the management of suppliers, and provided preferential policies for excellent suppliers, thus excellent suppliers have the motivation to continue to strengthen the cooperation with China Southern and create a benign supplier ecosystem.

Responsible procurement

China Southern promotes the procurement of green products from the source. In the cabin, China Southern purchased the dining car made of lightweight materials to reduce the weight of the dining car and reduce fuel consumption in flight. At Daxing International Airport, China Southern is 100% committed to using new energy general vehicles, with the purchase of 16 new vehicles during the year.
## Report Indicators Index

### ESG Indicators Index

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Aspect number</th>
<th>'Comply or Explain' provision</th>
<th>Locations in the report</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Environmental</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General disclosure</td>
<td>Information on (a) the types of emissions and respective emissions data; (b) total non-hazardous waste produced (in tons) and, where appropriate, intensity (e.g. per unit of production volume, per facility).</td>
<td>P50-P51</td>
<td>P50-P51</td>
</tr>
<tr>
<td>A1.1</td>
<td>The types of emissions and respective emissions data</td>
<td>P50-P51</td>
<td>P50-P51</td>
</tr>
<tr>
<td>A1.3</td>
<td>Total hazardous waste produced (in tons), where appropriate, intensity (e.g. per unit of production volume, per facility).</td>
<td>P51</td>
<td>P51</td>
</tr>
<tr>
<td>A1.4</td>
<td>Total non-hazardous waste produced (in tons) and, when applicable, intensity (e.g. per unit of production volume, per facility).</td>
<td>P51</td>
<td>P51</td>
</tr>
<tr>
<td>A1.5</td>
<td>Description of emission targets and the steps taken.</td>
<td>Emission targets have not been disclosed for the time being, and relevant plans are being formulated.</td>
<td>P56-P57</td>
</tr>
<tr>
<td>A1.6</td>
<td>Description of the methods used to treat hazardous and non-hazardous waste; (a) description of the waste reduction goals and steps taken.</td>
<td>Waste reduction targets have not been disclosed for the time being, and relevant plans are being formulated.</td>
<td>P56-P57</td>
</tr>
<tr>
<td><strong>A2 - Resources</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General disclosure</td>
<td>Information on: (a) policies and (b) compliance with relevant laws and regulations that have a material impact on the issuer relating to waste gas and greenhouse gas emissions, discharges to air and water, and generation of hazardous and non-hazardous waste.</td>
<td>P50</td>
<td>P50</td>
</tr>
<tr>
<td>A2.1</td>
<td>Direct and/or indirect energy consumption by type (e.g. electricity, gas or oil) in total (KWH, in 1000s) and intensity (e.g. per unit of production volume, per facility).</td>
<td>P50-P51</td>
<td>P50-P51</td>
</tr>
<tr>
<td>A2.2</td>
<td>Water consumption in total and intensity (e.g. per unit of production volume, per facility).</td>
<td>P50</td>
<td>P50</td>
</tr>
<tr>
<td>A2.3</td>
<td>Description of the energy efficiency goals and the steps taken.</td>
<td>Description of training activities conducted and the relevant implementation and monitoring methods.</td>
<td>P78-P78</td>
</tr>
<tr>
<td>A2.4</td>
<td>Description of whether there is any issue in sourcing water that is fit for purpose; water efficiency initiatives and results achieved.</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>A2.5</td>
<td>Total packaging material used for finished products (in tons) and, if applicable, with reference to per unit produced.</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>A3 - The Environment and Natural Resources</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General disclosure</td>
<td>Information on: (a) policies and (b) compliance with relevant laws and regulations that have a material impact on the environment and natural resources and the actions taken to manage them.</td>
<td>P52-P54</td>
<td>P52-P54</td>
</tr>
<tr>
<td>A3.1</td>
<td>Description of the significant impact on the environment and natural resources and the actions taken to manage them.</td>
<td>P52-P54</td>
<td>P52-P54</td>
</tr>
</tbody>
</table>

### A1 - Climate Change

- **A1.1**: Three aspects of the major climate-related issues that have had and are likely to have an impact on issuers and the actions taken to address them. | P52-P53 |

### Social

- **B1.1**: Total number of employees by gender, type of employment (including full-time and part-time), age group and region. | P75 |

### Supply Chain

- **B5**: Policies on managing supply chain environmental and social risk. | P88-P90 |
B1.1.1 Number of suppliers by region.
P89

B1.1.2 Description on the practices for identifying environmental and social risks at each stage of the supply chain, as well as the implementation and monitoring methods.
N/A

B1.1.3 Description on the practices used to prevent the use of environmentally friendly products in the selection of suppliers and the relevant enforcement and monitoring methods.
P89

General disclosure
Information on B1.1]. Policies and E1.1] compliance with relevant laws and regulations that have a material impact on the issuer relating to bribery, extortion, fraud and money laundering.
P71

B2.2 The number of complaints received about products and services in the selection of suppliers and the relevant enforcement and monitoring methods.
P51

B2.3 Description on the practices related to the prevention and protection of intellectual property rights.
P7

B2.4 Description on the quality certification process and product recovery procedures. Label related policy is not available
P70

B3.1 Percentage of total products sold or shipped that need to be recalled for safety and health reasons.

B3.2 Description on the practices used to promote the use of environmentally friendly products and services and the relevant enforcement and monitoring methods.
P71

B3.3 Description on the practices for identifying environmental and social risks at each stage of the supply chain, as well as the implementation and monitoring methods.
P71

General disclosure
Information on B3.3]. Policies and E1.1] compliance with relevant laws and regulations that have a material impact on the issuer relating to bribery, extortion, fraud and money laundering.
P71

B7.1.1 The number and results of corruption cases brought against and concluded against management.
P9

B7.1.2 Description on preventive measures and reporting procedures, as well as relevant enforcement and monitoring methods.
P71

B7.2 Description on the anti-corruption training activities provided to directors and staff.
P9

B7.3 Description on practices related to the protection and protection of intellectual property rights.
P7

B7.4 Description on the anti-corruption training activities provided to directors and staff.
P71

B7.5 Description on the practices used to promote the use of environmentally friendly products and services and the relevant enforcement and monitoring methods.
P71

B8.1 Focus areas of non-financial (e.g. education, environmental, training, labour, health, culture, sports).
P92, P727

B8.2 Resources (such as money or time) used in the focus area.
P89

This document contains the “Comply or Explain” provision as provided by the “Comply or Explain” legislation, where the practices are being implemented, the way they are implemented and monitored.


gri standards indicator index

Appendix