### China Southern Airlines Company Limited

Compiler: The Social Responsibility Management Committee of the Planning and Development Division, China Southern Airlines Company Limited Address of China Southern Airlines' Headquarters: No. 278, Airport Road, Guangzhou, Guangdong Province, P.R.C.

China Southern Airlines' Official Website: www.csair.com Contacts: xiaohang

E-mail: xiaohang@csair.com

### QR Code of CSA's WeChat account







link





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# 2017 China Southern A

China Southern Airlines Co., Ltd Corporate Social Responsibility Report



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Flying with the sun, towards a better life





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Flying with the sun, towards a better life

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# Flying with the sun, towards a better life

The world is moving rapidly, and flying has become the number one form of transportation. At China Southern, we carry more than 300,000 passengers to over 200 destinations in 40 countries and regions across the globe onboard our aircraft every day.

Shouldering this immense responsibility, every departure marks our 100% commitment to our passengers.



"Flying with the Sun" is the mantra of every flight. We strive to provide our customers with services that are as warm as the sun; we enjoy giving our warmth and strong care back to our society; we have created a vibrant network that connects families, friends and business partners alike and we place our Company under the sun by creating a transparent and responsible China

The world is changing and China Southern is changing as well but the 100,000 staff and management which make up our devoted China Southern family will stay true to ourselves in flying with the sun and moving together with you towards a better

20.662 million accumulated safe flight hours

Southern, adding dynamic colors to your life.

future.



63,000 hours of volunteer work

# **ABOUT THIS REPORT**

This is the 11th Corporate Social **Responsibility Report of China Southern** Airlines Company Limited (hereafter referred to as "we", "the Company", "China Southern" or "China Southern Airlines").

We hope, through this report, to closely engage and communicate with you and we hope this report will boldly illustrate the harmonious, mutual, and sustainable development of China Southern and the society.

At this new starting point, we pledge to continue to make greater commitments to our corporate social responsibilities and work closely with all stakeholders to embark upon a journey towards a better life.

# 2017 the Same 22 201 中國兩方領空間 社会資圧紛告 2017

### Scope of report

This report is for the period from January 1, 2017, to December 31, 2017. Certain parts of this report may be traced back to previous years where applicable. The content of this report covers the Company and its majority-controlled subsidiaries.

### References

This Report has been prepared in accordance with the following:

Guidelines Concerning State-owned Enterprises' Fulfilling Social Responsibilities published by the State-owned Assets Supervision and Administration Commission (SASAC); Environmental, Social and Governance Reporting Guide published by the Hong Kong Stock

Exchange:

Guidelines on Sustainable Development Information Disclosure for Companies Listed on the Shanghai Stock Exchange published by the Shanghai Stock Exchange;

G4 Sustainability Reporting Guidelines (GRI 4.0) and

The National Standard GB/T36001-2015: Guideline on the Compilation of Corporate Social **Responsibility Report** 

### Source of data

Financial data used in this report were sourced from Annual Reports and additional data wase sourced from official corporate documents and statistics. The Board of Directors of the Company and all directors hereby guarantee that this report contains no false records, misleading statements, or major omissions.

The directors accept liabilities for the truthfulness, accuracy, and completeness of this report.

### Availability of this report







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# **CHAIRMAN'S LETTER**

A New **Chapter in a New Era** 

As our country forges ahead on the way to a national rejuvenation, China Southern Airlines as a potent dynamism in the building of a strong aviation nation and stands at a new historic threshold to fulfil the Chinese Dream with our spirit of "Diligence, Pragmatism, Inclusiveness, and Innovation".

The Communist Party of China successfully held the 19th National Congress in 2017. This Congress formulated the action plan and an ambitious blueprint of the development of the Party and our nation. Socialism with Chinese characteristics has entered a new era. As our country forges ahead on the way to a national rejuvenation, China Southern Airlines as a potent dynamism in the building of a strong aviation nation and stands at a new historic threshold to fulfil the Chinese Dream with our spirit of "Diligence, Pragmatism, Inclusiveness, and Innovation".

Looking back at Year 2017, we have achieved satisfactory results. Our fleet size has exceeded 750 aircraft and our total revenue reached 127.489 billion RMB, a year-on-year growth of 11.05%. Compared to Year 2016, our total profit grew by 1.15 billion RMB, achieving the A-rating assessment requirement of the State-owned Assets Supervision and Administration Commission, With a well-known "Sunshine Southern" image: the construction of Beijing's new airport; our Guangzhou-Beijing dual-hub; becoming the largest Chinese carrier along the "Belt and Road"; full and thorough implementation of the spirit of the 19th National Congress of the CPC and our vibrant plans of becoming a world-class air transport enterprise collectively mark our solid steps into building a carrier brand that will be honored by time.

Regarding our safe flight operations, safety has always been our paramount concern. We are protecting the safety "bottom line" on all operational fronts. We firmly apply the requirements of "zero-tolerance to safety hazards" principle raised by the Party General Secretary Xi Jinping and take the "100-day safe operation competition" and "Top 10 safety models" activities as leverage to strictly and earnestly ensure flight safety. We have revised all safety management manuals to be in line with IOSA safety audit requirements, formulated The Decision on Further Strengthening Accountabilities for Safety in Operations and issued a checklist of zero-tolerance items. During Year 2017, our safety performance has pushed forward to new levels. We have achieved an accumulated 20.662 million hours of safe flights.

On environmental protection, we closely follow climate change and guard the environment that we all live in. In Year 2017, our investment to environmental protection also climbed to new frontiers. We have opened a new Office for **Resources and Environmental Protection** with specialists in relevant fields. We consistently refine our management procedures for energy savings and emission reductions by formulating emission reduction handbooks and energy and resource consumption handbooks that both plan and guide our work. We continuously explore possibilities in increasing energy

consumption efficiencies and in Year 2017, reduced more than 63,000 tons of greenhouse gas emissions. Last, but not least, we signed the Buckingham Palace Declaration to participate in the international community's effort to fighting against the transportation and trade of wildlife animals and their parts.

Regarding our services, we have re-doubled our efforts to improve our service standards both in the air and on the ground. Our hub at Baiyun International Airport Guangzhou has become the first of its kind in China that fully supports through check-in and we are the first airline in China to introduce facial recognition boarding technology as well as our exclusive "Baggage Up" initiative and accessible websites. Additionally, we have optimized our automatic refund and re-route processes and expanded the coverage of special meal reservations. During Year 2017, our on-time performance was ranked first among the three largest carriers in China; became one of the "World's Top 50 Most Valuable Airline Brands" and earned an AAA rating, both were the best among all Chinese carriers. We were also awarded the "Customer Satisfaction Benchmark of 2017" by the China Association for Quality. Our service quality is well noted both locally and globally.

Regarding our staff and management, we have constantly improved the overall quality and professionalism of all team

members. We made great strides to attract market leading talents, improve our internal training and refine incentive systems to form a diverse, competent, and professional team. We have carried out the "five-small" innovation initiative to encourage all staff and management to participate in day-to-day innovations. Throughout the year, more than 90% of all staff and management took part in this initiative and produced more than 1500 innovative new creative concepts. We will continue with our unique "promoting myself, achieving my dreams" employee quality enhancement program, care more for the working and living conditions of all staff and management and organize rich cultural and athletic events to meet our colleagues' desires and aspirations of a better life. On the front of reforms, we consistently

deepen reform and development and accelerate the implementation of strategies. In Year 2017, the management of the Group and the Company were integrated, and new services were launched (i.e. the new air bridge linking Guangzhou and Mexico City) that marked a network coverage across all five continents. We extended our cooperation with Xiamen Airlines and Sichuan Airlines to many resource sharing areas; our improved "China Southern e-Travel" platform has served 240 million on-line visits while many of its functions are industry trendsetters. We have reached a new strategic partnership with American

In the society, we actively contribute and assist in its harmonious development. Besides striving to move our Company to being bigger, better, and stronger, we also actively fulfil our corporate social responsibilities by taking up critical tasks for the country such as disaster relief; overseas Chinese repatriation and the transportation of peacekeeping forces and our dynamic "10-Fen" Care Foundation. In Year 2017, we completed the transportation and service tasks during the "Belt and Road" Summit; BRICS Summit; Guangzhou Fortune Global Forum; the transportation of the peacekeeping force and even a volcanic eruption at Bali. We have continuously implemented targeted poverty alleviation and other charitable activities. The Company provided poverty-alleviation fund and materials worth 15.3 million RMB, the Group invested 6.1 million RMB to targeted poverty-alleviation, and the "10-Fen" Care Foundation donated 2.8 million RMB, showcasing a responsible image as a state-owned enterprise.

At the same time, we continuously have enhanced communication and mutual understanding with our stakeholders. Our "Open Day" events have built bridges between the public, investors, and the



Airlines, added new partners such as British Airways, Etihad Airways and LATAM and are taking solid steps towards standardization, integration, intelligence, and internationalization.

Company. In 2017, we won the "Listed Company with Best Investment Potential" in the China Securities Golden Bauhinia Award, China Southern Airlines' official accounts on Weibo and WeChat were awarded the "Most Influential New Media Account of State-owned Enterprises".

Year 2018 is the beginning of implementing the essence of the 19th National Congress of the CPC; it is the 40th Anniversary of China's Reform and Opening-up and it is a critical juncture in securing a decisive victory in building a moderately prosperous society in all respects and implementing the 13th "Five-year" Plan. Year 2018 is also the launching point for China Southern's in our quest to become a world-class carrier. The development of China Southern could not have been achieved without the care from everyone, and we always are most grateful.

This bold new era gives us new missions and new quests brings us new responsibilities. We look forward to being with everyone at this new beginning in history to open a new chapter of development.



Wang Changshun Chairman China Southern Airlines Company Limited

# **ABOUT US**

China Southern was founded in Year 1995 and was listed in both HKEX and New York Stock Exchange in Year 1997 followed by a public listing on the Shanghai Stock Exchange in Year 2003. China Southern is headquartered at No. 278, Qixin Road, Baiyun District, Guangzhou, Guangdong Province of P. R. China. Our primary business scope covers the provision of scheduled (and non-scheduled) domestic, regional, and international air transportation services for passengers, freight, mail, and baggage. China Southern is the largest airline Company in the People's Republic of China regarding fleet size, the number of routes and annual passenger throughput.

# At a Glance

### Organizational Structure

In Year 2017, we adjusted our organizational structure by consolidating the management members and administrative divisions of the China Southern Airlines Holding Company and the China Southern Airlines Co. Ltd. The total number of functional divisions has been reduced from 37 to 20. This reorganization serves as a firm foundation for the integrated operation and management of the Company.

China Southern operates 16 branches of Xinjiang, Northern, among others; six controlled subsidiaries of Xiamen Airlines, Guizhou Airlines, Henan Airlines, Shantou Airlines, Zhuhai Airlines, and Chongqing Airlines; as well as China Southern General Aviation Co. Ltd in Zhuhai.

In addition, 22 domestic sales offices can be found in major Chinese cities such as Hangzhou and Qingdao; and 68 international sales offices are located in major metropolitan cities such as Sydney and New York. Scan to watch our corporate video

China Southern Airlines Company Limited



General Administrative Office **Company Secretary Bureau** Strategic Planning and Investment Division Organization and Personnel Division Human Resources Division **Finance Division Comprehensive Performance Assessment Division** Safety Supervision Division Flight Technology Management Division Laws and Standards Division Airline Products and Services Management Division International Corporate Relations Policy Research Office Audit Division Supervision Bureau **Publicity Division** Labor Union Office General Office Aviation Health Management Division General manager-on-duty Office **Training Center Retirees and Pensioner** Management Center



China Southern General Aviation



### Main Awards

6th place in Brand Finance's

Valuable Airline Brands in 2017,

Airline 50 2017 - The Most

with AAA rating, the best

among all Chinese airlines

**1st Place in "Chinese National** 

Customer Recommendation

"Most Socially Responsible

**Responsibility Annual** 

Media Operator of

Enterprise" Award at the 9th

Index - Air Transport

Category"

2017 "Most

State-owned

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SK.	$\geq$	$\leq$	Ø

CAAC General Aviation Flight Safety One-star Award

Awarded "Most Outstanding Airlines in Asia" by Now Travel

"Best Development in **Electronic Air Cargo** Transportation" by IATA

Favorite Employer"

Received A-rating in Shanghai Stock Exchange for four consecutive years **China Securities Golden** 

Bauhinia Award

23rd place in the Skytrax Top

improving from 32nd in Year

2016, the largest progression

"Happy Travel, Warm Way Home"

volunteer project was nominated

"Special Contribution" Award and

the "Excellence in Organization"

Youth Volunteer Service Project

at the China Youth Volunteer

Service Project Competition

100 Airlines ranking,

in China

### Route Network

Based on the four key hubs of Guangzhou, Beijing, Urumqi, and Chongqing, we continue to strengthen our airline route coverage as an international network carrier. Our hub at Baiyun International Airport Guangzhou has become the largest gateway from mainland China to the Oceania, Southeast Asia, and South Asia regions. We operate an extensive domestic network with additional routes spanning the Asian region and is closely connected with Europe, North America, the Oceania, and

Each day, more than 2,000 China Southern flights bring passengers to more than 200 destinations in over 40 countries and regions with 300,000 daily seat capacity.

**China Southern operates** flights per day

> Network covers more than lestinations in over

### Key Performances

**Total passenger** 

an increase of 10.2%

Total turnover

ton-kilometer an increase of 12.0%

During the year, we continued to make steady progress, launching 33 new international and regional services including:Guangzhou - Mexico City (via Vancouver),Guangzhou -Cairns, Shenzhen - Melbourne, Shenzhen - Moscow, Guangzhou -Male (via Colombo), Guangzhou - Vientiane, Guangzhou -Langkawi, and .Beijing - Ho Chi Minh City

As well as 210 new domestic services such as Shenzhen to Mohe.

By the close of Year 2017, China Southern Airlines operated a total number of 1,169 passenger and freight routes consisting of 905 domestic and 264 international and regional routes.

Currently, China Southern operates



domestic routes

international and regional routes

with over





Operating revenu





an increase of 11.05%

# Strategy and Governance

Having a clear development strategy and standardized management system is an important foundation for an enterprise to achieve sustainable development. China Southern Airlines is actively planning its future development strategies and we have established a solid governance structure and modern management system to promote the steady development of the Company.



### **Corporate Strategy**

Development is an ever-changing process and appropriate strategies should change with the ever-changing business environment. In Year 2017, China Southern conducted a comprehensive analysis of the international and domestic business community, as well as a two-step strategy and clear requirements of building a powerful nation of transportation and building world-class enterprises proposed in the 19th National Congress of the Communist Party of China. Having examined our development advantages and existing challenges, we have firmly proposed new missions, new strategies, new deployment, and new requirements.

These are: to persist in the general tone of "steady progression"; to steadily promote the 10 major strategic projects of China Southern; to continue our pursuit in becoming a world-class air transport enterprise; to plan for a great future; to showcase new climate and new actions; and to launch a new chapter in China Southern's development throughout the new year.



### **Corporate Governance**

Since its foundation, China Southern has strictly abided by relevant national and local laws and regulations and has continued its effort to improve its governance structures. The Company has regulated and specified duties and obligations for different parties in addition to the setting up a sound internal control system.

### Comprehensive reform to facilitate development

Throughout the year, China Southern reformed the Company from four areas of governance structure, system, mechanism, and relationship.

### In terms of governance structure

the Company has completed the term change of the Board of Directors and the Supervisory Committee. The human resources structures of the Board of Directors and the Supervisory Committee have been simplified and a Standing Committee of the Board of Directors and an Aviation Safety Committee has been established and the percentage of independent directors exceeded 50%.

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### In terms of governance mechanism

China Southern has systematically reviewed the authority boundaries of the main governing bodies including the Board of Directors, the Standing Committee, and the Working Meeting of the General Manager to establish a clearly bounded, seamlessly connected and rational hierarchical authorization mechanism. China Southern has clarified its corporate decision-making process and mechanism. effectively resolving the historical issue of having vague boundaries. The Company has clarified its relationships and procedures in the decision-making processes between the Party Committee and the Working Meeting of the General Manager, Standing Committee of the Board of Directors, and the Board of Directors to ensure that the Party Committee is both the governing and political core of the Company.

### LINK

China Southern has incorporated Party building into the Articles of Incorporation in Year 2017. We held roadshows in Hong Kong and Beijing to explain and communicate with 20 major domestic and international organizations and met with more than 50 investors. Consequently, the inclusion of Party building in Articles of Incorporation was passed with 94.6% votes at the Shareholder Meeting.

relationship.

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# In terms of governance relationship

China Southern has formulated a management system of directors and supervisors, established a standardized, clear, and smooth operational mechanism and control system. 09

Strategy and

Investment

Committee

Audit and Risk

Management

Committee

Nomination

Committee

Remuneration

and Appraisal

Committee

Aviation Safety

Committee

Standing

Committee of

the Board

of Directors

In addition, China Southern has entered into a strategic cooperation with American Airlines. The two parties signed Strategic Cooperation Framework Agreement, Share Purchase Agreement, and other business agreements. American Airlines through its purchase of China Southern shares, is expected to develop broader and higher-level cooperation with China Southern.

Shareholder

Meeting

Meetings

**Board of Directors** (Including m3 Executive Directors and 4 Independent Non-Executive Directors)

Supervisory Committee

During the year, the **Company held Directors** Meetings Shareholders General

Supervisory **Committee Meetings** 

### **Co-Development Through** Integration

China Southern has established strategies for standardization, integration, intelligence, and internationalization. Based on the concept of "standardizing every action, documenting every standard, acting in accordance with every document", China Southern joined forces with Xiamen Airlines and initiated the revision of eight sets of nine professional manuals. In Year 2017, China Southern actively explored the promotion of integration in maintenance and engineering and ground handling services and consolidated resources to build a "pan-China Southern brand".



Conducts research and provides recommendations to long-term

corporate development strategies and major investment decisions

1. Proposes the commissioning or changing of external auditors, 2.

external auditing. 4. Reviews financial information of the Company

3. Responsible for the communications between internal and

and their disclosure. 5. Reviews internal control and risk

1. Conducts research and provides recommendations to the

of the directors and the senior management members.

1. Conducts research on the appraisal standards of the

directors and senior management members, conducts appraisals, and provides recommendations. 2. Studies

and reviews the remuneration policies of the directors

1. Supervises aviation safety management of the

Company, 2. Conducts research, holds discussions

implementations of aviation safety management planning and other critical matters relating to safety for

provides recommendations, and supervises the

selection standards and hiring procedures of the directors and the

candidates of the directors and the senior management members.

3. Conducts reviews and provides recommendations of candidates

senior management members. 2. Conducts search of qualified

management systems of the Company.

and senior management members.

the Company.

upervises the system and the implementation of internal auditing.

# **Comprehensive and Strict Party** Self-Governance

At the 19th National Congress of the Communist Party of China (CPC), Party General Secretary Xi Jinping raised the requirement of "exercising strict governance over the party and improving the party's ability to govern and lead". He pointed out the direction, path, spirit, historical mission, and the focus of effort of the Party in this new era. We at China Southern profoundly grasped the new situation of implementing comprehensive strict Party self-governance and clarified the new goal of implementing stronger strict Party self-governance. China Southern Airlines pledges to promote the deepening of comprehensive, strict Party governance and promote China Southern to support the Party to develop in depth with greater determination, greater strength, and greater courage. We will achieve these advances on all fronts of our business operations.

### Full and faithful application of the essence of the 19th National Congress of the CPC

After the 19th National Congress of the CPC, we saw a wave of learning, grasping, understanding, and comprehending the essence and requests of the Congress at China Southern. The learning and applying of the essence of the 19th National Congress of the CPC is, and will be, the first-priority political task in the long-run to deeply study and thoroughly implement the requirements and measures raised in the 19th National Congress of the CPC.

Base ourselves on the new orientation of the new era, unify our thinking and unify our actions. We take the building of a world-class air transport enterprise as the foothold in implementing the spirit of the 19th National Congress of the CPC,. We firmly establish the "Four-Awareness", conscientiously study and implement Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era and implement the essence and implications of the 19th National Congress of the CPC and various decisions in all aspects of our operations. This will allow the Company to adapt to a new strategy and new mission, unswervingly fulfilling our duties in strengthening, expanding, and improving state-owned capital, earnestly assuming the political responsibility and political mission of state-owned enterprises.

### Deepening Strict Party Self-Governance

### To implement new requirements and new deployment, to promote a comprehensive deepening of strict Party

self-governance. China Southern Airlines will comprehensively strengthen the Party's leading role and Party building and select Party officials with expertise on the basis of capability, intention, and willingness to carry out duties to promote the professionalism of Party cadres. We pledge to conduct inspections and expand comprehensive and strict Party self-governance in all fronts. Party organizations at each level shall conduct the four forms of oversight over discipline compliance and use correct verbal warnings and disciplinary interviews. We also pledge to comprehensively construct a new pattern of appropriate Party self-governance from every angle of every aspect.

Party organizations at each level held

15,800 studies sessions and themed Part seminars on the theoretical and practical issues of Party building.

Organized



### Strict Implementation in Building a **Clean Operation**

To adapt to the new climate and new thoughts, to firmly build a fine Party culture, and to keep its organizations clean. China Southern takes seriously the work of building a Party culture and keeping its organizations clean as the foundation in promoting comprehensive strict Party self-governance. Corruption shall be heavily punished. We have established a coordination mechanism and joint meeting system with the involvement of the Discipline Inspection Team, Audit Division, and the Supervisory Committee to form a new, mass-supervision structure of "multiple position-in-one". We shall insist on keeping discipline in the forefront, conduct monthly activities of discipline education and learning, reminding all during conversations and talks about clean operations. China Southern Airlines will constantly enhance a sense of integrity and self-initiation of the people and Party officials, strengthen the supervision of the "key minority", strengthen the supervision and process of selecting and appointing personnel to ensure that we meet the political and clean operation standards. We aim to build an all-around line of defense from the system to the thoughts to protect the clean operation of the Company, and to provide a clean atmosphere and strong disciplinary structure to the building of "Sunshine Southern".

# **Business Ethics**

China Southern is consistently treating business ethics and honest business practice as important building blocks in the building of assets and brand. China Southern shall fully comply with laws, rules, and their legal principles; insist on operating with full compliance, implementing comprehensive risk control management to safeguard the healthy development of the Company.

### Embed legal risk prevention into business processes of major projects, finance and tax management, employment, environmental protection, intellectual property, and anti-trust.

Strengthen international legal risk prevention, enhance international legal risk analysis and inspection, formulated legal risk prevention manuals and long-term legal risk prevention mechanism.

In 2017, the Audit Division made



conducted responsibility audits of managerial staff at all levels



### **Risk Control**

China Southern always handles potential risks in its business operation with great care. In Year 2017, using the Financial Management Manual as its "ruler", China Southern regulated its operational controls, organized financing through multiple channels while continuously optimizing the Company's debt structure and strengthened financial risk controls.

During Year 2017, no major risk event and monetary loss occurred.



Airlines further strengthened brand protection, strictly regulated intellectual property such as patents, copyrights and trademarks and protected mature brands by becoming registered trademarks. The trademark of the "Canton Route" brand was successfully registered in Taiwan.

Stable operation, rationally match debt structure, insist on RMB-based financing strategy, negotiate early repayment and replacement of US Dollar-based financing to reduce debt risk.

- Innovative methods of using loans, combined with currency swap programs, to reduce interest rate risk.
- Broaden financing and actively sign all-round strategic cooperation agreements with banks to reserve lines of credit and enhance risk resistance ability.

### **Internal Audit**

China Southern continues to improve its audit mechanism, expand its coverage, and carry out economic auditing projects. We implemented compulsory audits to managerial staff when leaving their posts and implemented regular periodic audit system to strengthen the performance supervision of managerial staff. Focusing on key areas of production and operation, issue-prone areas, and high-risk areas, we carried out special audits to strengthen risk prevention. Furthermore, we continue to carry out internal control auditing and inspection to ensure the effectiveness of our internal control systems.

# Corporate Culture



Customer

\$ \$ \$

Spirit of China Southern

## Diligence, Pragmatism, Inclusiveness, Innovation

### Core values

Customer First, Respecting Talents, Striving for Excellence; Continuous Innovation and Return to Society

Return

Staff

As a talent-based company, we responsible, competent global professionals and provide them opportunities that benefit the long-term success of the

and methodologies, giving network-oriented airline.

We will be an airline of development.

Innovation is vital to the growth and survival of our company, from the customers to the mployees.

We are empowered through innovation by encouraging new ideas in the company. We are committed to a policy of innovation open to out-of-the-box thinking with commitment, support and rewards at all levels of the company.

We will always stand on the cutting-edge of the airline industry with the spirit of innovation and reform.

### Innovation

Advantage

We will always bear in mind to give back when we take, both from society and the environment.

We are committed to giving back as our duty and insist on meeting our economic, legal, ethical environmental and public responsibilities.

We are dedicated to be a highly responsible, accountable corporate citizen with sustainable and harmonious development.

# **2017 HIGHLIGHTS Targeted Poverty Alleviation -New Responsibilities**

China Southern Airlines is resolute in implementing the arrangements of the State, continuously taking duties of the country and the society as our two most important missions. We are eager to taking more responsibilities and offering more contributions to winning the battle against poverty. In Year 2017, China Southern was assigned to assist three state-level poverty-stricken regions, specifically Pishan County and Moyu County of Hotan Prefecture of Xinjiang and Wengang Village in Lianmai Township of Huaiji County in Zhaoqing, Guangdong in their poverty alleviation efforts. Our staff and management teams defined four action targets (1) driven by industry, (2) led by education, (3) infrastructure first, and (4) efforts to lower the focus of poverty alleviation to for all citizens, helping them to leave poverty and progress towards a better life.

### **Poverty Alleviation in Numbers**



669 working team members, village officials, residents, and students attended a flag-raising ceramony













Wang Jing from **Xinjiang Branch** received a box of walnut after visiting her paired "buddy"

Free-clinic to residents of Wengang Village



### Driven by Industry

Alleviating poverty by building a self-sufficient industry is the essential measure in achieving sustainable increases in income in less developed regions of the country. Having conducted thorough inquiries in several impoverished regions, we have helped thousands establish industries that are best suited their local characteristics so that local residents can combat poverty by generating new revenues themselves.

### China Southern Airlines' poverty alleviation efforts:

Helped impoverished households of Pixina Township in Pishan County to build grape racks and sheep sheds to develop household-based mini economies.

Supported the construction of a dragon fruit farm in Wengang Village of Huaiji County to resolve e employment challenges and develop new income sources.

Assisted the "Grocery Express" project in Fuchong Village of Qichun County in Huanggang, Hubei to transport green grocers directly to the canteens of China Southern, resolving sales and marketing challenges of local producers.



China Southern Airlines' poverty alleviation efforts:

Funded the construction of a China Southern Sky Pearl Kindergarten at Moyu County and the China Southern Sky Pearl Primary School at Pishan County; supported underprivileged students to complete their education; improved local school facilities and promoted local bi-lingual (Mandarin Chinese and Uyghur) education.

Funded the surface hardening project of a road leading to the Central Primary School of Luoshan Village, Fuchuan Yao Ethnic Autonomous County of Guangxi, greatly improving the accessibility to school for local youth, as well as villagers living along the road.

Long-term, one-to-one assistance pairs with local students have been formed at each assigned poverty alleviation region, establishing a long-term support mechanism.

### Led by education

Education is the core to China Southern Airlines' poverty alleviation policies. We attach the greatest importance to the education of China's youth, insisting on the combination of reducing poverty and illiteracy, increasing the investment in education, and helping more underprivileged students improve their educational levels, thereby cutting off the divisive chain of poverty that span generations.

## Infrastructure first

Satisfying the basic living needs of residents is a vital part in improving the living standards of local residents. We have built roads and dug water wells in impoverished areas aiming to provide basic accessibility and drinking water.

China Southern Airlines' poverty alleviation efforts: Funded the construction of five bridges at Pinaxi Township of Pishan County to improve local transport facilities. The first bridge has been completed and is now bringing exciting new transportation opportunities to local residents.

Resolved local residents' challenges in daily mobility and the transportation of agricultural products by building a new road in Wengang Village of Huaiji County. The road was named "Kapok Road" after the logo of China Southern.

Gradually provided safe, clean drinking water to 715 individuals of 216 households in Kuoshitage Township of Pishan County.

### **Care and rescue**

China Southern Airlines pays additional attention to those whose lives are severely impoverished due to special circumstances, providing a helping hand to those in desperate needs. It is our prayer that our Company can bring warmth and support to them during their most challenging times, and to restore their hope.

China Southern Airlines' poverty alleviation efforts: Invested in the "Tongzhou" (same boat) project fund to provide special financial aids to families that are suffering from financial difficulties due to critical illnesses in Moyu County, aiming to reduce the cases of "poverty due to illness" and "illness caused by poverty".

Refurbished endangered houses for 31 households in Wengang Village, safeguarding the living space of local residents.

"An elder in the village burst into tears and told me that their lifetime's wish was to see the completion of this mountain road. Now that the road is a thoroughfare, he had no more regrets."

> - Lang Tao, First Party Secretary of the Party Committee of Shenzhen Branch and Leader of the Village-based Working Team



# "Belt and Road" - New Layout

The "Belt and Road Initiative" is the key to promoting the forming of an all-round opening-up framework of China. It is a significant strategic decision to proactively respond to the deep change of global situations and to coordinate the national and global conditions. China Southern, as a large state-owned enterprise and a member of the "national team" of China's air transport companies, is actively responding to the "Belt and Road" advocacy, cultivating its dual-hub development strategy, refining our international network, strengthening cooperation with countries along the "Belt and Road", and building a connected and interlinked Silk Road in the air for bringing in foreign investments and dispersing Chinese investments.

### Creating a Dual-Hub Strategic Layout

China Southern's dual-hub of Guangzhou and Beijing as well as other important hubs of Urumgi and Xiamen are highly compatible with the "Belt and Road" advocacy. These are the key pivots in the building of a connected and interlinked "Belt and Road" system.

### Building the Guangzhou hub

We are continuously enriching the contents of the "Canton Route" family of travel products. We are exercising every effort in the building our hub at Baiyun International Airport Guangzhou, launching "through check-in" services on all flights connecting in Guangzhou to strengthen our transfer services. We have formed a network that is focused on Europe and the Oceania, supplemented by Southeast Asia, South Asia, and East Asia with comprehensive coverage in North America, the Middle East and Africa. China Southern is actively expanding our connections across all industries. We have signed government-enterprise cooperation agreements with the provincial governments of Xinjiang and Sichuan. The China Southern Airlines Holding Company has reached strategic cooperation agreements with large enterprise groups such as China Foreign Trade Center and Lingnan Group. By forming partnerships with other leading enterprises, we are achieving greater resource sharing, synergies, and innovative powers, promoting cooperation in trade and tourism along the "Belt and Road".

### Building the Beijing hub at a faster pace

We are determined to build a strong presence at Beijing's new international airport. Having been selected as one of the main base airlines at this new airport, we are accelerating our construction schedule to meet the infrastructure requirements of serving 40% of the projected passenger throughput. We are determined to safeguard the quality of construction, operation, and management, ensuring that our new base of operations will be operational when the new airport opens its door in Year 2019.

connecting passengers to Guangzhou hub in 2017 Number of international and

Contributed

regional routes originating from Guangzhou

International and regional destinations account for

at Guangzhou Baiyun International Airport



The China Southern Airlines Holding Company and Xinjiang Uyghur Autonomous Region reached strategic cooperation agreements by signing the Strategic Cooperation Agreement of Hub Operation at Urumgi Airport to promote the work of transforming Urumqi Airport into an international transit hub.

### **Refining the Route Network**

We have built up a wide service network across key "Belt and Road" regions of South Asia, Southeast Asia, the South Pacific as well as Central and Western Asia. Our number of flights, service frequencies and market share are all ranked the first among all Chinese carriers, becoming a leading player in connecting China with "Belt and Road" countries. In Year 2017, we launched new services and increased flight frequencies to key international destinations. For example, we added flights from Guangzhou to Mexico City (via Vancouver); to Male (via Colombo) and from Guangzhou to Vientiane, Langkawi, and Cairns. These new services have complemented our service network commitment to "Belt and Road" countries and established passageways for Sino-foreign trade and communications.By the end of 2017, China Southern operated 172 services along the "Belt and Road" with 2200 return flights per week carrying over 15 million passenger a year. China Southern is the largest Chinese carrier serving the "Belt and Road".

In the "Belt and Road" region, **China Southern** serves 68 cities in 38 countries with

172 2,200



routes

### **Comprehensive International Cooperation**

Internationalization is a requirement in serving the "Belt and Road" strategy and building a new, comprehensive opening-up framework. China Southern is gradually enhancing its efforts in international cooperation, taking more initiatives to become a world leading air transportation Company.

In Year 2017, China Southern reached codeshare agreements with 13 airlines, including Saudia and Etihad Airways, on 274 routes along the "Belt and Road". These agreements have further strengthened China Southern's global brand image and expanded its network coverage.

China Southern has entered the Latin America market by launching a Guangzhou -Vancouver - Mexico City service, becoming the first Chinese carrier to connect Mainland China with Mexico.

LINK

carrying more than

15

weekly return flights

passenger every year

is the largest "Belt and Road"

The Silk Road Economi The Maritime Silk Road "Belt and Road" routes

# 2017 HIGHLIGHTS "China Southern e-Travel" -**New Connection**

The rapid growth of the internet has created a "seismic reaction" to the air transport sector that blends connectivity into traditional travel. Responding to China's "Internet+" strategy and IATA's "Easy Travel" initiative, China Southern Airlines has once again upgraded its "China Southern e-Travel" product by launching 678 new functions, encompassing six key areas of pre-flight, ground transportation; waiting at the airport; in-flight; arrival and destination services. In addition, we have also launched new baggage enquiry functions alongside reservation services for special meal requests; unaccompanied elderly travelers and mobility challenged passengers. We hope that "China Southern e-Travel" will be the connection between flights and passengers that will ease passengers' travel by providing care-free experiences via one smartphone.



LINK: "China Souther e-Travel" has once again earned global ecognition

China Southern took part in 2017's IDC Digital Transformation Annual Gala on November 14, held in Singapore. Our e-business project, represented by "China Southern e-Travel", was awarded the "Overall Leader in Digital Transformation".

This global recognition vividly demonstrates that our technology-led digital transformation has been well acknowledged.

### **Easy Boarding with Facial Recognition**

China Southern launched China's first facial recognition boarding system at Nanyang Airport on June 28, 2017. Passengers can now enjoy easy boarding through facial recognition at security checks and gates once they have uploaded their photos to our on-line app. Easy boarding is realized by comparing whether the uploaded photo, ID photo, and real-time photo of the passenger match one another. This facial recognition boarding application has significantly improved passengers' travel efficiencies while reducing the number of airline personnel needed and the work schedule of the ground staff. Furthermore, passenger identities can be confidentially checked at multiple locations, hence increasing flight security.

### "China Southern e-Travel" in Numbers



By the close of Year 2017, "China Southern e-Travel" offered 000 678. 

Followers on social media exceeded 000  $23.117_{million}$ 





### **Smart China Southern and QR-Code Boarding**

To improve our passengers' travel experience, we have introduced our exclusive QR-code boarding pass service. After checking-in via official channels, passengers are given a QR-code for boarding without having to print a paper boarding pass. With the introduction of QR-code boarding pass, we have achieved full electronic and paperless service on all stages ... from ticketing, seat selection, check-in, security check to boarding.

### "China Southern e-Travel" **Experience Center**

The "China Southern e-Travel" Experience Center, based in Zhengzhou, opened its doors in May 2017. This experience center highlights China Southern's goals and on-going developments in the latest mobile connectivity technology. The experience center also houses facial recognition and VR technologies. After entering the center, visitors can use "China Southern e-Travel" applications and try out our advanced technologies in flight booking, check-in, and experience other exciting functions.

### **Onboard Wi-Fi**

As the Internet has changed every aspect of our lives, our passengers expect to stay connected everywhere and anywhere. In Year 2017, we launched satellite onboard Wi-Fi connectivity on 15, Airbus A330-300 aircraft. Passengers can now enjoy onboard Internet service with their phones, pads, laptop computers and other electronic devices for web-browsing, e-mail, and instant messaging services, as well as connecting to the rich IFE content. In the coming months, we will speed up our technological upgrades to provide more personalized services including additional onboard Wi-Fi and IFE on more flights to more passengers.

# **RESPONSIBILITY AND** DEVELOPMENT

Throughout the year to continuously improve the management of its Corporate Social Responsibility (CSR) programs and fully comply with the requirements imposed on public listed companies (in terms of CSR) by the State owned Assets Supervision and Administration Commission, the Shanghai Stock Exchange, and the HKEX. China Southern Airlines has further refined our CSR management systems. We have standardized the CSR contents and requirements into a regulatory framework to promote the steady progression of CSR and to achieve a harmonious development of the Company and the society.

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# Governance of Responsibility

To correspond with the integration of administrative functions of the Holding Group and the Company, we have streamlined our CSR management, renewed the CSR governance structure, and formulated the General Handbook of China Southern CSR Management (the "Handbook") and the China Southern CSR Management Standard Operation Procedures (the "SOP"). This Handbook clarifies the management flow, scope, and supervision, while the standard operating procedures details management procedures and their contents to ensure the standardization of CSR management and to lay a firm foundation for promoting the further integration of CSR concepts into daily management and operations.

# **Social Responsibility Concepts**

China Southern has blended its social responsibility with the revitalized corporate strategy, constructing a social responsibility conceptual framework that is based on delivering economic benefits for shareholders; creating social values for the society; delivering services for customers; creating opportunities for employees and using "green technology" to help preserve our precious environment.



### **Governance Structure**

China Southern has established a three-tier, interlinked CSR governance structure consisting of CSR Guidance Committee, CSR Working Office, and the functional divisions of the headquarters as well as all subsidiaries and branch operations. This structure aims to achieve a horizontal synergy and a vertical connection across departments and hierarchies, ensuring an efficient CSR operation.

CSR management leadership

Coordination and guidance

### **Management Contents**

In accordance with relevant CSR regulations and in conjunction with accepted CSR practices, we have streamlined eight CSR management contents and clarified the procedures and duties of each item to promote the standardization of CSR management.







CSR management contents

List of Corporate Social Res

# Identification of Material Aspects

In accordance with the requirements of G4 Guideline and ESG, as well as industry characteristics and our own business outreach, we have identified a set of aspects that are most relevant to our business operations, and those that have, or may potentially have, great impacts to our stakeholders as key points in our fulfilment of responsibilities and communication with stakeholders.

### Identification of Aspects

In line with the G4 reporting guidelines and considering the business operation of China Southern, we have collected CSR Aspects closely related to the development of China Southern from both internal and external stakeholders. Thirty-four social responsibility Material Aspects in four categories have been identified and will be used as the basis for the analysis of major aspects.

### Investigation of Aspects

Based on the significance of aspects on the two dimensions of both stakeholders and business development, China Southern conducts aspects analysis through Stakeholder Communication and Management Workshops. Stakeholder Communication focuses on assessing the importance of social responsibility issues from the perspective of stakeholders. Management Workshops focuses on the perspective of corporate business. In Year 2017, the Management Workshop invited 16 senior managers to rate the level of significance of these aspects.

### Selection of Aspects

We have drawn a Material Aspect Matrix to select Material Aspects. The horizontal axis indicates the level of significance to the Company, while the vertical axis indicates the level of significance to the stakeholders. Aspects fallen in the second quotient are internally identified as the Material Aspects.

### Assessment of Aspects

Reviewed by management and experts, we have identified 26 material CSR Aspects. In this report, we will monitor and disclose the management and information of these Material Aspects in a reasonable and balanced manner and will actively collect feedback from the stakeholders.





sponsibility Material Aspects of China Southern		
Corresp	onding Chapter	
vith law and regulations		
t of an appeal mechanism for corporate social responsibility related	About Us	
the improvement of economic performance and financial		
t of an appropriate procurement process and fine relationship with	Harmonious Society	
flight delays	Quality Service	
passengers' health and safety	Safe Operation	
bassenger satisfaction		
narketing and promotion	Quality Service	
passenger privacy	duality service	
t of passenger experience		
ก	About Us	
t of a complete internal communication system ensuring a smooth on channel between management and all levels of employees occupational health and safety at work ployee training and education		
i-background of employees, equal opportunity, and equal pay for		
a background of employees, equil opportant, juno equil poj tor	Employee	
mployees' remunerations and benefits	Development	
ested in improving employees' rights		
tion		
and forced labor		
he amount of resources used and the use of recyclable materials		
ergy efficiency		
water consumption		
enhouse gas emissions	Environmental Protection	
vastewater treatment and waste disposal		
purces invested in environmental protection		

Assistance to airports and authorities in the reduction of aircraft noise pollution

# **Responding to the UN Sustainable Development Goals**

The United Nations announced the "2030 Agenda for Sustainable Development in December 2015" with the goal of bringing all countries together to resolve global issues. As an active participant in the international community and an important global enterprise, China Southern actively responds to the advocacies of this important UN Agenda. In consideration of our own goals and values, our senior management team has identified eight priority actions from 17 Sustainable Development Goals. The Company plans to take part in resolving global issues by contributing our expertise and resources.

# Communication with **Stakeholders**

We are committed to full and transparent communication with our stakeholders. By establishing and refining communication channels with the stakeholders, we strive to understand their expectations and requirements of us, and constantly increase our capabilities in fulfilling our responsibilities to achieve co-development with all parties.

### Responsibility communication

We held a series of specially-designed communication activities in Year 2017 to further strengthen our relationships with various stakeholders, increase understanding, promote mutual trust, and improve service quality.



water waste.

# Completion of EU and Guangdong Carbon Trading compliance works to reduce environmental impact. Promotion of greener flights to reduce greenhouse gas

Officially signed the Buckingham Palace Declaration initiated by United for Wildlife, to take part in the global effort in stopping illegal transportation and trade of wild animals and their parts.



We organized multiple large-scale Public Open Day events with the themes of "The making of inflight meals", "aircraft cleaning" and "cabin crew training". Through these and other events, we have provided a platform for the general public and the media to gain a deeper understanding of our operations, as we seek to earn the trust of the public and share additional awareness of aviation safety.



LINK: International Internet Impact Power

The School of Journalism and Communication of Beijing Normal University, released a new document, entitled "The 2017 Report on Oversea Internet Impact Power of State-owned Enterprises" and China Southern Airlines was ranked first among all 98 state-owned enterprises.

### **Communicating with Stakeholders**

We are committed to full and transparent communication with our stakeholders. By establishing and refining communication channels with the stakeholders, we strive to understand their expectations and requirements of us, and constantly increase our capabilities in fulfilling our responsibilities to achieve co-development with all parties.

Stakeholder	Expectations and requirements	Means and channels of communication
Investors	A continuous and stable return on investment; Healthy corporate governance structure; Complete information disclosure system; Risk prevention system	Board of Directors; General meeting of shareholders; Meetings of Supervisory Board; Regular reports and announcements
Government	Legal operation; Increase in tax contribution; Increase in employment	Special reports, visits and investigations; Project cooperation and business meetings; Statistical reports
Environment	Energy saving and emission reduction; Climate change; Ecological preservation; Clean operation; Noise reduction	Fleet optimization and technological optimization; Management optimization, active participation in Carbon Trading; Advocacy of green living
	Continuous safety; Quality service; Reasonable price; Quick response to customer complaints and suggestions	Chain-of-contact service and customer feedbacks; Customer relation management and online services
Employees	Effective communications; Improve training; Improve employee benefits; Open, fair and healthy human resource policy	Employee Representatives General Meeting; Labor Union; Suggestion, forum, letter box; Training
Suppliers	Ethical operation; Mutual benefit; Co-development	Business negotiations; Meetings and discussion of contracts, agreements; Training and technology exchange seminars
Partners	Enhance debt-repayment ability; Reduce risk	Contract negotiations; Business meetings and discussions
Community	Establishment of a communication and interaction mechanism; Increase input to charity	"10-Fen" Care Foundation; Charitable activities and volunteers
Specialists	Complete internal procedures; Increase resistance to external risk	Communications and sharing sessions; Interviews and visits
Media	Establishment of information disclosure channels to timely expression of the voice of China Southern	Press conferences; Media forums
Other players in the industry	Fair competition; Friendly cooperation; Healthy and harmonious industry development	Forums and conferences Communications

# Media

- Held Press Conferences for
- newly launched routes Invited media representatives to attend China Southern Open Day events

## Government

- Launched the "Light up your journey across the sky with Ecuadorian roses" event with ProEcuador
- Additional route product promotion events with Tourism Australia to enhance digital marketing and media promotions

## Customers

- Started to provide onboard Wi-Fi

## Investors

 Released annual, bi-annual, and quarterly results reports. Meetings of the Board of Directors and Meetings of the Supervisory Board.

# Environment

- Completed EU Carbon Trade requirements of reporting, verification, and payment
- Competed Guangdong Carbon Trade requirements of Year 2017
- Closely followed the Carbon Offsetting Scheme for International Aviation (CORSIA).
- Organized national Energy Saving Week and Low Carbon Day events

# Employees

Provided specialized English trainings operational control, and ground staff Developed and implemented mental Held Employee Representative General

# **Suppliers**

- Established a centralized procurement management system, integrated, and optimized the allocation of resources Senior management maintained close
- contact with main suppliers such as Airbus and Boeing

# **Specialists**

- Invited internet experts from Alibaba to conduct intelligent marketing training
- Invited instructors from the US to conduct new check-in function training
- Exchanged with delegation team from the Cooperation and Study Group of Regional Airlines in Africa

# **Partners**

- Signed Strategic Cooperation Agreement with China Foreign Trade Center to enhance resource sharing
- Reached cooperation with Ali Cloud, became the first Chinese carrier to use the Cloud service
- Reached Strategic Cooperation Agreement with the Genting Group, expanded into a new development mode of ticket+cruise+tour
- Signed Strategic Cooperation Agreement with China General Technology Group to deepen cooperation in energy saving and environmental protection

# **Other players** in the industry

- Deepened cooperation with Air France-KLM on the "Dragon Project"
- Reached codeshare agreement with Etihad Airways to expand network coverage in the Middle East
- Signed a four-party Joint Venture MoU with Xiamen Airlines, Air France, and KLM
- Promoted the establishment of an industry standard on non-voluntary re-route across SkyTeam member airlines
- Reached strategic cooperation with American Airlines.
- Reached codeshare agreement with British Airways

# Community

- Held the "From ground to sky with you" charity program to care for the left-behind children
- rescue teams and criminal suspects
- Implemented targeted poverty-alleviation, invested funds

CORPORATE SOCIAL RESPONSIBILITY REPORT 2017

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# SAFE OPERATIONS

Safety is the cornerstone to the development of any airline and likewise is our paramount concern and most important responsibility. We are committed to "Safety First" constantly. improving our safety management to construct a safety control system that manages all aspects of flight operations as we push forward to become an airline that brings continuous safety to every passenger on every trip.

# **Safety Management**

We are continuously refining our safety management system, actively cultivating a safety culture that ensures that safety is of paramount importance across all operations.

## Safety System

The Safety Management System (SMS) of China Southern consists of rules and regulations, fulfillment of responsibilities, risk management, safety inspection and audit and information management. This system covers all aspects of flight deck operations, cabin, maintenance and engineering, aviation security, ground service, and dangerous goods transportation. The SMS is the foundation to achieving aviation safety and is consistently revised to solidify this cornerstone to our daily flight operations.

### Safety Inspection

We conduct regular safety inspections on all flight operations. Focusing on the potential "weak links", we fully inspect and document all potential safety hazards, mitigate each of these hazards, circulate inspection reports and issue mitigation and correction bulletins. Through these comprehensive measures, we work to ensure that the all inspections are thorough, no potential hazards are tolerated, all correction bulletins are strictly enforced, and the results met all industry standards. In consideration of critical points of bi-annual schedule changes and peak season operations, we have implemented large-scale safety inspections to identify all types of potential hazards and our inspection results are included in the annual China Southern Airlines Performance Assessment.

### **Risk Management**

Risk management is at the core of the SMS. We have established a closed-circuit supervision mechanism, consisting of daily reports, weekly discussions, monthly summaries, and quarterly rankings to strengthen risk control. We hold regular operational appraisal meetings to analyze "loopholes" to aid in raising awareness and increasing risk prevention capabilities.We target critical risks associated with newly launched routes such as Guangzhou – Vancouver – Mexico City as well as Guangzhou - Male -Colombo, and conduct risk evaluation which culminate in, formulating control measures that will ensure the safe operation of these new services.











### Safety Audit

We see our internal safety audit structure as an important asset in assessing the level of standardization of an operation unit's safety management. We use these safety audits to evaluate implementation and system compliance and management effectiveness to bridge all system gaps and to close potential safety "loopholes". In Year 2017, we completed safety audits of 20 branches and subsidiaries (excluding the newly founded Sichuan and Yunnan branches). In addition, we assisted our Xinjiang base to pass its ISAGO re-examination.



China Southern passed this year's IOSA audit with zero incompliance items earning accolades from all audit team members.

# CASE: New "Standards of Aviation Safety Errors" Version

To further the prevention of potential safety hazards, China Southern has released an updated version of the Standards of Aviation Safety Errors to follow the latest industry safety standards. This revision categorizes potential "unsafe" events in greater details with emphasis on the "human element", it increases the potential of error levels during certain events, strengthens penalty levels on potential unsafe events which are more prone to becoming safety incidents and in turn provides a more robust management of potential safety challenges.





es and

### Safety Culture

Constant safety is dependent upon the efforts of and high commitment to safety of all our staff and management. We have established a core safety culture of capability, compliance and honesty in our pilot team and we have organized a wide variety of safety educational events to embed the safety values into every staff/team member to make safety the primary concern of every member of the China Southern Airlines family.

### Voluntary Safety Reporting

We operate a voluntary safety reporting system that encourages employees to voluntarily report any potential infraction that may be related to safety, in order to help the Company, discover potential safety hazards and "unsafe" situations and be proactive in preventing incidents from happening.

### Safety Education

We offer an industry leading enhanced training program on newly updated regulations and handbooks such as the Operation Manual, Aviation Safety Management Handbook, and Cabin Crew Manual to standardize the code of conduct and operational standards of our staff and management team as well as organizing discussion sessions that offer flight operation and maintenance cases studies.

Our safety activities include our exclusive 100-Day Safe Operation Contest; Top 10 Safe Operation Models and other industry leading programs. We thoroughly inspect potential safety hazards, promote the reduction of possible "human errors", organized cultural activities, safety knowledge competitions, safety forums and safety micro story writing contests to raise safety awareness.



### **Safety Activities**



### CASE: 100-Day Safe Operation Contest

We held the 100-Day Safe Operation Contest which included more than 100,000 staff and management from 42 operation units. During the contest, employees overcame many challenges such as poor environment and the mass passenger travel during the annual Chinese New Year period. We also completed critical safety assurance tasks during the NPC and the CPPCC meetings. Only 23 errors occurred during this year's contest, the lowest in the past three years.

# Safety Assurance

Challenged by a tough safety situation in the aviation industry, we have established risk control and management measures covering all aspects. In particular, we continuously focus our efforts on safety assurance measures in the critical areas of aircraft maintenance, pilot management and new technological innovations from our aircraft partners - Airbus, Boeing, and Embraer - to ensure safety on every flight, Challenged by a tough safety situation in the aviation industry, we have established risk control and management measures covering all aspects. In particular, we continuously focus our efforts on safety assurance measures in the critical areas of aircraft maintenance, pilot management and new technological innovations from our aircraft partners - Airbus, Boeing, and Embraer - to ensure safety on every flight.

### **Risk Control**

Air transportation is an industry that has complex safety risks and numerous challenges in the field of safety management. Errors in any aspect could lead to profound consequences. We have identified the source of risk at different operational phases of ground maneuvers, take-off, climbing, cruising, approach, and landing; and formulated corresponding prevention measures to ensure active control throughout flight operations and to increase our staff capabilities.

### 01

### Ground maneuver

Main risks: Scratching with ground obstructions, aircraft collision, runway incursion.

**Preventive measures: Strict** compliance to ground operation regulations, enhancement of crew recourse management.

## 03

### Climbing

Main risks: Wrong departure procedure and altitude, adverse weather conditions, mechanical fault, mid-air collision.

### Preventive measures: Strict

implementation of crosscheck, timely use of onboard equipment, accurate implementation of checklists, -----strict compliance to ATC instructions.

### 04 Cruising

Main risks: Wrong airway, adverse weather conditions, mechanical fault, mid-air collision.

### Preventive measures: Strict implementation of crosscheck, timely use of onboard equipment, accurate implementation of checklists, strict compliance to ATC instructions.

### Emergency landing after cargo hold fire warning

was given after take-off. The crew immediately initiated contingency 21 minutes after the initial warning. After landing, the crew guided all 151

The CAAC Central and Southern Regional Administration investigated this alternating due to false fire warning caused by a system mechanical fault. This event does not constitute an accident or an incident with responsibility. The China Southern crew handled the event correctly, ground evacuation was prompt, and all were in compliance with safety

# 02

Take-off

Main risks: Operation not following procedures, mechanical fault, adverse weather condition, scratching with ground obstructions.

Preventive measures: Strict

compliance to SOP, enhancement of standard callout and checklist, timely and correct use of onboard equipment.



# 05

Main risks: Wrong arrival procedure and altitude, mechanical fault, terrain warning.

### **Descend and approaching**

### Preventive measures: Strict

implementation of crosscheck, correct use of onboard equipment, strict compliance to ATC instructions, good decision awareness.

## 06 Landing

Main risks: Wrong runway, runway excursion, tail strike, heavy landing, controlled flight into terrain.

### Preventive measures:

Establishment of stable approach awareness, enhancement of standard callout and check, enhancement of good go-around awareness, solid technique foundation.



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### **Pilot Management**

The technique and mental state of our pilots are crucial factors which may impact light safety. China Southern has a rigorous pilot management system, through strengthening training and assessment, we continuously improve the techniques of our pilots. Meanwhile, we follow industry mandated stress levels and mental health of all pilots closely, administer random alcohol and drug testing to ensure that all pilots can professionally assume their duties in their best physical state.



Enhance flight training. China Southern conducts regular flight simulator trainings at our flight training facility based in Zhuhai to captains and first officers to improve flight control capabilities.

Implement quality inspection. China Southern holds comprehensive technical inspections and implement experience training and supplementary training to those who may have their qualifications suspended at inspection to ensure the technical capabilities of our pilots are in full compliance to regulations.

Enhance cadet-pilot training. We founded a cadet-pilot brigade with centralized management and trainings to all newly recruited cadet-pilots in a semi-military style which has improved training quality and efficiency of cadet-pilot to reserve qualified pilots for the Company.



Rigorous implementation of the Limitation on Alcoholic Beverages and Drug Use of Operational Staff and the new China Southern Alcohol Monitoring Management Regulation to constrain the consumption of alcoholic beverages and drugs among all pilots.

China Southern issued an alcohol ban and we administer alcohol testing on all flight and cabin crew members to ensure optimal flight safety.

Stress and Mental **Health Management** 

- We have health observers who are responsible for communicating with supervising flight medical practitioners concerning potential "abnormal" situations including health hazards, key personnel, and sick leave(s) so that prompt actions can be taken.
- China Southern founded a private "stress-relief" room for flight and cabin crew members.

Held mental health workshops to promote the correct handling of stress and mental health issues.

### **Aircraft Maintenance**

Aircraft maintenance quality is an important foundation to flight safety. China Southern continuously enhances the all-round management of operational status of the fleet, formulate itemized checklists for each aircraft type and provide on-going inspection overall structure and critical system parts pre-flight and post-flight to achieve a transition from result-oriented to process-control and source management, thus improving the reliability of our fleet operation.



### **Promoting an Integrated** Maintenance and Engineering System

In order to increase the collective competitiveness of all pan-China Southern operators, we are exploring the use of a synergetic maintenance and engineering (M&E) system. In cooperation with Xiamen Airlines and Sichuan Airlines, we are promoting an integrated M&E service and have selected Guangzhou, Shenyang, and Changchun as the first batch of trial bases by effectively integrating the collective M&E resources of the three to improve M&E service levels and to build a quality pan-China Southern M&E service brand.



China Southern takes the "Arrangement -Procedure - Standard" (APS) maintenance safety management system as the core of maintenance safety. In Year 2017, China Southern continued to promote the application of APS into maintenance practices. We -formulated and refined management systems such as the China Southern Maintenance Engineering Management System, China Southern Maintenance Standards among others, established mechanical fault inventory list of critical aircraft systems and parts, enhanced the standardization and operability of M&E manuals to improve maintenance levels.

The Company is in possession of





### **Refining Maintenance** Management System



In Year 2017, China Southern's Aircraft Maintenance Management APS Theory was awarded First Prize in the 16th National Transportation Enterprises Management Modernization and Innovation Competition, China Southern was the only organization in China's air transport sector honored with this prestigious prize.

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### CASE: Implementation of the new **Marginal Error Management** Mechanism

To further unify marginal error standards and assessment standards, China Southern has implemented its new Marginal Error Management Mechanism. The new mechanism categorizes marginal errors into A, B, C and D. The mechanism has also outlined more quantifiable and rigorous management requirements on the time and quantity of marginal error reporting so as to increase the accuracy and M&E with refined management requirements.

### CASE: First A380 6-Year Check in China

The Guangzhou Aircraft Maintenance Engineering Company Limited (i.e. GAMECO) is an aircraft maintenance Company in Guangzhou at Baiyun International Airport Guangzhou and provides maintenance, repair, and overhaul services. GAMECO saw the beginning of China's first Airbus A380 six-year check as the entire process took 94 days, completed 1,550 items including painting, weighing, and test flights, totaling more than 100,000 work hours, using 6,372 parts and tools. The total paint area has exceeded 4,000m2. The success of this six-year check has not only further increases China Southern's maintenance capability but also provided valuable industry experience for China Southern to expand into the wider A380 major overhaul market.



LINK: Large-scale Engine Safety Inspection across the M&E

The M&E launched a large-scale engine safety inspection through self-checks and crosschecks, carried out internal audits on the implementation of prevention and control of engine mid-air breakdowns and fully inspected engine performances and safety situations.



### **Responding to Emergencies**

Challenged by an increase in potential terrorism situations, China Southern is continuously refining its internal policies and mechanisms in terms of emergency responses and anti-terrorism, optimized the handling procedures of emergency incidents while organizing various emergency response trainings and drills to enhance management and handling capabilities.



### CASE: Joint Emergency Response Drills of Emergency Rescue of Aircraft Accidents

When testing its emergency response mechanism and further refining internal contingency plans, China Southern and other departments at Baiyun International Airport Guangzhou jointly organized a joint emergency response drill of emergency rescue of aircraft accident on the apron of Terminal 2. This was the largest, real-life joint drill with the highest level and largest number of participants organized by China Southern in recent years. It also had the greatest impact, covering all aspects in emergency rescue and handling of aftermath related to an aircraft incident.

### CASE: Emergency Response Drill with Safety and Security Departments

China Southern and the Airport Public Security Bureau of Guangdong Public Security Department, co-organized 2017's emergency response drill. Through air and ground cooperation, a simulated illegal interference incident was handles successfully, thus enhancing air ground cooperation.

### **Technological Innovation**

Technological advancements provide innovative ideas and methods to safety management. China Southern continues to enhance our technological innovation capacities to promote flight technological evolution – which adds to the Company-wide safety environment.

### Aircraft Remote Diagnosis and Real-time Tracking System

China Southern has developed an exclusive Aircraft Remote Diagnosis and Real-Time Tracking System. It is the only aircraft health management system that is capable of monitoring major aircraft types manufactured by Airbus, Boeing, and Embraer. By analyzing system platforms and using "big data", this system can perform diagnosis and track aircraft status of all aircraft types operated by China Southern. Through intelligent analysis, can be forecast. This technology can effectively support the transformation

### **Enhanced Weather** Intelligence System

Chinese carrier qualified to operate

### The Rainbow System

The Rainbow System is China Southern's first, self-developed, flight status control system that can dynamically monitor flight statuses and provide timely and rational solutions to dispatchers during flight delays based on a unique decision assistance function. Currently, the Rainbow System is handling dynamic monitoring and adjustments of more than 2,000 flights branches operated by 17 aircraft types a day across our Guangzhou-based headquarters and subsidiaries. The application of this system has greatly increased flight operation efficiency.

### **Operational Risk Control** System

The Operational Risk Control System (ORCS) is a self-designed product. real-time risk values to different providing effective decision-making upport to operational control, flight nd M&E teams

### General Aviation Operation Management System

China Southern has developed China's first operation management system for general aviation (GFOS) - an information management platform for flight operational management and monitoring services which can effectively manage flight operations of each base and evaluate operational qualities by information sharing which will increase operational efficiency.

### **Real-time Take-off Calculation System**

and developed its own, exclusive real-time take-off calculation system,

# **Safety Performance**







Incident per 10,000 flights in general aviation





aviation security

0.0101

218

Incident per 10,000 flight-hour (Excluding Xiamen Airlines)



N.B. The above is only inclusive of incidents caused directly by China Southern, excludes manufacturer-causes and other causes.

🗖 China Southern 📮 CAAC National average

2017

CAAC ieneral Aviation Flight Safety Despite the challenge of remedial budgets, technology, human resources, and needed professional expertise, Mr. Liu and his team reviewed almost all literature about aircraft operations and maintenance, conducted deep data mining, and investigated data patterns. Finally, in Year 2011, the team completed a prototype of the current China Southern's Aircraft Remote Diagnosis and Real-time Tracking System based on Boeing 777 while continuing to develop systems for other aircraft types. Through on-going revision and upgrades, the system was patented in Year 2006 as the team has filled a large technological gap in China in spite of international blockage and the system is compatible with current international standards.

### Non-stop Innovation

Since Year 2011, China Southern Airlines has boldly introduced a new generation of IT-laden aircraft types such as the Airbus A380 and the Boeing 787 Dreamliner. These massive computer control systems brought new challenges to the Company and Mr. Liu and his team tackled these challenges, working around the clock to overcome numerous challenges to successfully develop remote diagnosis modules for the A380 and 787. Mr. Liu's team and the engineers from COMAC exchanged experiences in remote aircraft diagnosis, as Mr. Liu offered advices and counsel to the development of an onboard information system for China's C919 aircraft.

China Southern's Remote Aircraft Diagnostic and Real-time Tracking System has undergone five generational upgrades and is rapidly gaining in capabilities with years of testing and revision. The system is now applicable to all aircraft types operated by China Southern, achieving a technological leap in the ability to monitor aircraft performance. It is expected that in the future, this system will be compatible with more aircraft including the C919. Mr. Liu and his team are proud to serve China's market leading air transport sector and are already playing an important part in the rising of China's aviation industry.

Technological innovation is a challenging and long-term journey and China Southern will continue its efforts in innovative developments that will aid in safeguarding the safe air travel experience of all passengers.



### Remote Aircraft Diagnosis with "Dark Technology"

As China Southern aircraft soar through the sky, ground staff are receiving real-time "health status" of these same aircraft which provides technical guidance to the engineering team with a real-time maintenance database that effectively ensures consistent safe flight operation. This "dark technology" is the product of an 18-year effort of Liu Yuhui and his team at China Southern.



Back in Year 1999, the then standard maintenance procedures dictated that engineers could only perform aircraft checks after landing. Spare parts were only prepared after technical issues were discovered. Following this practice, passengers on subsequent flights would inevitable have to suffer from day-long delays. As air transportation entered an era of rapid growth, this traditional practice no longer meets the crushing demand as remote aircraft diagnostic systems were only available from aircraft manufacturers. Coupled was a crushing near 60,000RMB daily service charge which became a heavy financial burden to the Company. To overcome these challenges Mr. Liu and his team had embarked upon a journey to develop China Southern's own remote aircraft diagnostic systems.



# ENVIRONMENTAL PROTECTION

China Southern sees environmental friendliness as an indispensable component in a high-quality development. Green development has become an important performance measurement indicator in our development. We actively respond to climate change, continuously promote reduction in energy consumption and emissions, and strive to achieve smaller impacts to the environment.

# **Environmental Management Policy**

Environmental protection has become an indispensable element in the operation and development of China Southern Airlines. We consistently take the initiative as we focus on the impact of global climate change, greenhouse gas (GHG) emissions and biodiversity loss during our Company' is continued development. China Southern actively supports the advocacies and interim goals of sustainable development set by global organizations including the United Nations, ICAO, IATA and the SkyTeam alliance; we implement various policies set by the Chinese government on energy saving and emission reduction; strive to promote a balanced development of businesses and social environment through a comprehensive framework of "green" ideas; an optimized management style and the day to day implementation of environmental protection technologies.

In Year 2017, our investment in environment related matters reached new heights. We now have an office for energy and environment with staff and management who are specialists in energy savings, emission reductions and other environmental protection tasks. China Southern has further refined our energy saving and emission reduction management systems, produced energy savings and emission reduction management documents such as the general management manual, energy consumption and emission calculation management.



Established an energy saving and emission reduction leading team that is responsible for the major decision-makings on policies, guidelines and management system on energy saving and emission reduction of the Company.



Established the Office for Energy Saving and Emission Reduction, which is responsible for implementing and executing the decisions made by the leading team, and to provide advices to the leading team.



Implemented a diverse management style of combining centralized

management and responsibilities by delegating energy saving and emission reduction tasks down to core functions to the Mechanical and Engineering Division, Operational Control Centre, and Cargo Division as well as majority-controlled subsidiaries.



# **Responding to Climate Change**

Climate change has become a severe environmental issue and we are witnessing strong moves towards acting against global climate change. The Company continues to explore different ways to increase efficiency in its use of energy sources, reduce carbon footprint by various means such as technological advancements, efficiency upgrades and the use of alternative fuels ... all coupled to earnestly make use of carbon trading mechanisms and implement the emission reduction responsibilities that are compatible with our developmental stage and capability.

### **Greenhouse Gas Emissions**

The main source of greenhouse gas emissions for any airline comes from the burning of jet fuel with a minor source coming from ground energy consumption including the burning and using of petrol, diesel, natural gas, liquefied gases, coal and purchased electricity. In Year 2017, the Company strived to build a stringent procedure framework from organization to system, from system to operation, and from operation to performance monitoring.

7940.1



thousand ton-kilometer) 0.302 2015

Unit fuel consumption (ton per

2016	0.300
2017	0.291



### Unit GHG emission (ton per thousand ton-kilometer)

2015	0.952
2016	0.945
2017	0.916



Total

N.B. The civil aviation industry uses CO2 as the measurement of GHG emission. The calculation of equivalent CO2 emission can be found in Civil Aviation Comprehensive Statistics Reporting System, and 2011-2012 China National Grid CO2 Emission Factors

CO<sub>2</sub>

2017









Optimize aircraft center-of-gravity, promote centralized payload, and integrated the Guideline on Optimizing Center-of-Gravity for Fuel Saving through Payload to guide the practice of fuel saving by adjusting the center-of-gravity.

using "jet fuel e-cloud" big

 Developing aircraft ground reduce the use of APUs.

E 維 道、震

### CASE: "Jet Fuel e-Cloud"

The "Jet Fuel e-Cloud" data platform is an open data platform, developed exclusively by China Southern Airlines, which supports multiple systems and serves as a platform which consolidates data chains of jet fuel data of all China Southern flights. This unique "Jet Fuel e-Cloud" monitors and analyzes fueling and consumption status of each flight, dynamically and in real-time enabling dual data transmission with jet fuel providers. Benefiting by its abilities in calculating fuel consumption, we have achieved precise fueling, supported by big data, which in turn reduces costs and energy consumption, resolving the issues of fuel-burn by carrying redundant fuels.

### CASE: Paperless Flight Deck

China Southern Airlines has been exploring and developing the application of EFB. By promoting greater use of EFB to replace paper handbooks and materials, our goals are to accelerate the process of becoming an airline with paperless flight decks. During Year 2017, we developed an electronic aircraft

release module in the EFB by digitalizing the release document, flight plan, NOTAM, METAR/TAF and graphical weather. The implementation of EFB can reduce 40kg of weight per aircraft, effectively reducing fuel consumption and GHG emission. The elimination of paper handbooks also significantly reduces the time and "human efforts" needed in manual updating the handbooks, minimizing workload and the possibilities of human error of the technical release staff, improving operational quality and safety.





### **Active Participation in** Carbon Trading

per Air Waybill

As a pioneer in a domestic carbon trade trial scheme, the Company is actively exploring latest ideas to significantly manage CO2 emissions. We see carbon trading as a new means and tool of reacting to climate change and controlling GHG emissions. We are building a standardized management system and preparing the Company for the challenges of carbon trading with positive attitude and actions.

### **CASE: Electronic Air Waybill**

China Southern is steadily promoting the standardization of the electronic air waybill which will optimize paperless operation capability of the internal IT system, and ramp-up the application of e-AWB. We have launched e-AWBs at domestic originating cargo terminals and destination cargo terminals, as well as some international routes. The Company estimates that we can save more than one million paper air waybills each year. If we were to stack these paper air waybills one on top of another, they would reach the height of two Canton Towers of 1,200 meters. In the future, the Company will transform itself into an e-AWB and electronic cargo operation, gradually replacing existing paper cargo document packs with electronic packs, achieving an end-to-end paperless transportation process for our air cargo operations.



### **Standardized Management** System

As we build up an energy management system and achieve the primary goals of informatizing data collection and analysis, the Company is also establishing a carbon management system that is primarily formulated an integrated management structure covering carbon trade MRV (Measurement, Reporting, and Validation) system, agreement implementation, carbon assets development and carbon assets management.

With regard to flights between two EU airports operated between Years 2012 to 2016, the Company has fulfilled our responsibilities in accordance with EU requirements including carbon trade monitoring, reporting, verification, and payment. These operations include certain scheduled cargo flights and a small number of diverted flights and charter flights, hence completing EU carbon trade during this time period. Between the Years of 2017 to 2020, we pledge to continue fulfilling all requirements of Chinese laws and

## regulations. Environmental **Protection on the Ground**

We care about flying, and we care more about the additional challenges we have brought to the environment due to flying. In this light, the Company makes significant efforts to minimize our environmental impact. In our daily operation and management, we enforce strict management policies and measures that enhance control from two areas of scale and emissions by reducing the use of resources and controlling the emissions of pollutants.

### Water Treatment

### Saving Water Resources

The Company closely monitors if our use of water is reasonable to ensure that no water is wasted. We therefore review carefully if wastewater emissions meet the standards needed to ensure that no water is polluted. We are consistently planning how to use less water so that this precious resource can serve real needs. During Year 2017, Xiamen Airlines continued to implement a rational drinking water plan that focuses on every detail and exploits every opportunity to save water. Drinking water is loaded to each aircraft in precise quantities, based on the capacity of the aircraft water tank and flight distance. For example, when a Boeing 737-800 aircraft is deployed on flights less than 1.5 hours, only 40% of the water tank needs to be filled. Xiamen Airlines saved 9,456 tons of water from these precise water filling measures. In terms of aircraft maintenance, we introduced an advanced engine cleaning equipment, the EcoPower. EcoPower conforms to ISO 50001 Energy Management Systems and provides a meaningful commitment to continual improvement in energy performance. With the use of EcoPower, not only that the performance restoration result has been improved by 10%, water used in engine cleaning can now be recycled and reused, aiding in achieving zero emission during the engine cleaning processes. During Year 2017, China Southern consumed 7.68 million tons of water.

### **EU Carbon Trade** Requirements

### Supporting Guangdong **Carbon Trade**

The Company made bold steps in working with the Guangdong Development and Reform Committee by discussing quota allocation methods and detailed MRV implementation that are suitable for air transport enterprises. We have completed work on reporting historical data and third-party data verification, providing technical support to the development of carbon trade in Guangdong Province. China Southern Airlines, and its majority-controlled subsidiaries of Shantou Airlines and Zhuhai Airlines, have successfully completed 2016's fulfillment of carbon trade requirements of Guangdong Province.



### Wastewater Treatment

The cleaning of aircraft is one of the main sources of wastewater generation. The Company promotes the use of dry-clean technology, reducing wastewater from its source. Wastewater generated is primarily transported to our wastewater treatment plant through the sewage system. Wastewater is treated and emitted in strict compliance to the Comprehensive Wastewater Emission Standards of Guangdong and are checked by appropriate authorities on a regular basis.

### Waste Control

### **Treatment of Hazardous Wastes**

All hazardous solid wastes are being disposed of in accordance with the Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste, as well as other relevant laws and regulations. We consistently strive to enhance the level of compliance of waste disposal from every stage in the generation of hazardous waste. Significant hazardous wastes generated in our daily operations include waste oil from aircraft maintenance; waste organic solvents from cleaning and waste fluorescent tubes from offices. The Company is using dedicated hazardous waste storage facilities, imposed regulations on disposal procedures and performance pre-treatment to flammable, explosive and volatile hazardous wastes. Impermeable materials are used in the storage facilities; wastes that are incompatible are stored separately to mitigate the risk of reactions. All wastes are properly collected and treated by qualified agencies after treatment(s) before storage and before transportation.

### **Treatment of Non-Hazardous Wastes**

We follow the principles of "volume-reduction" and "holding harmless" in the managing of non-hazardous wastes. We believe that the most effective means of reducing the amount of waste treatment is to recycle these wastes at their points of disposal and to reuse them as appropriate resources. The Company has commissioned specialized agencies to collect, recycle and reuse the wastes generated and we also advocate to our staff and management recycle at the points of disposal in order to increase the value of reuse and upcycling of all wastes.

### Gas Emission Controls

Air pollution is one of the key issues in harming our living environment and health. In response to the goals of total quantity control raised by the Chinese government, as well as various policies on energy saving and emission reduction, the Company endeavors to make "green flying" the best practice of our efforts in reducing environmental impact by promoting energy savings and emission reduction technologies which in turn enhancing our fuel management and improve energy consumption efficiencies.

### Noise Abatement

We prefer the use of guieter and cleaner engines to reduce aircraft noise from its source. During each aircraft engine testing phase, we use ground testing flow diversion walls and noise barriers; during operational phase, we optimize runway and routes and deploy noise reduction procedures to reduce engine running noise; during engine maintenance phases, we regularly clean each engine to improve performance and reduce decibel levels. We also regularly monitor the effectiveness of the flow diversion walls to ensure that the noise levels meet the Emission Standard for Industrial Enterprises Noise at Boundary.

# **Advocating a Greener Lifestyle**

We fully understand that the capability of any one, single Company to independently solve environmental and resource problems is highly limited. Therefore, we incorporate elements of environmental protection into various aspects of our business, present a rich and diverse set of environmental protection to the public and encourage more people to take part in environmental protection activities that are fun, educational and help turn environmental protection activities into a refreshing new experience.

### **Green Electronic** Services

China Southern Airlines is dedicated to connecting low carbon footprint travel and flight services. Through innovative products and services, we have replaced traditional paper marketing with electronic means which in turn has significantly reduced the use of paper materials in our service processes. We consistently strive to motivate passengers to practice environmental protection through their own behaviors and raise their environmental awareness.

### Energy Saving and **Emission Reduction**

Use of weather adapted maintenance structure, optimization of area-specific ventilation using natural wind, sub-divided air-conditioning system, intelligent air-conditioning controls and fresh air during weather transition period

Low Consumption of Resources.

Use of high-performance



### **Electronic Boarding Pass**

China Southern has expanded the use of smartphone-based QR code boarding passes to a wider coverage. Passengers can now go through security checks and boarding gates simply by scanning the QR codes on their smartphones without having to print traditional paper boarding passes which in turn effectively reduces paper use while improving passengers' seamless pre-flight experiences.

passengers. If these printed invoices can be replaced by e-invoice, the saving of paper is equivalent to the saving of 3200 trees.





### **Electronic Invoice**

From paper invoices to e-tickets and from printed itineraries to e-invoices, China Southern embraces every change in the exciting era of digitalization. July 28, 2017 saw the production of the first e-invoice in China's civil aviation industry, this marked the official launch of e-invoice service on domestic flights to all passengers. During Year 2017, China Southern printed eight million passenger invoices. If these printed invoices can be replaced by instead switching to e-invoices, is equivalent to the saving more than 3.200 trees.

### **Promoting Green Building**

China Southern actively promotes the development of green building construction. Our new headquarters building, the China Southern Tower in Guangzhou was designed and constructed based on green building technologies and follows the principles of sustainable development. By applying the concepts of "green and balance" and through a scientific general design, the China Southern Tower has already achieved five key goals of energy savings, land-use savings, water savings, material savings and environmental protection as advocated by China's green building demonstration projects. In consideration of our own characteristics, the China Southern Tower project focused specifically on three areas of energy savings and emission reductions, low resource consumption, and a healthy and comfortable building environment.

Underground lighting, indoor ventilation with soatural wind,

energy-saving indoor ind noise

### Advocating Energy Saving

During the National Energy Saving Advoca Week, we joined forces with Baiyun A Guangzhou and the CEPREI Certification in advocating the participation in Guangdo inclusive carbon offset scheme (PHCEF through various media channels, includi billboards and roll-up banners at Baiyun International Airport Guangzhou and China Southern's official WeChat account. By explaining the concept of PHCER, we are delivering the positive messages that low-carbon activities can be rewarded by material incentives. We encourage our staff and management to have the first experience of learning workshops which attract significant public engagement.



### **CASE:** The Antarctica Summit

The theme of 2017's China Polar Tourism Forum – The Antarctica Summit was "Explore and Responsibility". The summit discussed environmental protection and sustainable tourism at the Antarctica and the Arctic regions. As th official partner of the Forum, the China Southern Airlines' team of who are devoted to public welfare travel to Antarctica. The team was divided

Training Outline, to that they fully un

### Shielding Bio-diversity

China Southern Airlines continually strives to protect the environment and actively participates in environmental and wildlife protection. In order to halt the illegal transportations of wild animals and their products, we ha regulations in accordance with international regulations of China and have prepared training contents i our Air Cargo Transportation ge, loading and m

> mber 1, 2017, China Southern officially signed the United for Wildlife Transport Buckingham Palace Declaration, which was initiated and advocated by United fe. By signing this historical declaration, the Company declared our participation abal campaign to fight the trafficking of wildlife and their products, and ok to unite passengers, clients, and our employees to jointly protec



### **Reducing the Use of Water**

T

The fuselage of an Airbus A320neo is 37.57m long and 11.76m high and its wingspan is 35.80m. This translates to a total washing area of 800m2. Each washing consumes nearly 20 metric tons of water. If the Company were to wash all the aircraft in our fleet at 24-day intervals, the amount of water needed would be tremendous. Bearing the environmental impact in mind, we could not waste water resources on this scale.

### Fuselage length



The comment of "does not require a lot of water" given by one of our employees is the aircraft dry clean technology that we have been promoting. This "dry clean" process is completed by applying highly dissolving professional detergents directly onto the aircraft surface, then drying it with special equipment. The use of this technology only consumes 30 to 45 liters of water, a mere one-thousandth compared to traditional water washing method. In addition, all detergents used are not harmful to aircraft surface and paint, and also serves to have waxing functions and eliminate the possibility of water entering aircraft precision parts. For the engineers at China Southern, the journey of "green flight" starts from the superficial task of aircraft washing and our teams are determined to carry this effort forward.





### Start with "Superficial Effort" - End in "Green Flight"

By most people's understanding, the role of washing either an aircraft or a car is pretty much the same. It is a superficial effort through in washing, foaming, cleaning, and wiping down to restore a clean surface luster. However, in the eyes of our engineers, aircraft washing is an effective way to save on energy consumption.

# Say No to 1% Weight Gain

Aircraft surfaces are contaminated by pollutants in the air, on the ground and from gas exhaust during flight and parking. Pollutants such as smoke, dust, oil, fine particulate carbon, and oxides may be deposited on the surface of the fuselage and its components. The deposition of pollutants onto the fuselage surface results in in the increase in frictional resistance and the accumulation of static electricity. More important, these pollutants may cause topical corrosions that impact the "lifespan" of certain aircraft components and overall flight safety. These pollutants may only account for a 1% weight gain, yet in total, it increases fuel consumption resulting from this gain leads to adverse environmental impact of more than 1%. Therefore, to ensure a smooth and intact aerodynamic surface of each aircraft, China Southern requires a complete and thorough aircraft washing at least once every 24 days. One staff member from the Maintenance and Engineering Division commented that, "an aircraft is clean when its surface has a good reflective finish and feels smooth when you touch it. It gives us peace of mind when we know that the cleaning process does not require a lot of water".

an aircraft is clean when its surface has a good reflective finish and feels smooth when you touch it. It gives us peace of mind when we know that the cleaning process does not require a lot of water



One staff member from the Maintenance and Engineering Division .

# **QUALITY SERVICES**

**正理管机** 

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China Southern Airlines is in a relentless pursuit to meet and exceed our customer's satisfaction. We adhere to the mantra of "sincere service" and we make great strives to meet passengers' ever-increasing demands for high-quality and high-standard services. We have integrated the concept of sincere service into every on-ground and in-flight detail and work tirelessly to improve the efficiency and level of service so that every travel experience is full of warmth and sincerity.



# **Service Management**

We formed a "closed-circuit" management of service improvements by both investigating and solving issues as we continually work to provide passengers with high quality professional services through improving the design of our service products with consistent evaluation by staff and management.



a combination of feedback from passengers and our own, China Southern evaluation support system. Service improvement directions are then identified through case studies, discussions, and seminars.

Service Improvements

Through a full process service quality monitoring system and targeted rectification of key service issues, we timely analyze feedback and suggestions from our passengers to constantly improve our service qualities.





# **Service Improvements**

Providing a world-class service has always been our standard and our goal. We constantly refine service standards and procedures and promote our service brand to ensure that we meet and exceed passengers' expectation with higher service quality.

### Improving Flight On-time Performance

We at china Southern Airlines know that on-time flight arrivals and departures are of the greatest concern to our passengers. We analyzed the cause to flight delays and constructed a consolidated operation mode as well as formulated an advanced control system which deploys specific measures to increase our on-time efficiency.

### Refining Management Rules and Regulations

We have amended the Management Regulations for the On-time Performance of China Southern Flights, clarified our guiding principles, requirements, and staff/management rewards in managing the on-time performance of our flights and revised numerous contingency plans for extensive flight delays in order to improve delay handling and recovery capabilities.

### Improving Operational Efficiency

Externally, we work to maintain regular communication and coordination mechanisms with airports and air traffic control centers and present plans for flights with priority in maintaining the operational environment. Internally, we have hired additional flight dispatchers as well as constant training procedures, standardized the cooperation and linkage with all our Company branches, subsidiaries, and units to improve operational command efficiency and collaboration levels.

### Flights with Poor On-Time Performance

We have refined the early warning systems for "delay-prone" flights in key metropolitan markets, conducted daily checks and received valued feedback of our flight plans that optimize flight management procedures by adjusting and improving the flight schedule structures from the source.

We have also organized flight on-time performance competitions and have held operation review seminars to coordinate existing issues to improve on-time performance.





SERVICES

# Flight on-time performance(%) 2015 67.9 2016 75.1 2017 73.1

Best among China's "Big-Three" Airlines

### **Quality Service**

At China Southern Airlines, our passenger needs are our primary concern. Focusing on every possible detail, we are constantly innovating our products and services to improve passenger experiences both on the ground and in the air.

### Baggage

Implemented the "Baggage Up" service standards at airport delivery to minimize possible damage to passengers' checked baggage.

Introduced baggage compensation coupons to reduce compensation payment processing time.

Enhanced baggage information sharing to enable real-time checked baggage tracking.

Expanded our exclusive "through check-in" service coverage to benefit more passengers by delivering their checked baggage to their final destinations.

**Onboard Services** ......

### Ticketing

Easy ticketing through online booking engine and advance seat selection services.

### Check-in

Optimized crowd management at check-in area to reduce waiting time for passengers.

Developed in-app verification "mini-programs" to enhance efficiency and accuracy of identity checks.

### Transfer

Fully implemented easy transfer services to improve passenger experience during transit.

Enhanced "backstage" re-route efficiency to reduce passenger wait time during flight interruption.

### **Flight Delay and Interruption**

Improved hotel services and optimized passenger self-selection functions.

Refined service standards and transition procedures to improve services for passengers with a disability and with special needs.

Enhanced handling efficiency of delayed and interrupted flights, prompt information dissemination to affected passengers.

audio and video contents. passengers.



### Improved overall cabin crew quality

Upgraded service standards of our premium flight attendants to provide the finest passenger services.

Rationalized allocation of English proficient cabin crew members to improve passenger communication onboard.



### Upgrade Cabin Services

Introduced new IFE interface and internet platforms and launched "push notification" of

Implemented new cabin passenger audio announcements.

Improved inflight catering qualities to meet the personalized needs of our varied

Implemented cabin "deep cleaning" to create a comfortable and hygiene environment. Organized various onboard activities to create warm and pleasant travel experience.

### "Baggage Up"

In June 2017, China Southern launched the "Baggage Up" initiative baggage handling stages of check-in, ramp loading, aircraft loading, aircraft off-loading, ramp off-loading and baggage reclaim carousel loading. These standards have regulated baggage

China Southern has also ramped up the applications of PDA scans and communication across all loading personnel. Passengers can now track the location of their checked bags by scanning the QR-code on their boarding passes.





### "One-Stop" Transfer

Starting March 1, 2017, China connecting to/from international flights at Baiyun .. while checked bags are

In cooperation with Baiyun International Airport Guangzhou and China Customs, we have optimized our abilities and ground handling service for connecting passengers by: Expanding our waiting lounges dedicated to connecting passengers; Introducing dedicated baggage inspection machines for transfer luggage; Optimized custom procedures for connecting passengers; Improved information management throughout connecting procedures so that more passengers can benefit from through check-in service



### Inflight Catering Services

passengers. We have gradually passengers to enjoy a gourmet onboard culinary experience.

### QUALITY SERVICES

### "Through check-in" coverage in Year 2017

9 Flights

International services operated by China Southern at Guangzhou







LINK: China's Finest Flavors Served Onboard

After consolidating catering resources across the entire China Southern system, the new Nanland Air Catering Co. Ltd was founded on May 18, 2017. Nanland has evolved from the original Company platform which now has a consolidated processing, supply, R&D, and distribution functions of all air catering businesses to promote a greater integration and transformation of onboard catering. The Nanland Catering Center strives to serve China's finest cuisine to all passengers onboard China Southern flights.

resources, gaining valued insight from leading catering providers in terms of standardized meal production to enhance our on-board product development and innovation. Our carefully designed culinary menus serves a varied array of international and contemporary Asian cuisines with a "taste of China Southern" to our launched various meal advance ordering channels including our website, on-line app, WeChat official account, and call centers, allowing



# **Customer Care**

We uphold the service concept of "Life First, People Oriented" as we focus on the special needs of passengers by constantly bringing specialized services that attend to their abilities in dealing with unique situations. Human care is an integral part of our service concepts and we work diligently to facilitate passengers traveling with special needs.

### **Prompt Medical Emergency Services**

We have improved our abilities in handling emergency situations to ensure that every passenger with a medical emergency is taken care of in a timely and professional manner.

### Managing Medical Emergencies.We

attach the greatest importance to the well-being of our passengers. Our principles are to provide active help, to cover upfront costs and to offer companionship during medical emergencies. China Southern has signed medical assistance agreements with Baiyun International Airport Guangzhou to ensure that passengers can be promptly transferred to local or regional hospitals for further treatments.

### **Onboard Medical Volunteer**

Program.Strongly supported by the National Health and Family Planning Commission, and through cooperation with medical institutions and volunteering organizations, China Southern continues to actively recruit onboard medical volunteers. We offer a reward scheme to our volunteers with air miles and at the end of Year 2017, we recorded a total number of 3,850 onboard medical volunteers.



3,850

### CASE: Emergency Medical Repatriation

On May 11, 2017, an infant who had his palm fractured by a machine, travelled with us onboard flight CZ6404 from Kunming to Chongqing. This infant needed to be treated within 10 hours. Having learnt this situation, our Customer Care Center immediately was in touch with the operating branch of this flight, the airport of origin and the destination airport to streamline all operational details so that the flight would receive the highest priority in both departure and landing. During the flight, the infant was carefully looked after by the crew and upon landing, the infant and his companions were swiftly transferred to an awaiting and pre-arranged ambulance and were taken immediately to the hospital.



### CASE: Cabin Crew Aided Seriously III Passenger

Onboard flight China Southern flight CZ3987 from Hangzhou to Harbin and during the massive air transportation during Chinese New Year, a passenger suddenly became ill. The passenger started to vomit blood and fell into a coma. The crew immediately reacted and assisted a doctor who was traveling onboard to treat this passenger. After diverting the aircraft to a nearby airport, the passenger was transferred to a hospital and fully recovered. Our in-flight crew successfully helped save a life with their calm professional skills.





### CASE: Emergency Response at 30,000 Feet

On September 12, 2017, a passenger suddenly had a seizure when a flying from Guiyang to Shantou at its designated cruising altitude of 30,000 feet. The crew assisted a physician, who was traveling onboard, as he performed an emergency procedure. The flight was immediately diverted to Guangzhou and 73 minutes after take-off, the flight landed safely. The passenger was immediately transferred to a nearby hospital for follow-up treatments.



LINK: "A Quiet Flight" -**China Southern's Latest** Micro-Film

China Southern's latest micro-film entitled A Quiet Flight, was released on December 7. 2017. During the production of this film, China Southern once again invited award-winning documentary director, Mr. Chang Jung-chi, to present to the public a touching story about love, without voice, that took place on one of our flights.





Scan to see the full story

### **Caring for Passengers with Special Needs**

Assisting the traveling of passengers with special needs has always been our focus. China Southern is committed to ensuring the safety and comfort of the passengers with special needs by increasing our service standards and providing personalized and professional services.



### Children

### Elderly

For our senior citizen passengers, aged 65 or above, our SMS platform sends out message instructions inviting them to make use of our dedicated counters at airports across China Southern's network to provide more considerate service to these senior citizens.

### Passengers with **Impaired Mobility**



### Passengers with **Special Meal** Requests

provided to passengers requests. Passengers can make their meal reservation requests online or via our on-line app. Passengers are also offered the opportunity to make their special meal request for all future bookings by replying to a system jenerated SMS.



### CASE: Upgraded Maternal and Child Service

In cooperation with professional maternity care providers, China Southern has upgraded its maternal and child care service at Shanghai Pudong International Airport, becoming China's first airline to have upgraded such facilities. After the upgrade, the station is now equipped with many advanced appliances, including ergonomically designed nursing chairs with elbow support with appropriate hardness and curvature to reduce the pressure on the arms and back nursing mothers. China Southern has also introduced "intelligent baby bassinets" which not only play soothing music, they can also be adjusted to suit different sleeping postures and feature special movement patterns to help infants fall asleep faster.





### LINK: Visually Impaired Passengers

On December 19, 2017, China Southern's accessible website was launched, specially designed to provide easy and professional web services to our visually impaired passengers. After entering the accessible site, visually impaired passengers can check flight information and make flight reservations with assistive functions such as larger font size, change of background colors and font colors, and audio narration of web contents. In

the future, additional contents will be added. China Southern is also developing voice-based interfacing functions on our on-line app to better serve the needs of visually impaired passengers.





### LINK: Guide Dog Services

December 2017 marked the one-year anniversary of the cooperation between China Southern and China Guide Dog Training Center, based in Dalian. Over the year, China Southern continuously refined the service system for guide dogs in the areas of flight booking, check-in, boarding, inflight and arrival. Services have been integrated to a seamless link formed by the airline's marketing, ground service, and cabin service divisions.
# E SOCIAL RESPONSI REPORT 1017

# **Listening to Feedback**

Passenger satisfaction is our ultimate goal. We listen carefully to passenger opinions, constantly improving and strengthen service management, striving to provide the most satisfactory service to our passengers.

#### Value Complaints

We highly value feedback and complaints from our passengers and constantly optimize service procedures and standards. We have a "pre-warning system" that takes proactive measures to handle passenger complaints in a timely manner so that every passenger is treated with the upmost respect.

#### **Quick Response to Complaints**

In cooperation with the Consumer Association of Guangdong and Consumer Affairs Center of the CAAC, we have launched a consumer rights protection "fast track" to specifically handle complaints relating to consumer rights and damages. China Southern has also improved its internal management of complaint processing efficiencies and expedited the processing time from three to five business days ... down to one to two calendar days.

### effective complaint rate was

0.075<sub>per 10,000</sub>

The overall satisfaction rate of sales and marketing was

9.205<sub>out of 10</sub>

while the overall flight satisfaction rate was

4.29<sub>out of 5.</sub>

#### **Optimization of Service** Procedures

By summarizing and analyzing "hot" topics from passenger feedback, we identified the weakest links and shortcomings in our service procedures and standards and have set up a department responsible for service procedure implementation to ensure passenger satisfaction.

#### **Active Passenger Care**

We have established a tripartite event handling mechanism comprising the Customer Care Center, functional divisions, and responsible units in the complaint event to jointly resolve customer complaints, refine complaint processing and standardize compensation. Through this mechanism, we can ensure customer complaints are promptly and effectively dealt with, forming a positive direction of active care to increase passenger satisfaction rate.

#### Satisfaction Survey

China Southern is completely customer-oriented, issue-oriented, and result-oriented. Through customer evaluations, assessment by professional bodies and internal feedback, we have implemented a multi-level, multi-dimension, and systematic service control system to continuously improve customer satisfaction.

#### **Collecting Passenger** Feedback

To understand passengers' opinions to our service on the ground and in the air and to follow up on any unresolved complaints, we have established and exclusive SMS evaluation system, an on-line app-based flight service comment system and questionnaire surveys of satisfaction on complaint processing.



#### Internal Service Evaluation and Monitoring

monthly basis.



#### LINK: National Customer Satisfaction Benchmark Company

The 2017 Chinese Customer Satisfaction Annual Meeting and Chinese National Customer Satisfaction Index Conference, jointly organized by the Chinese Association of Quality and the National Customer Committee, was held in Zhejiang on November 12, 2017. In recognition of China Southern's exceptional performance in on-time management, delay service, baggage service and special flights, the Company S was awarded the title of "National Customer Satisfaction Benchmark Company" and was also ranked first in the Chinese National Customer Recommendation Index - Air Transport Category.

China Southern has founded the first crew service evaluation system in China that allows the chief pursers to evaluate on-board meal service, ground support and cabin cleaning at each airport and have recruited 40 service quality inspectors to conduct unannounced inspection of ground and air services on a

#### **Monitoring Key Projects**

China Southern has an important website analysis system that closely monitors passenger comments on travel websites, such as www.airlinequality.com and www.ausbt.com. In respect of these comments, we conduct monthly summary analysis and rectification projects. In terms of other key areas such as lounge service and cabin announcements, we also conducted dedicated investigation to further gleam from passenger opinions.









#### 37°C Energy Keeper

1

"Warm hug-hug" has become a hot topic in the news as Ms. Zhuang's story was reported widely in media. Ms. Zhuang was the only China Southern personnel from the aviation industry who was named one of the "10 Individuals who Touched Us the Most in the Transport Sector". When shown these accolades, Ms. Zhuang said, "I was honored to have been recognized and awarded as an ordinary purser because of an ordinary hug. I will keep on being a keeper of 37°C energy to pass on warmth and strength". Ms. Zhuang Xuedan is one of many in China Southern's service team and each and every one of us at China Southern practice sincere service in our jobs, brining passengers with professionalism, warmth, and sense of touch on every journey.

## **Our Story**

#### To be the "Most Beautiful Stewardess" with "Warmth"

Because of a hug, Miss Zhuang Xuedan, a chief purser of China Southern, became the heated topic of 2017 ... all in one night. The photo of her hugging a passenger in kneeling position appeared in all major websites and her special story was reported by various media including CCTV.

#### A Warm Hug

On the morning of January 19, 2017, a young female passenger onboard China Southern flight CZ6237 from Shenzhen to Xi'an was stricken by a sudden illness. Ms. Zhuang found her being short of breath, shivering, and vomiting violently and immediately turned on all ventilations on Row 31, guided the passenger to regulate her breathing, massaged her hands and arms, cooled her down with ice cubes and cold napkins by wiping her forehead, neck, and ears. When the passenger still could not be calmed, Ms. Zhuang hugged the passenger and gently patted her back to sooth her nerves. This posture was captured by other passengers onboard and quickly brought Ms. Zhuang a nickname "warm hug-hug".

The flight landed five minutes ahead of schedule, and the passenger gradually recovered. Ms. Zhuang recalled what happened and said when she saw how terrified the passenger was, all she could think of was that a hug was the best way to bring the sense of security to another person.

#### "Five-Heart and 3S" Model

Since joining China Southern in 2009, Ms. Zhuang has treated each flight with passion. She summarized a model that she called "Five-Heart and 3S". The "Five-Heart" are hearts of carefulness, love, patience, responsibility, and confidence. The 3S are Smile, Smart, and Speed. So that passengers traveling onboard China Southern Airlines will have an exceptional travel experience, the Company has included the "Five-heart and 3S" model into the training content of new flight attendants.

In her flight bag, Ms. Zhuang, always keeps small items such as sweets, effervescent tablets, essence oils and plasters. On flights with a higher number of children or senior citizens, she would hand out her own sweets and chocolates to show her love and appreciation.



REORATE SOCIAL RESPONSIBILITY REPORT 2017

# EMPLOYEE DEVELOPMENTS

The professional development of our staff and management are the foundation to the sustainable development of China Southern airlines and we have integrated the core values of "Respect Talent" into the processes of recruitment, training, and management. The Company constantly enhances the capabilities and overall quality of our staff and management and strive to create a fair and just work environment, facilitating a work-life balance and achieve the co-development of staff and the Company.



# **Human Resources Policy**

China Southern continuously refines our human resource policy framework. We insist on being efficiency-oriented based on the foundation of post management by fully exploiting the flexibility of our employment structure. The Company provides competitive remuneration packages to attract a diverse range of talents and endeavor to create an all-inclusive and embracing work environment.

#### **Fundamental Rights**

China Southern strictly abides by international treaties and national laws, respect and protect human rights that are recognized by international standards and will never accept behaviors that are in violation and disregard for human rights. The Company is also in full compliance with all local labor protection regulations and policies and we are tireless in eliminating all kinds of forced labor, child labor and employment related discriminations. We are committed to create a fair and friendly work environment and treat each one of our colleagues without discrimination of their differences in gender, ethnicity, nationality, health status, religious, political stand, and marital status. During Year 2017, 100% of our staff and management are fully protected by employment contracts.

100% Employment contract coverage in 2017

By the end of 2017, China Southernsigned long-term employment contracts with

1,840 outstanding employees on second short-term contracts.

#### Remuneration and Benefits

As the Company continues to grow and develop, China Southern has gradually established a remuneration strategy that is compatible with its development strategy. We insist on being efficiency-oriented and are continuously optimizing our remuneration distribution to provide a competitive salary and benefit system for all staff and management and to help our staff in their pursuit toward the highest "work/life" balances. In Year 2017, we continued our efforts in promoting a unified employment system and have deepened our reform of the airline's human resources management system, formulated a set of "top-down" guidelines to lead each functional division in refining their human resource management. The Company has now achieved a post-based equal pay and equal career path system and career development path for ground service posts have been normalized.



#### **Employee Structure**

In order to provide multi-level quality talents to the Company, we have created professional growth paths for employees at different functions as we encourage diversified experiences.

Total number of employees









100

# 4,446

# 1,282

Number of non-Chinese

# 3

# 9,365

lost due to work-related

# **Growth of Employees**

We see our staff and management as a critical resource to reaching sustainable development. Following the core concept of "training creates value", we have organized multi-level, all-inclusive trainings to ignite the innovative powers and to promote the professional growth of each of our staff members.

#### Enhancing the Building of Online Training Platforms

In order to increase training quality and training efficiency, we re-organized the China Southern e-learning platform. This exciting new platform encompasses teaching, research, service, and management functions and uses intelligent data analysis as a tool to provide dedicated support to the organization of effective employee trainings through online activities and micro lessons



#### **Diverse Training**

#### Pilot Training

The pilot training standard and system includes theory training, simulator training, routine training, and regular assessment. The system aims to help pilots to improve flying techniques continuously and our senior management team has rationalized training(s) on in accordance with different pilot demands during peak and off-peak seasons, designed scientific allocation plans and pilot substitute procedures to meet operational needs.

#### **English Training**

We have actively promoted "100 English Sentences in Cabin"; "Double-100 English Training" and "PEPEC English Assessment" among our pilots and flight attendants. Specific abilities such as using English at critical service points, were tested to improve communication skills on international flights and to promote the Company's continued international development.

00 Total participants over



#### **Cabin Attendant Training**

In order to build an integrated service team from the ground to the skies, we adjusted our training system to be in line with Xiamen Airlines' 3+3 model which adds a ground service training element to the training contents of new flight attendants. This new system enables the transition from "efficient recruitment and fast deployment" to "scientific training and talent building". At the same time, we established a flight attendant management trainee program to reserve a pool of management talents.

#### Young-Employee Cultivation

సినిని

We have select key business elites to serve as mentors of younger employees and promote more "mentor-mentee" relationships to guide younger employees in their career planning and for the younger employees to achieve faster professional development.

#### Foreign Pilot Training

6

To promote the level of internationalization of our pilot team, the Company has strengthened the training of foreign pilots. By forming a "foreign pilot recruitment inspection team", hiring

internationally-experience instructors, and increasing specialized foreign captain training, we have further enhanced foreign pilot capacity management to provide a solid human resource foundation for the international expansion of China Southern Airlines.

G 1,880 **Completed training subjects** 

# **An Innovative Team**

Innovation is the first driving force to development. We have continued to innovate activities of "small inventions, small evolutions, small modifications, small designs, small suggestions" (the "Five-smalls") to harness the creative power of our staff and management. During Year 2017, the output of the "Five-small activities" covered nine major functions of sales and marketing, flight, M&E, operational control, cargo, cabin, and ground services. More than 90% of our staff and management participated in these activities.



Over



The Electrical Motor Team of GAMECO Parts Center was awarded "The Most Influential Team in the Civil Aviation Sector". employees had participated in

### "My Aircraft" Mobile Application

GAMECO developed a "My Aircraft" mobile application that can obtain real-time parking position change and aircraft status. This application also incorporated a request for parts function which has improved maintenance quality and efficiency.



#### **Data Calculation Application for** International Shipments

The Cargo Division of China Southern's Shanghai Branch developed an application that can automatically calculate shipping fees of international shipments within the cargo hold. Each shipment item is automatically matched to different calculation modules of international transfer, international direct and international accumulative. The average time taken to calculate shipping fess has been reduced from 2 hours to 30 minutes.

#### Parts Purchase and Send-for-Maintenance **Request Approval** System

The maintenance depot of Henan Airlines developed a "parts purchase and send-for-maintenance request approval system" that effectively reduces approval time from up to two weeks to only 30 minutes. This system rap idly accelerated the transition time of parts inventory, improved purchases, and send-for-maintenance efficiency.

#### Video Recorder

The Company's Cabin Division introduced the use of a video inspection "recorder" during cabin safety inspections. The collected audio and video footage are then used as part of the evaluation of flight attendants.

#### Aircraft Oil Can Opener

Using 3D survey and design tools and modular printing technologies, China Southern's Hunan Branch developed a new aircraft oil can opener. This opener resolved many shortcomings using traditional methods and developed a new tool that is being used throughout China's civil aviation sector. This tool has also earned a patent from the State Intellectual Property Office.

# Station

system.



#### **Troubleshooting Training**

The China Southern M&E Division developed a Troubleshooting Training Station for Aircraft Electricity Power Distribution System which can simulate all types of complex malfunctions and quickly improve training efficiencies of maintenance trainees and enhance their understanding of the power distribution

#### Four-Level **Pre-Warning System**

A project team developed an exclusive regional thunderstorm four-level pre-warning system which can evaluate the number of flights and level of impact from thunderstorms at different times and at different airports to provide important reference to the decision-making process of flight schedule adjustments.

#### Parts Dispatch System

The maintenance depot of Guizhou Airlines developed a user-friendly and standardized parts dispatching system which simplifies information submission, achieved the transition from manual filing to electronic submission and increased the filing accuracy rate from the previous 75% to a remarkable 99.9%.

## **Health Management**

A good health guarantees the work and life of an employee. We pay close attention to the physical and mental health of our employees, continuously refine the health and safety management system to create a safe and healthy workplace.

#### **Employee Health Check**

China Southern Airlines organizes annual health check for our staff and management and created occupational health files for each team member. We regularly increase health checks and take effective measures to prevent accidents at the workplace to protect the safety of our staff and management.

#### **Public Health**

Aviation Health Assurance System. The Aviation Health Division has compiled aviation health assurance documents that provide theoretical evidences and technical support to flight operations covering areas such as prevention of onboard vector-borne diseases and medical emergencies onboard to further improve the health and safety protection.

Food Safety Inspection. During Year 2017, China Southern staff conducted food safety inspection at our headquarters and branches; dispatched 2,105 person-time inspectors; inspected food outlets 995 unit-time and issued 452 inspection reports on-site. The inspections have helped the guarding of food safety of our employees.

Communicable Disease Control. The Company has held 59 information sessions on the epidemic of communicable diseases, trained 4,771 person-time staff and equipped each division and work unit with protective materials to prevent the outbreak of disease.

# Employee health check rate 81.05

**Pilots and cabin** attendants participated in health checks

17,188

Ground staff participated in health checks

/4,560

#### Mental Health Support

EAP Project. To better care for the mental health of our frontline employees who work under constant stress, we have organized seminars of EAP Basic Theory; EAP Active Coaching Techniques; Mental Health Promotion Training and Practicing EAP at Work. The Company has also trained EAP specialists to provide high quality counselling services to our staff and management.

Mental Health Trainings. China Southern launched online "micro training sessions" and offline seminars, mental health growth classes and metal health micro counselling events specifically for new flight attendants. The launch of these training regiments marked the beginning of raising training standards through psychological aid, to help Staff, management and flight attendants relieve their stresses.



#### **CASE: Stress Relief**

In order to help staff and management through the massive stress during peak travel seasons, we invited professional counsellors to offer complimentary mental health seminars. The seminars are rovided both online and offline, including online micro sessions and offline sharing sessions. These seminars include stress and emotion; relationship and family; parenting and personal growth and offer comprehensive counselling services to our Staff with a combination of lecturing and experiential learning.

# Happiness in the Workplace

We treasure the contribution of every Southern Airlines staff and manageme care for the work/life balance of our staff and management and we work towards promote th work/life balance and increase their h

#### **Caring for Staff with Special Needs**

uch as impo

**Care for female** employees

We care for the health of our female colleagues and during Year 2017, we secured 665,000 RMB of medical assistance on behalf of 47 female colleagues who suffered from critical illnesses and have continued the building of "Mother's Room", distributed anti-radiation maternity clothes to 1,975 pregnant colleagues.

colleagues.



financial assistance from the 4th session of the Mutual Fund

Care for Employees

in Hardships

The Company continues to aid financially challenged colleagues through our Mutual Fund for Critical Illnesses. The 4th session of the fund provided 3.34 million RMB financial assistance to 532 colleagues and Year 2017's 5th session provided 355,000 RMB financial assistance to 97

The lives and health of our retired staff and management are of great concern to the Company and we have designed personalized healthcare plans for our valued retirees and we have invited these important cadres to offer suggestions and recommendations to the Company while organizing annual "positive energy" activities to showcase the healthy and positive attitudes of these retirees to promote healthy development ... both physically and mentally.

Care for

Retired

Employees

355,000 R

financial assitance from the 5th session of the Mutual Fund

#### **Enriching Lives Beyond Work**

The Company actively cultivates a warm and hospitable corporate culture by organizing regular cultural and sport activities to enhance group cohesiveness and encourage employees to enjoy a superior work/life balance.





#### **Employee Cultural Festival**

The 2nd China Southern Employee Cultural Festival, with the theme of "Sunshine Southern and Colorful Dream of the Sky", was held from April 30 to June 30, 2017. The festival brought employees of different ages, different interests and from different jobs together through a series of activities including a basketball tournament, tug of war, mass dancing, book forum, storytelling, and letter exhibition.





#### **Spring Fun Fair**

The Spring Fun Fair was held in February 2017 and attracted nearly 8,000 staff and their families with 12 fun and challenging games for all ages. At the end of the fair, more than 500 prizes were given, bringing joy to all participants.

#### **Table Tennis Tournament**

The "Ankang Cup" Table Tennis Tournament was held in November which attracted more than 400 participants from 44 secondary work units.



#### "The Voice of Cabin"

"The Voice of Cabin" and the Cabin Broadcaster Competition was held across out network from mid-April to June 2017. More than 14,000 flight attendants took part in the fierce competition which helped the improvement of cabin announcements and promoted an all-round cabin service image.







#### Mind Sports Games

The first "Mind Sports Games" was held in November 2017. More than 180 participants from 40 secondary units took part in this "feast of intelligence" by competing in four sports of "Tractor Game", Chinese Chess, bridge, and the game of Go.



# The Fruit of the Dream

Never Give Up!

Years 2008 to 2009 brought even more challenges. Due to external factors beyond her control, Leilei moved from Pan Am Aviation Academy to Tianjin Civil Aviation College then to Guanghan Flight Academy. But she never gave up. Perhaps moved by her perseverance, the "God of Luck" finally set his sights on her and Leilei graduated from Guanghan in 2010 and was recruited by China Southern as a cadet-pilot.

After joining China Southern, Leilei felt more physical and mental stress in an industry that is dominated by men. However, being so close to realizing her dream, Leilei spent hours studying flight theories, took numerous base training and simulator training exercises to increase her command capabilities and under the attentive guidance of the instructors, Leilei achieved her breakthrough, built up her self-confidence with her own attention to details and precision.

After ten years of hard work, on April 28, 2017, the 7th year after joining China Southern Airlines, having passed all examinations, Leilei finally obtained her Captaincy and was given the "four-stripe" Captain insignia and the shoulder epaulets that she had been so longing for.

A decade of hard work brought Leilei to the point of truly finding herself and she hopes to bring her passengers to their destinations safely and happy on every flight. This is the reason she started her pursuit and her biggest goal. Every dream deserves to be respected and China Southern Airlines will always be there to provide fair opportunities to each college to construct a diverse platform and to help our staff realize their dreams.

CORPORATE SOCIAL RESPONSIBILITY REPORT 2017

# **Our Story**



As long as you don't place limits upon yourself, you will eventually be your "better self" even when there are obstacles and challenges along the way.

# 99 —Leilei

#### **Discover Life's Many Possibilities**

If your dream seems far-fetched, do you have the courage to persist? Our female Captain Leilei answers with her own experience that, as long as you do not place limits upon yourself, you will eventually be your "better self" even when there are obstacles and challenges along the way.

#### Charting a New Path

a child and as she matured, she even made the ranks of a professional team. Unfortunately, an injury forced her to retire from the team. This was Leilei's first major challenge. To enrich herself, Leilei enrolled in the Polytechnic College of the People's Liberation Army. She became a flight attendant after graduation and stayed at the job for five years. Yet, after getting married and having her own child, she started to feel that her lack of knowledge had become a looming shortcoming but as fate would have it, she was told by her father (who was also a professional airline pilot) that an aviation academy was recruiting. As if this was meant to be, she instantaneously knew that becoming a pilot was her life's ambition. In January 2007, at the age of 27, Leilei enrolled at Pan Am Aviation Academy in Shijiazhuang and became the oldest cadet in the entire academy.

#### Never Give Up!

At the academy, Leilei felt tremendously stressed due to her age and her lack of basic aviation knowledge. Leilei had to work very hard to cover seven modules in four months. During that time, she slept only four to five hours a day, used all her diligence to make up for her weaknesses. In four months, she successfully passed the theory test.

Captain Leilei was really "into" badminton when she was

# HARMOUNIOUS SOCIETY

China Southern values its social contribution as highly as its business development. We fulfill our commitments and fully exercise our strengths and arrange special flights, social charity activities, and the promotion of cultural exchanges throughout the international community as important pillars in fulfilling its social responsibilities and achieving the vision of building a harmonious society.

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# **Special Flights**

High political awareness, bearing in mind the overall interests, and taking up solemn responsibilities are the style of all state-owned enterprises. During special flights and emergency rescue, we actively take in national missions and performed multiple large and urgent tasks such as the transportation of peacekeeping forces, government charter flights and disaster relief.

#### **Undertaking Special Tasks**

#### Transportation of Peacekeeping Forces

We selected flight crews with the highest integrity and outstanding abilities to operate charter flights for peacekeeping forces. We safely operated flights to Mali on May 16-17, 2017 and overflew 15 countries in Asia, Europe, and Africa to span a distance of 25,000 kilometers and safely transported 405 peacekeeping force members.

#### Serving Important Events

China Southern operated special charter flights for VIPs and were a major air partner to major global events, including: the Bo'ao Forum; Belt and Road Summit; The Summer Davos and Fortune Global Forum in Guangzhou. During Year 2017, China Southern 135 operated charter flights,

transported 14,717 passengers

and more than



#### LINK: Peacekeeping Forces to South Sudan

On November 31, 2017. China Southern has completed eight charter flights to and from Juba in South Sudan, facilitating the shift change of the infantry camp of international peacekeeping forces. More than 1,000 force members were transported. These flights were operated using China Southern's Airbus A330 and spanned an 18-day period, accumulating 126 flight hours. These flights covered a distance of nearly 100,000km, equivalent to 2.5 times the circumference of the equator.



#### **Escorted Transportation of Criminal Suspects**

China Southern arranged double crew and aviation security personnel with high political awareness when operating escorted transportation of criminal suspects. On July 6, 2017, experienced air marshals of the "Golden Shield" team escorted 74 individuals who were suspected of extortion and blackmail from Phnom Penh and Kampot, Cambodia back to China.

# **Disaster Relief and Rescue Actions**

#### **Disaster Relief and Rescue**

In August 2017, two earthquakes struck Jiuzhaigou, Sichuan Province and Jinghe, Xinjiang Province. After the earthquakes, China Southern immediately initiated disaster rescue efforts to these two stricken areas. An emergency directing team was formed to keep in close contact with the CAAC, ATC, and each respective airport. A rescue team of 150 was standing by to participate in the rescue efforts.

#### **Transportation of Materials**

In September 2017, China Southern freighter aircraft departed from Shanghai Pudong International Airport, carrying 96 tons of rescue materials donated by the Chinese government to Mexico City.

#### **Urgent Tasks**

On the evening of July 19, 2017, the China Southern General Aviation Xingcheng Base received an emergency rescue alert. An emergency procedure was immediately launched and a helicopter immediately departed, taking only 92 minutes to bring back a worker at sea who suffered a head injury.

# **Charity and** Philanthropy

China Southern Airlines is devoted to charitable causes through donations, poverty alleviation, volunteer efforts and other activities to fulfill our responsibilities to the society while promoting an integrated development of the Company and the society.



#### Focus on Culture and Education

China Southern places the greatest value on education and we provide bursaries to underprivileged students, organize various volunteer activities, actively strive to improve the education and living standards of youth living in impoverished regions to create new opportunities for them to realize their dreams.

#### "10-Fen" Care Foundation Education Fund

Since its founding 12 years ago, the "10-Fen" Care Foundation has helped more than 1,500 college students (per year) complete their education. We have funded more than 13,000 underprivileged and outstanding students from across China, putting wings to their chasing of their dreams. The foundation has also conducted education aid activities at primary schools in remote areas in Heyuan, Qingyuan and Raoping. We have donated computers, clothes and stationary to schools and left-behind children to help them realize their dreams.



operated by China Southern as more than 410 stranded passengers flew home on flights CZ6066 and CZ626 to



Total amount of bursary 30

Over the years, the foundation has brought hope to financially challenged but academically outstanding students at numerous institutions. During these years, the "10-Fen" Care Foundation donated an accumulated amount of more than 70 million RMB to education and poverty alleviation projects

#### "Bookroom of Dreams"

"Bookroom of Dreams" was founded by China Southern Young Volunteers Association. Its purpose is to collect donated books for students and left-behind children in impoverished regions, to create an environment that values knowledge and culture for them. January 7, 2017, the "Reading China Southern" project teamed up with "Bookroom of Dreams" to visit Tianbei Primary School and Qingshang Primary School in Longchuan, Heyuan, marked the beginning of a series of school visits of the "Bookroom of Dreams" project. In this visit, the volunteers brought over more than 600 books and 150 culture and sports materials.



Volunteer Service Project" .



held on February 28, 2017. The "10-Fen" Care Foundation Education Aid volunteer action was awarded China's "Best

95

#### Passing on the Spirit of Volunteer Service

China Southern promotes and advocates the spirit of volunteer service, highlighting the leading role of the China Southern Young Volunteers Association, encouraging, and supporting our staff and management to initiate community-based volunteer activities and continuously help those in need.

**Total volunteering service** hours 63,000

"I Am Your Eyes" The China Southern Xinjiang Branch has been visiting the Urumgi School for the Blind for the last eight years. During Year 2017, they invited 15 visually-impaired students under the "I Am Your Eyes" project to visit cabin simulators at the China Southern Training Center in Guangzhou. Both volunteers and students had great fun when they shared aviation knowledge together. The volunteers introduced various kinds of aviation knowledge to the students through touching the seats, buttons, tray tables and other cabin equipment so that they

could also "experience" the fun of flying.

China Southern volunteers brought the "Kapok Classroom" into local schools to introduce civil aviation knowledge to primary and secondary school student through one-on-one lectures and demonstrations. Also, in connection with China Southern Open Day, the Company included more students to experience our frontline operations, to understand civil aviation and to build up safe travel concepts hence raising the safety awareness of the entire society.

"Kapok Classroom"

nominated at the "100 Youth Volunteer Service **Demonstration Project of** China" The 4th China Youth Volunteer Service

LINK: China Southern

Project Competition and the 2017 Volunteer Service Conference were held in Chengdu, Sichuan on December 2, 2017. China Southern's "Happy Travel, Warm Way Home" project was one of only two from the civil aviation industry nominated at the competition.



LINK: "Kapok Classroom" and "I Am Your Eves" Projects Win Awards at the **1st Civil Aviation Youth** Volunteer Service Project Competition

The 1st Civil Aviation Youth Volunteer Service Project Competition was held in Guangzhou on November 23, 2017. The "Kapok Classroom" of China Southern Young Volunteers Association and the "I Am Your Eyes" project of the Company's Xinjiang Branch were awarded individual prizes at the competition. China Southern won the Special Contribution Award and the "Excellence in Oerganization" Award.

# **Engaging with International Communities**

China Southern is actively engaged in the "Belt and Road" advocacy and "Reaching Out" strategy. We respect the culture and customs of different countries, take part in local cultural events and sports activities to promote cultural exchanges and development. China Southern's goal is to be the bridge between China and the international community and become a global corporate citizen.

#### International Cultural Festivals

China Southern has been sponsoring the largest cultural festival of the southern hemisphere, the Sydney Festival, for the last six consecutive years starting from Year 2012 to 2017. We have also reached an agreement that covers the next three years from 2018 to 2020 to deepen the positive relationships between China Southern and the Sydney Festival. Through a comprehensive brand image promotion, we have further integrated into the local societies and our international image has become more well-known among the varied regional communities.

#### Sports Development

China Southern has become a main partner of the longest-standing football team of Australia, the Melbourne City FC and reached a three-year sponsorship for Years 2017 through 2019. China Southern also became one of the major sponsors of the Adelaide Crows of the Australian Football League during Year 2017. We have promoted our brand image and influence through supporting local sport events.

#### Partnership with Local Symphony Orchestras

China Southern is a proud platinum sponsor of the Adelaide Symphony Orchestra, one of the six professional orchestras of Australia and the largest performer in South Australia. Each year, the Adelaide Symphony Orchestra provides more than 100 musical performances of various genres. Through this cooperation, we are able to continuously expose our brand to the high quality and high net-worth demographics located in South Australia.





#### **Brand Promotions**

China Southern has reached cooperation agreement with the world-renowned University of Canterbury and became one of its leading corporate partners. We have launched brand promotional events at Mt. John University Observatory, a popular tourist attraction and a prestigious space research institute of New Zealand. Such promotional events help China Southern build an international premium brand image and earn the trust from the local and regional communities.

# **Supply Chain Management**

China Southern is committed to building an open cooperation platform. The goal of our "sunshine procurement" is that all transactions are recorded and all processes are transparent. We also actively encourage our suppliers to join with us in fulfilling social responsibilities to share our values and grow together.

#### **Procurement Management**

China Southern Airlines attaches great importance to procurement management. During Year 2017, we launched a strategic reform of our procurement management systems and built a unified procurement management system, standardized six sets of rules on invitation to bid, supplier management and judging panel management. The Company initiated a centralized procurement management mechanism, built a procurement operation mechanism, consolidated and optimized procurement resources to manage risks from their sources, in order to build an efficient procurement system.

die

#### LINK: China Southern's New Centralized procurement platform

China Southern's centralized procurement platform was officially launched on December 18, 2017. Invitation to bid, non-bidding procurement, and sunshine mall functions have now been fully integrated. The launch of this platform is a vivid illustration of China Southern's push forward towards a centralized procurement system. **Geographical Distribution of Supplier** 

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**PDEING 77** 

#### **Supplier Management**

China Southern Airlines constantly explores the opportunities in refining our supplier management. In Year 2013, we issued the Supplier Code of Conduct which has become an important annex in all procurement agreements, regulating the cooperation with suppliers from business, social, and environmental aspects and encouraging suppliers to take on social responsibilities.

China Southern's senior management also take great pleasure in listening to and acting upon suggestions and opinions from suppliers to improve our business practices.



#### **A Better Future**

Apart from spending time with his family, Liao and his parents were invited to take part in the Summer Science Camp in Guangzhou. The camp included visits to China Southern Headquarters; FAW-Volkswagen Manufacturing Center and the Guangzhou Science and Technology Center. On July 22, 2017, Liao and 10 friends from his home, paired up with 11 local kids of their age and visited the Training Center at China Southern's Headquarters.

In addition to visiting the cabin simulators and learning about in-flight cabin services, the youngsters also experienced emergency evacuation procedures at the center. Accompanied by their parents, the youth changed into training outfits and evacuated from the cabin simulator through the evacuation slide. Immediately after the experience, Liao told his mother excitedly that he had so much fun and he wanted to be an astronaut when he grew up. After the experience, Liao told his mother excitedly that he had so much fun and he wanted to be an astronaut when he grew up.



A relay of love has fulfilled the wishes of these children to reunite with their parents and has also brought the goodwill of the entire Chinese nation with them. Through such events, these and other youngsters now have a chance to broaden their horizons and to see the world outside their villages.

This experience may also serve to encourage them to change their lives. In the future, China Southern will continue to promote the "traveling with children from air to ground" project to additional organizations; to care for the needs of more left-behind children and to fulfil corporate social responsibilities with real and meaningful action.



# **Our Story**

# A relay of love that brought more than a family reunion



There is a special group of people in China's most rural areas that were separated from their parents at a young age as their parents had to leave the family to work in the cities to make a living. They were only able to spend very little time with their parents each year during the annual Chinese New Year festivities. They are known as the "left-behind children" and the issues associated with them have become a major concern of the society.

#### Crossing a Thousand Miles

We at China Southern pay close attention to the healthy growth of children. Paired up with several organizations in the society, we are providing care and warmth to these left-behind children.



On June 3, 2017, in close partnership with FAW-Volkswagen, All-China Women's Federation, and Dream Relay to create the "Traveling with Children from Air to Ground Charity Project" to help family reunions of left-behind children and their parents. The project brought together 11 left-behind children from five primary schools in Guizhou Province to where their parents were working via airplane and ground vehicles.





Liao Chuifu of Qinglong County, Guizhou Province was one of these young people who were left behind.He had never traveled farther than the town center of Qinglong and accompanied by a team of volunteers, Liao landed at Baiyun International Airport Guangzhou on July 21, 2017, onboard a China Southern flight. He was at his mother's side immediately after leaving the aircraft. It took Liao more than six6 months to cover the 1,000-mile journey to reunite with his mother.

# **ESG INDICATORS INDEX**

B1.1

B1.2

		Environmental	
Aspect	Aspect number	"Comply or explain" Provisions	Location in this report
A1: Emissions	General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to air and greenhouse gas emissions, discharges into water and land, and generation of hazardous and non-hazardous waste.	P45、P51-P52
	A1.1	The types of emissions and respective emissions data.	N/A The aviation industry currently does n unified measurement system on air po
	A1.2	Greenhouse gas emissions in total (in tons) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	P46-P47
	A1.3	Total hazardous waste produced (in tons) and, where appropriate, intensity (e.g. per unit of productionvolume, per facility).	N/A Hazardous waste is not a main pollutic business process of the aviation indus the reporting period, China Southern produce significant amount of hazard
	A1.4	Total non-hazardous waste produced (in tons) and, where appropriate, intensity (e.g. per unit of production volume, per facility)	N/A The Company is currently in the proce refining data collection and analysis. T will be disclosed in stages as results be available.
	A1.5	Description of measures to mitigate emissions and results achieved.	P48-P49, P51-P52
	A1.6	Description of how hazardous and non-hazardous wastes are handled, reduction initiatives and results achieved.	P50, P52
	General Disclosure	Policies on the efficient use of resources, including energy, water and other raw materials.	P48-P51
A2:Use of Resources	A2.1	Direct and/or indirect energy consumption by type (e.g. electricity, gas or oil) in total (kWh in '000s) and intensity (e.g. per unit of production volume, per facility),	P46-P47
	A2.2	Water consumption in total and intensity (e.g. per unit of production volume, per facility).	P51
	A2.3	Description of energy use efficiency initiatives and results achieved.	P48-P49
	A2.4	Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency initiatives and results achieved.	P51
	A2.5	Total packaging material used for finished products (in tons) and, if applicable, with reference to per unit produced.	Not applicable
A3: Environment and Natural Resources	General Disclosure	Policies on minimising the issuer's significant impact on the environment and natural resources.	P50、P53、P55、P57
	A3.1	Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them.	P50, P53, P55, P57
		Social	
Aspect	Aspect number	"Comply or explain" Provisions	Location in this report
B1:Employment	General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination, and other benefits and welfare.	P77, P81, P85

Total workforce by gender, employment type, age group and geographical p78-p79

N/A

Employee turnover rate by gender,age group and geographical region.

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Aspect	Aspect number	"Comply or explain" Provisions	Location in this report
B2: Health and Safety	General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to providing a safe working environment and protecting employees from occupational hazards.	P31, P33
	B2.1	Number and rate of work-related fatalities.	P79
	B2.2	Lost days due to work injury.	P79
	B2.3	Description of occupational health and safety measures adopted, how they are implemented and monitored.	P84
B3: Development and Training	General Disclosure	Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities.	P80-P81
	B3.1	The percentage of employees trained by gender and employee category (e.g. senior management, middle management).	N/A
	B3.2	The average training hours completed per employee by gender and employee category.	N/A
B4: Labor Standards	General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to preventing child and forced labor.	P77
	84.1	Description of measures to review employment practices to avoid child and forced labor.	P77
-	B4.2	Description of steps taken to eliminate such practices when discovered.	P77
B5: Supply Chain Management	General Disclosure	Policies on managing environmental and social risks of the supply chain.	P98
	B5.1	Number of suppliers by geographical region	P101
	B5.2	Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, how they are implemented and monitored.	P101
B6: Product Responsibility	General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to health and safety, advertising, labelling and privacy matters relating to products and services provided and methods of redress.	P59-P65
	B6.1	Percentage of total products sold or shipped subject to recalls for safety and health reasons.	Not applicable
	B6.2	Number of products and service related complaints received and how they are dealt with.	P70-P71
	B6.3	Description of practices relating to observing and protecting intellectual property rights.	P12
	B6.4	Description of quality assurance process and recall procedures.	Not applicable
	B6.5	Description of consumer data protection and privacy policies, how they are implemented and monitored.	P71
B7: Anti-corruption	General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to bribery, extortion, fraud and money laundering.	P11
	B7.1	Number of concluded legal cases regarding corrupt practices brought against the issuer or its employees during the reporting period and the outcomes of the cases.	P11
	B7.2	Description of preventive measures and whistle-blowing procedures, how they are implemented and monitored.	P11
B8: Community Investment	General Disclosure	Policies on community engagement to understand the needs of the communities where the issuer operates and to ensure its activities take into consideration the communities' interests.	P29, P96
	88.1	Focus areas of contribution (e.g. education, environmental concerns, labor needs, health, culture, sport).	P94-P97
	B8.2	Resources contributed (e.g. money or time) to the focus area.	P95-P96

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