CHINA AIRLINES

永續華航
SUSTAINABILITY WE CARE

CARGO

CHINA AIRLINES
BOEING 77F

2020
China Airlines Corporate Sustainability Report

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Preface

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About the Report

China Airlines (hereinafter referred to as "CAL") publishes corporate sustainability reports and discloses related information on its CSR website on a regular basis to maintain good and smooth communications with all stakeholders. The coronavirus (COVID-19) delivered a massive blow to the global airline industry in 2020. Following its commitment to corporate sustainability, CAL nevertheless continued to support sustainability oriented environmental, social, and economic / governance activities. While the ongoing pandemic keeps recovery in passenger transport slow, airlines are depending on cargo transport to shoulder operational burdens. Flying into a new era in cargo transport, CAL cargo aircrafts are carrying cargoes across its global network despite the pandemic.

Cover Story

CAL has introduced the Boeing 777 Freighter since 2020 which is expected to be the new force of CAL's cargo fleet. We used it as the main visual theme and high-altitude clouds as the background to recreate the well-known colors of the Company. We used image processing to create a sense of speed that signifies our passage over the woes of the pandemic in 2020 and embrace of opportunities for recovery in 2021.

In 2018, CAL introduced the sustainability logo that highlighted "Sustainability We Care". We placed the slogan on the back cover this year as a strong signal that CAL tries to differentiate itself by sustainability to demonstrate the brand's commitment to sustainability despite the pandemic. The overall visual style is a change from the illustration approach in the past. We reverted to using photographs throughout the report and adopted a realistic and refreshing style for the photographs so that the reader can view CAL's performance in all areas as they read the information. The style also helps us project a professional image for air transportation.

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Reporting Principles & Standard Disclosures `GRI 102-54`

The Report is prepared in accordance with the International IR Framework published by the International Integrated Reporting Council (IIRC), the GRI Standards Core Option published by the Global Sustainability Standards Board, the sustainability metrics published by the Sustainability Accounting Standards Board, and the United Nations (UN) Global Compact. The GRI Content Index, SASB Comparison Table, and UN Global Compact Comparison Table are described in the appendix.

Report Period & Boundary `GRI 102-45, 102-50`

• Report Period

The Report discloses CAL's information from January 1, 2020 to December 31, 2020. Some material information up to April 30, 2021 is also reported.

• Report Boundary

The Report discloses all information on CAL. Considering commercial correlation between CAL and its subsidiaries and the financial materiality (Note), Mandarin Airlines and Tigerair Taiwan are also disclosed in some index in the Report.

Note: China Airlines, Mandarin Airlines, and Tigerair Taiwan account for the 96% of the consolidated revenue.

Guarantee of Truthful Reporting `GRI 102-56`

• Internal Audit

All data and information disclosed in the Report are provided by the responsible departments of CAL, proofread and examined by the Executive Secretary (Corporate Development Office), Corporate Sustainability Committee, submitted to the Chairman for review and approval, and then reported to the Board of Directors according to CAL Corporate Social Responsibility and Sustainable Development Best Practice Principles.

• External Assurance

The Report has been verified by KPMG Taiwan in accordance with the GRI standards and the limited assurance of ISAE 3000. The truthfulness of the Report is guaranteed. Please refer to the appendix for the Independent Limited Assurance Report.

• Data Quality Management

Financial data in the Report and data relating to ISO quality, information security, occupational safety and health, environmental and energy management, and greenhouse gas emissions have been certified or verified by independent third parties.

CSR Website

Financial Data	Deloitte Taiwan
ISO 9001 Quality Management System	DNV GL
ISO 27001 Information Security Management System	SGS
ISO 45001 Occupational Health and Safety Management System	SGS
TOSHMS Taiwan Occupational Safety and Health Management System	SGS
ISO 14001 Environmental Management System	DNV GL
ISO 50001 Energy Management System	DNV GL
ISO 14064-1 Greenhouse Gas Emissions	DNV GL

Publication History `GRI 102-51, 102-52`

This Report is published in both Chinese and English every year and available on the CAL's CSR website. The dates ofg release are as follows:

First edition release date	August 2014
Previous edition release date	June 2020
Current edition release date	June 2021
Next edition release date	June 2022

Feedback `GRI 102-1, 102-53`

If you have any suggestions or questions about the Report, please contact:

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Chairman
Su-chien Hsieh

President
Shing-hwang Kao

Global Environmental Challenges

2020 is a year the world will not soon forget. The COVID-19 pandemic has changed the way we live. Border control and strict quarantine requirements have hit the global airline industry hard. The pandemic started spreading in 2020 at the beginning of the Chinese New Year. CAL, from the head office to outstations, responded quickly and rescheduled passenger and cargo flights. Countermeasures, including taking turns to work from home and stockpiling medical supplies, were put in place to protect the health and safety of first line employees and help travelers return home. Passenger and cargo transport capacity was allocated to transport medical supplies to their destinations. While leading airlines around the world started downsizing and implementing pay cuts and layoffs and some declared bankruptcy, CAL and the union displayed a harmonious employer-employee relationship. The work groups also showed perseverance as a team. CAL affiliated enterprises supported each other, and worked together to meet the challenges. As a result, CAL managed to remain standing after a difficult year.

Opportunity amid Adversity

The passenger and cargo transport demand showed clear polarization in 2020. For CAL, passenger transport dropped by 78% while cargo transport skyrocketed by 79% for the year. However, in contrast to the tens of billions of US dollars in losses suffered by the global airline industry as a whole, CAL took advantage of its mid-sized operation, geographical environment, and the world's largest 747-400F cargo fleet to turn the adversity to an opportunity. CAL has the world's largest 747-400F cargo fleets. CAL cargo services devised counterstrategies soon after the pandemic started. The team made full use of the cargo transport capacity provided by 18 747-400F aircrafts, and scheduled flights and allocated space as needed. The team also promoted customized cargo charters, and tried to expand in express delivery, e-commerce shipping, and temperature controlled goods. Meanwhile, passenger belly capacity was enhanced, and passenger cabins were repurposed to transport cargo. Since the second quarter, CAL flew more than 1,000 all-cargo passenger flights per month on average to meet the demand. Given the pandemic, most cargoes carried by CAL were medical relief, personal protective equipment and other emergency supplies, and e-commerce goods. CAL cargo services was a winner of Air Cargo World's Air Cargo Excellence Awards. The team often receives positive customer feedback for its professional services and air transport quality. CAL has plenty of experience in transporting special cargoes such as precious relics and delicate instruments. CAL also assists in delivering a large number of made-in-Taiwan flu vaccines to around the world every year. CAL is the only IATA CEIV Pharma airline in Taiwan. The company has been expanding the air cargo transport network by adding all-cargo destinations, including Nagoya in Japan, Delhi and Mumbai

in India, and Columbus in the United States. Flights are also added to increase capacity to Hanoi and Ho Chi Minh City in Vietnam, Penang in Malaysia, and Singapore. These additions make a more extensive air cargo transport network. Meanwhile, CAL is paying close attention to post-pandemic developments in the global cargo transport industry. With hubs in Taiwan, CAL continues to focus on transfer opportunities in Asia Pacific and target Oceania routes.

Sustainability Philosophy

CAL remains committed to environmental protection, and continues to support climate related financial disclosures. The company also invests in sustainability oriented environmental, social, and economic / governance activities, and takes action to incorporate sustainability into the corporate culture. "Safety, governance, fleet and network, products and services, group business, and brand awareness" are the six directions in which CAL develops sustainability strategies. Following the guide for business action on the SDGs, CAL has set short-, medium-, and long-term goals for tasks forces in six areas: "foundation for sustainable development, trust value, talent value, collaborative value, environmental value, and social value". These goals are designed to help CAL achieve sustainability. Looking back on 2020, CAL received a Reporting Award from the Global Corporate Sustainability Awards (GCSA) for the second time. The company also won the Taiwan Corporate Sustainability Awards (TCSA) for the seventh consecutive year. Meanwhile, CAL was included in the Dow Jones Sustainability Indices (DJSI) and the FTSE4 Good Emerging Index for the fifth consecutive year in 2020. In addition, CAL was recognized in the Silver Class in the latest S&P Global Sustainability Yearbook.

Looking Back and Moving Forward

As the global pandemic continued, CAL purchased a new 777F cargo fleet in 2020, followed by new narrow-body passenger A321neo in 2021. Standing at the beginning of another sixty years, CAL is ready with an efficient cargo and passenger fleet posed to take off into success. Like its logo, CAL is a red plum flower that blooms more beautifully in adversity. CAL of tomorrow will be better than today.

J. C. Hsieh   *S.H. Kao*

2020
Key Performance and External Affirmation

DJSI / 5th

5th Time selected for DJSI Emerging Markets Index

The only Taiwanese airline selected for DJSI Emerging Markets for five consecutive years and ranked in 3rd place among the world's airlines.

FTSE / 5th

5th Time selected for FTSE4Good Emerging Index

Selected in the FTSE4Good Emerging Index for five consecutive years.

TOP 6%-20%

Top 6% - 20% of TWSE/TPEx listed companies

Selected as the top 6% - 20% of the excellent corporation award in the sixth Corporate Governance Review.

GCSA / 2nd

2nd Time in GCSA Award

Awarded in the GCSA Reporting Award for the second year.

TCSA / 7th

7th Time in TCSA Award

Awarded in the Taiwan Corporate Sustainability Award for seven consecutive years along with four TCSA awards.

Economic / Governance

4th Time selected for Taiwan EMP 99 Index and Taiwan HC100 Index

Selected in the Taiwan Employment Creation 99 Index and the Taiwan High Compensation 100 Index for four consecutive years.

1st airline to conduct sustainability audits

Taiwan's first airline to perform sustainability audits.

3rd Time received highest scores in supply chain management criteria of DJSI

Granted the highest scores in supply chain management criteria of DJSI for three consecutive years.

ISMS and PIMS introduced to certify core information systems

The Company began implementing annual reevaluation of the core Information Security Management System (ISMS) and certification of the Privacy Information Management System in 2020 to ensure that the management system can effectively operate and control risks. The Company also obtained credit card transaction system data security certification in 2020 to ensure the security of the Company's credit card transaction environment and protect passenger rights.

IOSA / 9th

9th passed IOSA Certification

CAL has successfully passed the IATA Operational Safety Audit (IOSA) of the International Air Transport Association (IATA).

Hosted aviation security seminar

CAL, China Aviation Development Foundation, and CAA of MOTC co-organized an aviation security risk management seminar in 2020.

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Environmental

5th Time selected in DJSI, and got highest scores in environmental reporting and policies, management systems, and climate strategies

Five consecutive times selected in DJSI emerging markets index and got highest score in environmental reporting and policies, management systems, and climate strategies of DJSI in 2020.

7th Time in TCSA Climate Leadership Award

Awarded in TCSA Climate Leadership Award for seven consecutive years since 2014.

1st Taiwanese airlines to publish TCFD disclosures

First airline in Taiwan to publish climate related financial disclosures (TCFD).

Buying Power – Special Environmental Sustainability Award

Worked with Zen Zhou to develop "CAL Foldable Platinum Silicone Cups", which was rewarded a special prize in the environmental sustainability category and a first prize in the procurement category of the Buying Power Awards by SMEA of Taiwan MOEA.

1st Airlines in Taiwan to receive Carbon Label and Carbon Reduction Label

Mandarin Airlines of CAL group passed the 3rd party carbon footprint verification again, and became the first airlines to receive the Taiwan EPA "carbon label" and "carbon reduction label" with over 30% carbon reduction.

Social

Over 2,200 cases of medical supplies
Over 1,200 passengers

Participated in international relief efforts in 2020, and organized charter transport for medical supplies. A total of 10 flights carried 2,278 cases of supplies weighing a total of 73,343kg. Helped transporting expats in regions more affected by the coronavirus back to Taiwan. A total of 9 charter flights benefited 1,224 people.

99.43% union participation

99.43% of employees participating in labor unions.

Over 7.16 million in charity contributions

Invested TWD 7,162,191 in charity activities throughout 2020.

Over 3,400 students

From 2014 to now, CAL's Love All Around team has visited more than 15 cities and counties, 27 villages and towns, and 56 elementary schools as well as social welfare organizations in Taiwan to help 3,447 students.

550 senior citizens

Provided care for 550 disadvantaged senior citizens at four events throughout 2020.

45,000 students

Sponsored book programs for 102 schools throughout Taiwan to help approximately 45,000 students.

4th Time in TCSA Social Inclusion Award

Awarded in TCSA Social Inclusion Award for four consecutive years.

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07.22

Dynasty, the CAL magazine, won the APEX Awards for Publication Excellence for the fifth time in 2020, and received another Design & Layout Award.
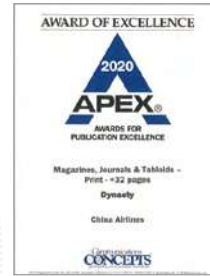
11.18

Received the Taiwan Corporate Sustainability Awards (TCSA) for the seventh consecutive year and the Global Corporate Sustainability Awards (GCSA) for the second consecutive year.

12.17

Received a special prize in the environmental sustainability category and a first prize in the procurement category of the 2020 Buying Power Social and Innovative Products and Services Awards by SMEA of Taiwan MOEA.

Member of
Dow Jones Sustainability Indices
Powered by the S&P Global CSA

11.13

Selected as a constituent stock of the Dow Jones Sustainability (DJSI) Emerging Markets Indices for the fifth consecutive year.

12.10

CAL's brand promotional video, "What Travel Brings You", received a bronze award at the CLIO Awards and a honorable mention at the New York Festivals.

12.28

Received the 2020 Air Cargo Executive of the Year Award.

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COVID-19
Special Column

The ongoing pandemic is putting the airline industry on the brink of survival. Airlines around the world have been cutting pays, laying off employees, and downsizing their businesses. More than 40 airlines have declared bankruptcy so far. Close to 5 million people face the risk of losing their jobs in the global airline industry. (Refer to 1-1-2 Analysis of Business Environment in the Aviation Industry) The demand for passenger air transport remains low amid uncertainty in the pandemic and the lack of traveler confidence, and IATA keeps adjusting the demand forecast downward. In contrast, the demand for air cargo transport is rising against the pandemic and becoming the lifeline of recovery. While the global airline industry fights for survival, CAL delivers an impressive performance through cargo services, and eases the impact of the pandemic on the company as a whole. Like a red plum flower, CAL blooms despite the coronavirus induced shock waves. (Refer to 1-1-1 Business Overview)

The "National Team of the Sky" Flying on for You — Bringing Expats Home on Charters and Transporting Medical Relief

Refer to **2-5 Society**

Many Taiwanese expats were unable to return at the beginning of the COVID-19 pandemic. CAL, as the "National Team of the Sky", remained committed to its role and assisted in arranging multiple charters. The company also played a key role in transporting medical relief, personal protective equipment and other emergency supplies during the pandemic. CAL supported the government's "Taiwan can help" campaign, and donated face masks to countries severely affected by the coronavirus. CAL completed many missions at the behest of the government in the process.

April 2020: CAL Transported Medical Supplies

March 2020: CAL Wuhan Charter Carried Expats Home for Quarantine

Source: MNA

Preemptive Protective Measures — Safeguarding Public Health and Safety

Refer to **2-1 Trust**   **2-2 Human Resources**

Ensuring the health and safety of passengers throughout the travel journey is top priority for airlines. Airport and aircraft cleaning and disinfection have become more stringent than ever before. These measures will also continue in order to restore traveler confidence in air travel. CAL implemented preemptive protective measures, and followed the health authority's instructions in enforcing health management procedures. In addition to complying fully with the CDC's guidelines and creating a COVID-19 information services section to safeguard public health and safety, CAL has taken enhanced measures to provide a safe, relaxing and comfortable journey.

Enhanced Aircraft Cleaning and Disinfection

COVID-19 Information Services

Enhanced Measures Against COVID-19

Aircrew Safety Protection and Health Monitoring Measures

COVID-19
Special Column

Building Momentum for Reopening of Cargo / Passenger Transport — Combination Strategies

At present, the key factors in the recovery of the airline industry are control of the coronavirus and consumer confidence. The demand for international passenger transport is subject to constantly changing travel restrictions, and growth of passenger air transport is limited by entry restrictions. Compared to long haul international travel, recovery of domestic or regional air travel may take place sooner. CAL continues to follow developments in the pandemic and the effects of border control policies. In addition to enforcing air travel safety measures, CAL combines several strategies to meet operational challenges. These strategies include gaining access to relief programs, maintaining financial stability, creating flexibility in passenger route allocation, increasing cargo route revenues, and optimizing fleet size.

December 2020: CAL Introduced New 777F cargo aircrafts

> Taking off with hope at every departure.
>
> Bringing home memories at every arrival.
>
> With fortitude, we will meet again in the sky when the pandemic ends.

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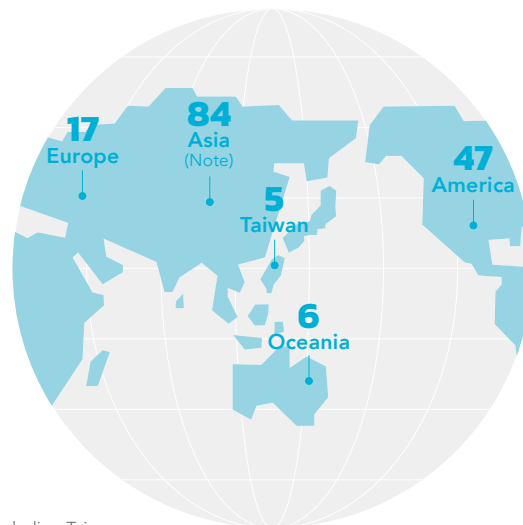
1-6 CAL's Sustainability Value

1-7 Achieving Sustainable Development Goals

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About
China Airlines

1-1-1 Business Overview `GRI 102-2, 102-3, 102-4, 102-6, 102-7`

China Airlines (2610) is the largest airline in Taiwan. Based in Taiwan Taoyuan International Airport, CAL mainly provides international passenger and cargo air transport services. CAL has two subsidiary airlines: Mandarin Airlines (serving domestic and regional markets) and Tigerair Taiwan (offering a low-cost business model). With a multi-brand strategy, members of the CAL Group share resources and complement one another's strengths and weaknesses to provide a variety of options for customers based on an established network. For more information on the business development of the fleet and route network, refer to CAL's Annual Report. Through codeshare agreements with other airlines, the CAL Group offered flights to / from 29 countries and 159 destinations worldwide, and Tigerair Taiwan served 22 destinations and 29 routes in 2020.

Number of Destinations

17 Europe

84 Asia (Note)

5 Taiwan

47 America

6 Oceania

Note: Excluding Taiwan

Destinations (including the CAL Group and code-shared routes)

Country	29	Destination	159

Note 1: Statistics as of December 31, 2020.
Note 2: The latest destinations please refer to the website.

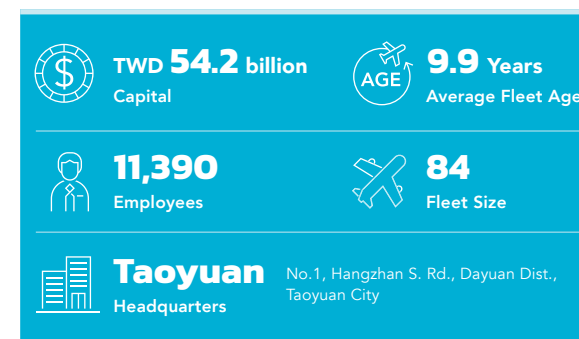### Passenger Load (including the CAL Group)

China	38.5%	Hong Kong	46.9%	Northeast Asia	61.9%
Southeast Asia	52.4%	Oceania	60.5%	Americas	54.3%
Europe	56.8%				

China Airlines

TWD **54.2** billion Capital	**9.9** Years Average Fleet Age
11,390 Employees	**84** Fleet Size
Taoyuan Headquarters	No.1, Hangzhan S. Rd., Dayuan Dist., Taoyuan City

Mandarin Airlines

TWD **2** billion Capital	**5.2** Years Average Fleet Age
951 Employees	**13** Fleet Size
Taipei Headquarters	No.3, Alley 123, Ln. 405, Dunhua N. Rd., Songshan Dist., Taipei City

Tigerair Taiwan

TWD **2.8** billion Capital	**5.7** Years Average Fleet Age
728 Employees	**11** Fleet Size
Taipei Headquarters	No.3, Alley 123, Ln. 405, Dunhua N. Rd., Songshan Dist., Taipei City

Note: For the latest operating fleet size and age, please refer to the CAL website.

CAL Group's Operational Achievements `GRI 201-1`

Countries across the world have implemented border controls, strict quarantine measures, and general restrictions in response to the impact of the COVID-19 pandemic in 2020. The number of passengers fell sharply 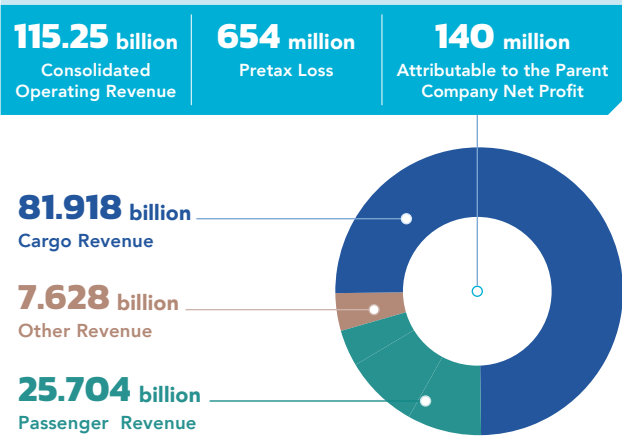and a significant number of flights was canceled. Due to the imbalance in supply and demand caused by the significant decrease in cargo capacity as a result of canceled passenger flights, CAL adapted to market changes by making full use of the 18 Boeing 747-400F cargo aircrafts and passenger aircraft belly capacity to increase revenue from cargo services. The consolidated operating revenue in 2020 amounted to TWD 115.25 billion including TWD 25.704 billion in passenger services, TWD 81.918 billion in cargo services, and TWD 7.628 billion in other revenues. The consolidated net profit amounted to TWD 2.184 billion and the consolidated net loss before tax amounted to TWD 654 million. The net profit attributable to the parent company amounted to TWD 140 million. Please refer to the financial performance in the Appendix for more information.

Operational Achievements (Unit: TWD)

115.25 billion Consolidated Operating Revenue

654 million Pretax Loss

140 million Attributable to the Parent Company Net Profit

81.918 billion Cargo Revenue

7.628 billion Other Revenue

25.704 billion Passenger Revenue

Consolidated Financial Statement (Unit: TWD billion)

Item	2017	2018	2019	2020
Passenger Revenue	102.22	108.35	111.41	25.704
Cargo Revenue	43.33	49.85	43.79	81.918
Other Revenue	10.57	12.52	13.24	7.628
Consolidated Operating Revenue	156.12	170.71	168.44	115.25
Pretax Profit	3.52	3.08	-0.097	-0.654

Individual Financial Statement (Unit: TWD billion)

Item	2017	2018	2019	2020
Operating Revenue	139.82	150.26	146.37	106.327
Operating Cost	121.85	137.62	135.01	95.19
Operating Expense	10.61	10.80	11.28	6.252
Income Tax Expense (Interest)	0.88	0.53	0.01	0.031
Salary Expenses	15.18	15.01	14.48	12.892
An Analysis of Employee Benefits Expense by Function	21.22	21.55	21.97	18.931
Post-employment Benefits	1.24	1.69	1.62	1.587

2020 Performance of International Passenger and Cargo Transport

Routes	Company	Number of Departures (Flight)	Passenger Transport					Cargo Transport				
			Passengers (Person)	Market Share (%)	Revenue Passenger Kilometers (RPK)	Available Seat Kilometers (ASK)	Passenger Load Factor (%)	Tonnage (Metric ton)	Market Share (%)	Freight Revenue Ton Kilometers (FRTK)	Freight Available Ton Kilometers (FATK)	Freight Load Factor (%)
International		45,030	2,259,563	43.6	7,917,306,253	14,406,859,540	55.0	1,538,770	68.0	6,386,281,321	8,970,650,170	71.2
		1,838	125,557	2.4	118,389,820	244,969,398	48.3	9,468	0.4	3,354,034	10,163,746	33.0
		3,262	345,045	6.7	606,005,445	1,037,051,426	58.4	4,046	0.2	7,670,561	11,977,768	64.0
	CAL Group	50,130	2,730,165	52.7	8,641,701,518	15,688,880,364	55.1	1,552,284	68.6	6,397,305,916	8,992,791,684	71.1

Routes	Company	Number of Departures (Flight)	Passenger Transport					Cargo Transport				
			Passengers (Person)	Market Share (%)	Revenue Passenger Kilometers (RPK)	Available Seat Kilometers (ASK)	Passenger Load Factor (%)	Tonnage (Metric ton)	Market Share (%)	Freight Revenue Ton Kilometers (FRTK)	Freight Available Ton Kilometers (FATK)	Freight Load Factor (%)
Domestic		26,379	1,728,809	34.3	724,398,680	969,062,493	74.8	12,022	28.6	1,518,672	11,059,615	13.7
Global	CAL Group	76,509	4,458,974	43.6	9,366,100,198	16,657,942,857	56.2	1,564,306	67.8	6,398,824,588	9,003,851,299	71.1

Source: "Civil Air Transport Statistics (Table 18 Overview of Global Passenger and Cargo Transport on Global Routes by Domestic Airlines)" by CAA of MOTC.

1–1–2 Analysis of Business Environment in the Aviation Industry

The airline industry connects the flow of people and the flow of goods around the world. There is a close correlation between growth and outlook of the global economy and growth of the airline industry. According to a report published by the International Air Transport Association (IATA) in November 2020, the civil air transport industry was severely impacted by the COVID-19 pandemic, and airlines worldwide expected the number of passengers to fall to 1.795 billion and the freight tonnage to fall to 54.2 million tons in 2020. As many as 46 million people could be at risk of losing their jobs in the airline industry. Close to US$536 billion in production value evaporated in the process. The total loss was projected at US$118.5 billion. Recovery of passenger transport to pre-pandemic level would be unlikely until after 2024. Hence, CAL performs the "Analysis of Business Environment in the Aviation Industry", and inspects regularly long term operational opportunities and risks to lay a solid foundation for sustainability. CAL also incorporates material issues relevant to its stakeholders into the CAL sustainable development strategies.

Global Airline Industry	2019	2020 Forecast	2020 Compared to 2019	
Production Value (US$100mn)	8,760	3,400	-5,360	-61.2%
Contribution to Global GDP (%)	1.0%	0.4%		-0.6ppt
Direct Job Opportunities (10,000 persons)	1,130	650	-480	-42.5%
Indirect Job Opportunities (10,000 persons)	7,770	3,650	-4,120	-53.0%
Job Opportunities in Aviation (10,000 persons)	8,900	4,300	-4,600	-51.7%
Passengers (persons)	45.43	17.95	-27.48	-60.5%
RPK (1,000bn km)	8.68	2.92	-5.76	-66.3%
Passenger Revenue (US$100mn)	6,120	1,910	-4,210	-68.8%
Freight Ton (10,000 ton)	6,130	5,420	-710	-11.6%
FRTK (100mn km)	2,540	2,250	-290	-11.4%
Freight Revenue (US$100mn)	1,024	1,177	+153	+14.9%
After-tax Earnings (US$100mn)	264	-1,185	-1,449	-5.48%

Source: IATA and AAPA.

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Business Opportunities

Focusing on Air Cargo Opportunities

As the COVID-19 spreads, the demand for medical and protective equipment is skyrocketing, and in turn drives the demand for stay-at-home economy and remote working / learning related products. It also creates opportunities in e-commerce and 5G. The demand for cargo services can be expected to hold steady the upward trend. It is generally agreed in the airline industry that the COVID-19 vaccine will become an opportunity to turn the air travel business around, and "pharmaceutical cold chain transport opportunities" will be a new area of interest. In response to upcoming market changes, airlines are actively strengthening their cargo operations. In addition to repurposing passenger aircrafts for cargo transport, domestic airlines are changing some passenger aircraft orders to 777F cargo aircrafts. CAL already has a large 747-400F cargo fleet with 18 aircrafts, and is going to bring in another 6 777F cargo aircrafts to increase its share of the cargo market.

Post-pandemic Reshuffling of the Airline Market

The top priorities for airlines in a pandemic are "fighting for survival against the virus", "giving full support to develop cargo services", and "building momentum for reopening". Consensus in the private sector does not expect the economy to return to the pre-pandemic level until 2024. Meanwhile, the pandemic has triggered a large wave of bankruptcies in the airline industry. The ongoing spread of the coronavirus is putting 5 million people in the global airline industry at risk of losing their jobs. Many airlines are trying to survive by cutting pays and implementing unpaid leaves, early retirement offers, and layoffs as they face dangerously low cash flows. Domestic airlines are modifying their business strategies and shifting resources to cargo services for optimal passenger-cargo allocation.

Taking Advantage of Geographic Location as a Hub

Taiwan is well situated as an air cargo hub in Asia Pacific. Cargo traffic through the Taoyuan International Airport over the last 10 years shows that on average a total of 2.1 million tons of cargo go through the airport every year. In particular, the 10-year high appeared in 2018 at 2.32 million tons. Except where it was affected by the US-China trade war in 2019, the import / export cargo volume has been consistent in the last 10 years. The import / export cargo volume is generally between 470,000 and 600,000 tons per year and the entrepot volume between 950,000 and 1.13 million tons per year. The ratio of import / export to entrepot volume per year is approximately 1:1:2, which suggests entrepot is a market where Taiwanese airlines actively compete with each other. CAL expects to continue to focus its resources on the Taoyuan International Airport (cargo over passenger) in order to ensure Taiwan's position as a competitive air cargo hub.

Fleet Renewal for Enhanced Operational Efficiency

CAL continues to complete sustainability oriented fleet renewal. For cargo aircrafts, 777F cargo aircrafts were brought in late 2020 as planned. According to the passenger fleet renewal plan, CAL intends to start introducing A321neo passenger aircrafts into the fleet to replace Boeing 737-800 passenger aircrafts in 2021. CAL is also considering introducing new regional wide-body passenger aircrafts to replace the A330-300 and 747-400 fleet. Furthermore, to provide better in-flight services and satisfy the demand for consistent travel products and to follow the direction of "less contact and going virtual" for in-flight entertainment in the post-pandemic era, CAL is campaigning for portable in-flight wireless streaming entertainment upgrade be installed in 737-800 cabins. CAL expects to start allowing travelers to use "their own mobile smart devices" onboard to connect to the in-flight system and enjoy in-flight entertainment in 2021. Moreover, there are plans to install the latest cabin seats and HD personal entertainment system on the A321neo narrow-body passenger aircrafts to be introduced in late 2021. These aircrafts will be equipped with the fastest wifi service in the business to provide a more entertaining, safe, and comfortable journey.

Business Risks

COVID-19 Creates an Uncertain Outlook for the Global Airline Industry

An IATA forecast sees pandemic losses sustained by the global airline industry reaching US$157.2 billion across 2020 and 2021. Global passenger air traffic will not return to the pre-pandemic level until 2024. It is estimated that revenue passenger kilometers (RPKs) fell by 66.3% and passenger revenue fell by 68.8% in 2020, while freight revenue ton kilometers (FRTKs) fell by 11.4% but cargo revenue rose by 14.9% in the same year. While COVID-19 vaccine research is starting to look promising and some countries have started vaccinating their populations, how long the vaccines can stay effective in the human body remains to be seen. The airline industry still faces massive challenges. According to an IATA forecast, RPKs will increase by 50.4% in 2021 (down by 49.4% compared to 2019) and passenger revenue by 50.3% (down by 53.1% compared to 2019); and FRTKs will increase by 12.9% (on par with 2019) and cargo revenue by 18.8% (up by 36.5% compared to 2019). IATA expects most airlines to remain cash negative until Q4 2021.

A Different Airline Industry in the New Post-pandemic Norm

Increased costs of fighting the virus means smaller profit margins. Hence, the airline industry will have to face structural changes. Before the pandemic, "business travelers" and "transfer opportunities" were the target markets for traditional airlines. The pandemic has had an impact on economics and trade, the employment market, and consumer confidence. Many companies are adopting a remote work model. As disposable income falls, both business travelers and leisure travelers will start to re-evaluate whether flying is still essential. Meanwhile, airlines face challenges in the form of cost reduction, demand for working capital, allocation of idle passenger capacity, air traffic rights, slot time, crew training, and aircraft airworthiness.

Boeing 737 MAX Returning to the Sky

After being grounded for nearly two years after two fatal crashes, Boeing 737 MAX was deemed to have met the safety standards and cleared by the civil aviation authority to return to the sky. American airlines were first to use Boeing 737 MAX to fly commercial flights again on December 29, 2020. According to statistics, Boeing 737 MAX caused Boeing to lose approximately US$20 billion (TWD 559.7 billion). Some companies encountered engine issues during the aircraft's return to the sky. Given the passenger transport demand swept away by COVID-19, the future remains unknown with challenges such as regaining traveler confidence, cutting production, laying off employees, delaying deliveries, and financial burdens.

1-2 Sustainability Vision and Strategy
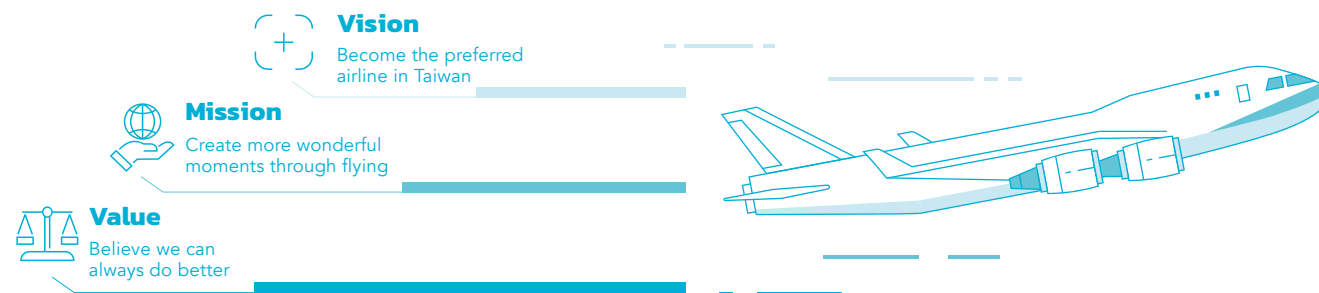
1-2-1 CAL's Sustainability Vision

The 17 UN's SDGs formally launched by CAL in 2016 follow the SDG Compass and related sustainability reports of the International Civil Aviation Organization (ICAO), the Air Transportation Action Group (ATAG), and the international transportation industry. CAL chose to focus on 9 SDGs that established the direction of CAL's sustainability efforts. This is a way for CAL to achieve sustainability and promise to create stakeholder value.

9 Sustainable Development Goals Focused from CAL

Economic / Governance
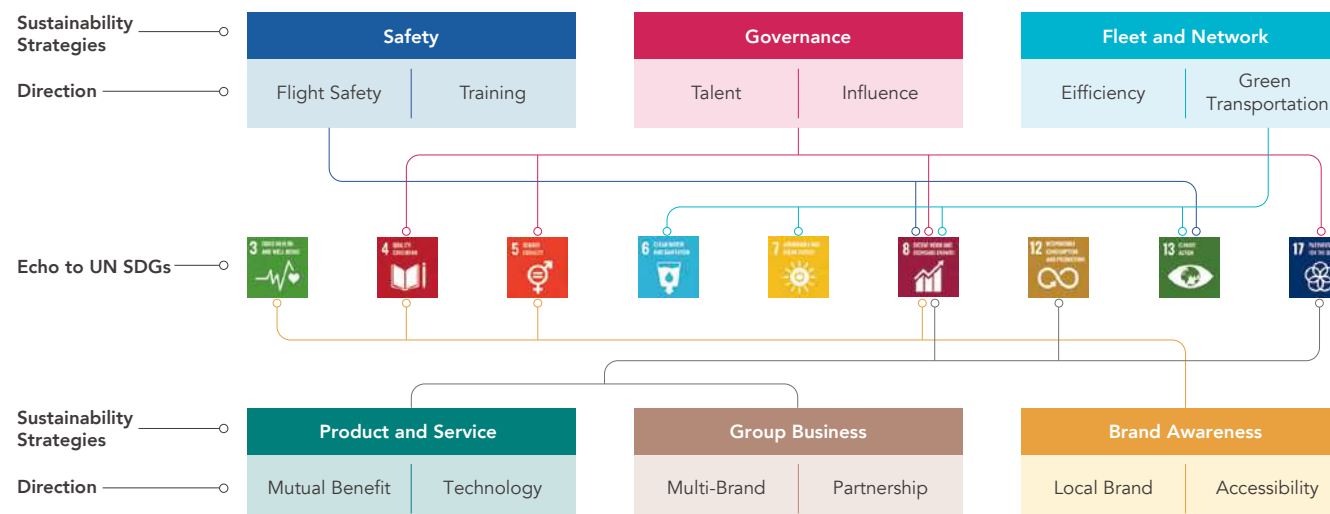
Social

Environmental

1-2-2 Sustainability Strategy

CAL aims to "Become the preferred airline in Taiwan" and embraces the mission to "Create more wonderful moments through flying". We adopted "Safety" and "Governance" as the basis for sustainable development and incorporated our main strategies of "Fleet and Network", "Products and Services", and "Group Business" to continue to enhance CAL's "Brand Awareness" in the minds of customers. We initiated three action plans to enhance the brand image including "Smart Resilience: resilient operations to combat extreme weather and changes in the business environment", "Localized Global Operations: taking Taiwan's local culture to the world", and "Youth Innovation: connect with the innovative generation with youthful thinking". The action plans reflect our lasting commitment to environmental, social, and economic / governance. The six sustainability strategies also support the UN's SDGs and we establish implementation strategies to create a strategic framework for sustainable development.

Vision
Become the preferred airline in Taiwan

Mission
Create more wonderful moments through flying

Value
Believe we can always do better

Sustainability Strategy Framework

Sustainability Strategies	Safety		Governance		Fleet and Network	
Direction	Flight Safety	Training	Talent	Influence	Eifficiency	Green Transportation

Echo to UN SDGs

Sustainability Strategies	Product and Service		Group Business		Brand Awareness	
Direction	Mutual Benefit	Technology	Multi-Brand	Partnership	Local Brand	Accessibility

1-3 Governance Framework

GRI 102-5, 102-10, 102-18

Board of Directors

As the highest governing organization at CAL, the Board of Directors is responsible for supervising, resolving on crucial issues, and guiding management, in addition to formulating and complying with policies and rules, in accordance with both laws and regulations, and with the powers granted by the shareholders' meetings. The composition of the Board of Directors is diverse; it is based on talent, regardless of gender, nationality, or race. A total of eleven directors have been elected to the 21st term Board of Directors, including three independent directors, two of whom are female, with good qualities and expertise or experience in management of international companies. The tenure of the 21st term Board of Directors is three years (from June 27, 2018 to June 26, 2021). CAL convenes Board meetings at least five times every year and may convene extraordinary meetings for important or urgent business needs. Moreover, the China Aviation Development Foundation appointed Shing-Hwang Kao as CAL director of the Board on March 11, 2021; therefore, the number of directors of the 21st Board increased to 12 directors with effect from the aforesaid date.

As of 2020, shareholders holding more than 5% of CAL's shares are as follows:

Major Shareholder	Contributions to Taiwan	Percentage of Shares Held
China Aviation Development Foundation	Striving for the development of Taiwan's aviation business, national traffic construction, research, and event promotion	34.45%
National Development Fund, Executive Yuan	Accelerating industrial innovation, economic transformation, and national development	9.59%

Note: For experience / education, concurrent posts, expertise, field of experience, compliance of independence, and the operations of the Board of Directors, please refer to the CAL's Annual Report.

Functional Committees of the Board

The Board of Directors has three functional committees: the Remuneration Committee, Audit Committee, and Risk Management Committee. These help the Board of Directors with its supervision and guidance when meetings are convened; in accordance with the respective organizational regulations adopted by the Board of Directors, these committees exercise the powers granted them by law to review and discuss relevant issues, then regularly submit their conclusions and recommendations to the Board of Directors for resolution. Based on the powers specified in the CAL's Remuneration Committee Charter, the Remuneration Committee periodically reviews performance evaluations and remuneration policies, systems, standards, and structures for directors and managerial officers.

Functional Committees

Audit Committee

Frequency of Meetings: At least once every quarter

Composed of all independent directors and is responsible for helping the Board of Directors perform its duties, including supervision of fair presentation of CAL's financial statements, selection (dismissal), independence and performance of CPAs, implementation of internal controls, and compliance with corporate laws and regulations, as well as other statutory tasks.

Remuneration Committee

Frequency of Meetings: At least twice every year

The committee regularly reviews the overall benefit and compensation policy for directors and executives. It also conducts board performance evaluation once a year. In addition, it has a qualified external independent institution or external expert team conduct the evaluation once every three years (last time being in 2020). CAL increases the long term value of the management team to the company through performance evaluation and remuneration systems. The approach creates a sound corporate governance system, and helps CAL achieve sustainability goals.

CAL's Remuneration Committee Charter

Note: Please refer to the CAL's Annual Report for director and executive remuneration.

Risk Management Committee

Frequency of Meetings: Once every quarter

Responsible for helping the Board of Directors review the establishment, implementation, and countermeasures of CAL's overall strategy for risk management in terms of finance, economy, and flight safety.

General Audit Office

To enforce corporate sustainability, the General Audit Office is responsible for auditing the corporate governance system to prevent fraudulent activities and corruption. The results of audits are continually followed and required to be corrected by the given time limit. The audited cases in 2020 are summarized below by category. All of the cases have been corrected and reported to the General Audit Office for approval.

Audited Cases in 2020

Type of Cases	Number of Cases Audited	Number of Comments	Number of Corrections
Head Office	17	116	116
Branch	13	81	81
Subsidiary	12	73	73
Transaction in Derivative Products	12	None, all complying with regulations	-
Procedures for Lending Funds and Making Endorsements / Guarantees	4	None, all complying with regulations	-

Every year, the General Audit Office compiles an "overall evaluation" based on self assessments performed by individual departments and improvement of errors and irregularities identified in the annual audits. The overall evaluation is used to verify the effectiveness of the internal control system, and provides the basis for the "Declaration of the Internal Control System", which will be submitted to the board of directors for review. The General Audit Office has also established a whistle-blowing mechanism to report fraudulent activities and unethical conduct. If it is found that an employee of CAL or its affiliates is misusing his / her position to take bribes or behave in violation of his / her duties for the purpose of obtaining unlawful benefits for himself / herself or others, thereby causing losses to CAL's property or reputation, an employee or an external partner (e.g., a supplier) is encouraged to report this matter through the management mechanism or through the independent mailbox (auditor@china-airlines.com) published on the website (Stakeholder Contact-Business Conduct) and in the Annual Report (Corporate Governance Report-Corporate Governance).

Corporate Governance Framework
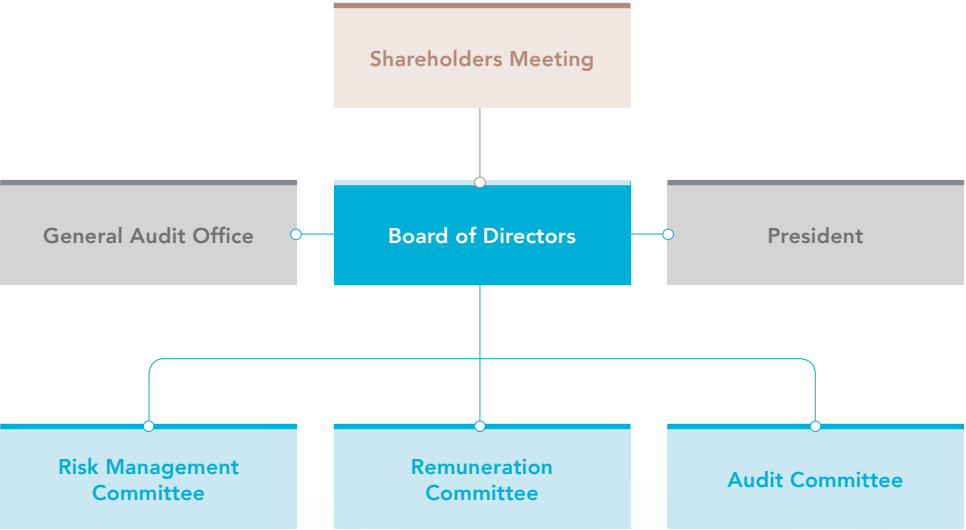
1-4 Sustainability Management Structure
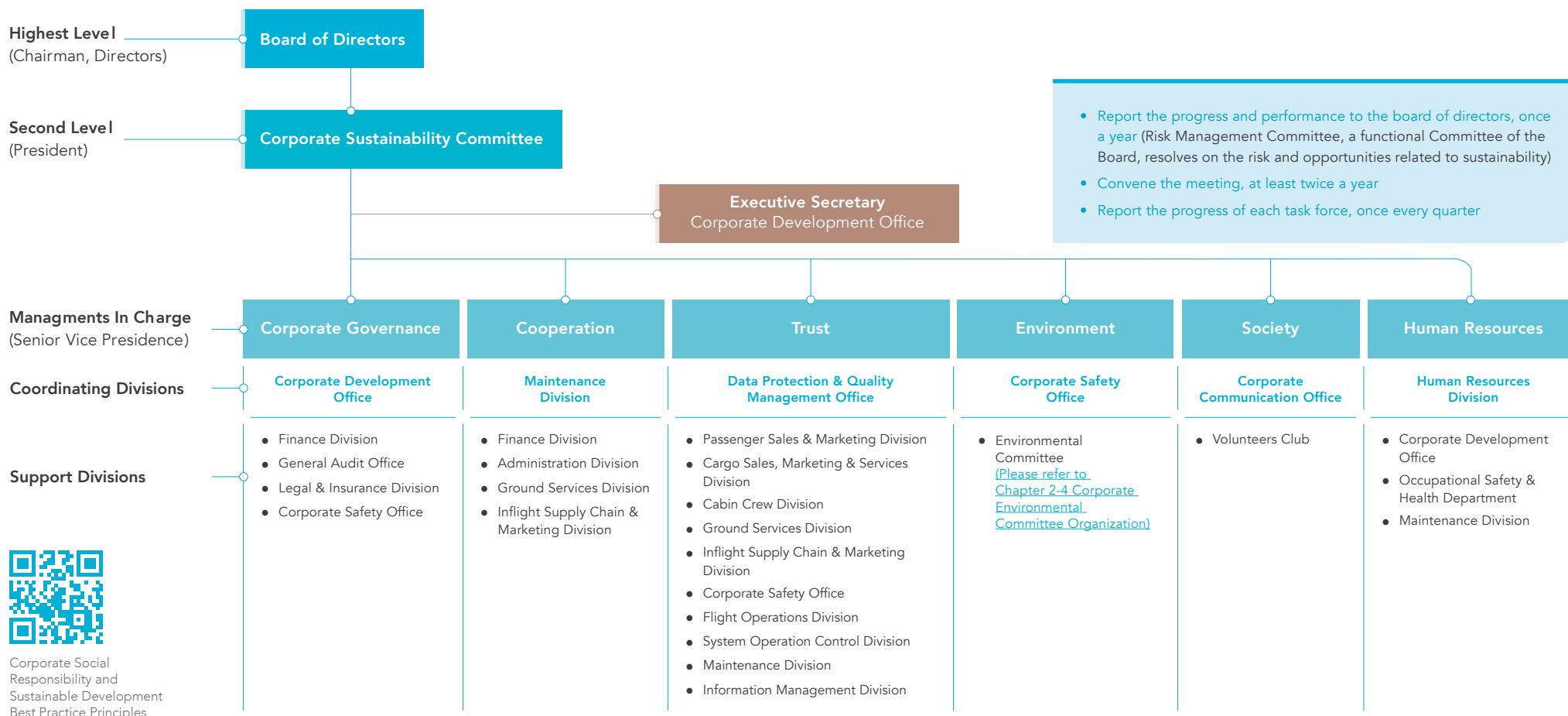
1-4-1 Corporate Sustainability Committee

Under the challenging and rapid changing environment with the growing trend regarding sustainability, CAL followed the international trend of sustainability and referred to the experience from the benchmarking companies based on its mission and sense of duty for the sustainable development of the Company to establish its Corporate Sustainability Committee in 2014, the highest governing body of sustainability promotion, and set the Corporate Social Responsibility and Sustainable Development Best Practice Principles. The Corporate Sustainability Committee comprises six task forces which are responsible for setting and implementing sustainable development goals to enforce the sustainable development. It also presents the CSR performance to the Board of Directors once every year to continue to strengthen the connection between the Corporate Sustainability Committee and the Board of Directors and improve sustainability actions.

Corporate Sustainability Committee

Highest Level (Chairman, Directors) → **Board of Directors**

Second Level (President) → **Corporate Sustainability Committee**

Executive Secretary Corporate Development Office

- Report the progress and performance to the board of directors, once a year (Risk Management Committee, a functional Committee of the Board, resolves on the risk and opportunities related to sustainability)
- Convene the meeting, at least twice a year
- Report the progress of each task force, once every quarter

Managments In Charge (Senior Vice Presidence)

Corporate Governance	Cooperation	Trust	Environment	Society	Human Resources
Coordinating Divisions					
Corporate Development Office	Maintenance Division	Data Protection & Quality Management Office	Corporate Safety Office	Corporate Communication Office	Human Resources Division
Support Divisions					
• Finance Division • General Audit Office • Legal & Insurance Division • Corporate Safety Office	• Finance Division • Administration Division • Ground Services Division • Inflight Supply Chain & Marketing Division	• Passenger Sales & Marketing Division • Cargo Sales, Marketing & Services Division • Cabin Crew Division • Ground Services Division • Inflight Supply Chain & Marketing Division • Corporate Safety Office • Flight Operations Division • System Operation Control Division • Maintenance Division • Information Management Division	• Environmental Committee (Please refer to Chapter 2-4 Corporate Environmental Committee Organization)	• Volunteers Club	• Corporate Development Office • Occupational Safety & Health Department • Maintenance Division

Corporate Social Responsibility and Sustainable Development Best Practice Principles

1-5

Materiality Analysis and Stakeholder Engagement

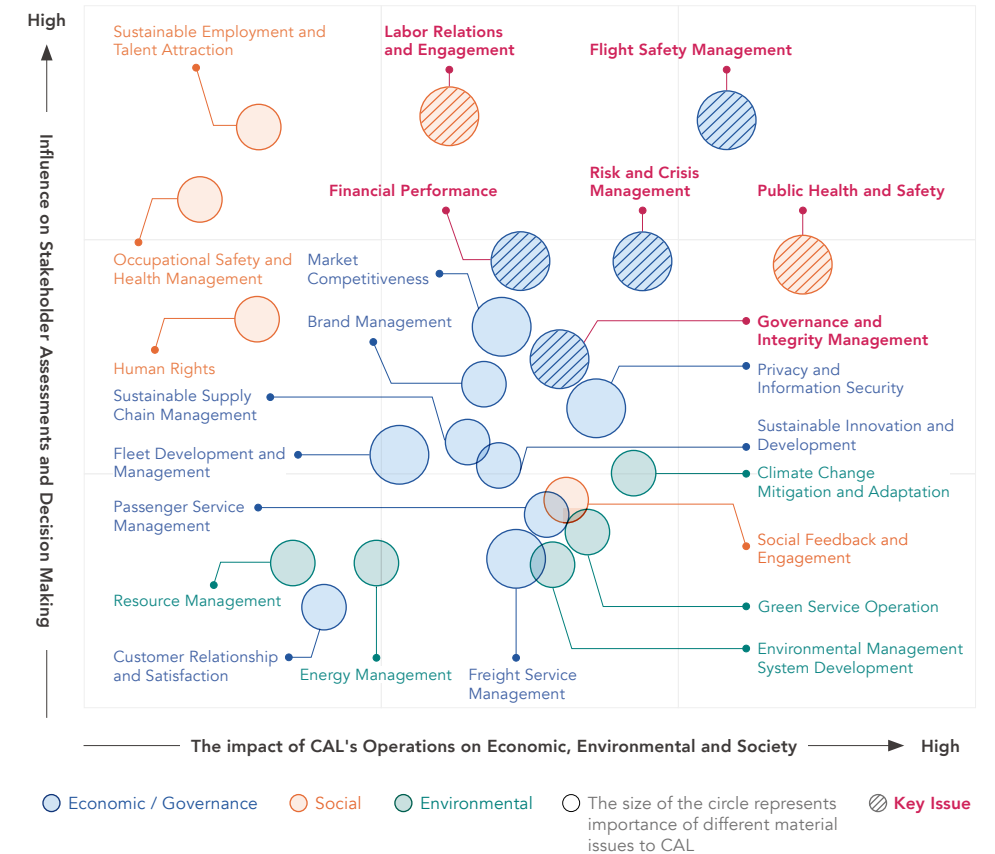|		
Step 1	**Stakeholder Identification**	CAL identified eight stakeholders, namely employee, customer, investor, government, partner, community, media, and association in accordance with the five principles set in AA1000 Stakeholder Engagement Standard (SES). However, the focus turned to internal investigation in 2020 due to the pandemic. Members of the CAL Corporate Sustainability Committee conducted the overall evaluation of material issues in and outside CAL.
Step 2	**Review and Identification**	Based on the results of the 2019 materiality analysis, and after reviewing the effects of the coronavirus on sustainability and the airline industry and emerging trends in 2020, CAL identified 24 material issues, including the newly added issue Public Health and Safety.
Step 3	**Evaluation and Prioritization**	Once the material issues were established, CAL proceeded to conduct a biennial materiality survey. The previous survey took place in early 2019, when 307 questionnaires were completed. The next materiality survey was scheduled for early 2021, but, given the massive impact of the pandemic on the airline industry in 2020, the questionnaires were completed instead by 43 members of an internal sustainability team. The adjustment was intended to avoid distortion of materiality. The 43 members of the sustainability team assessed the importance of different material issues to CAL, the influence on stakeholder assessment and decision making, and the impact of CAL's operations on economic, environmental and society. Scores were tallied separately in the three aspects. CAL then ranked the issues based on the result from the 43 valid questionnaires returned, and generated the 2020 materiality matrix.
Step 4	**Validation and Response**	The results of the CAL material issues investigation were ultimately resolved by the Corporate Sustainability Committee, the highest governing organization of corporate sustainability, in 2020. The material issues relevant to the stakeholders are disclosed in the Report and on CAL's CSR website. CSR Website

1-5-1 Materiality Analysis   GRI 102-46, 102-47, 103-1

CAL identified eight stakeholders in accordance with the five major principles defined in the AA1000 Stakeholder Engagement Standard (SES), then established the following procedures for materiality analysis based on the reporting principles of the GRI Standards (stakeholder inclusiveness, sustainability context, materiality and completeness) to identify material issues of stakeholders' primary concern. Different channels of communication are also established to respond to stakeholders' needs and expectations.

2020 China Airlines Materiality Matrix

Economic / Governance   Social   Environmental   The size of the circle represents importance of different material issues to CAL   Key Issue

Note 1: COVID-19 has sent shock waves throughout the globe, and the airline industry is also severely affected. Stakeholders will be paying more attention to how we respond to the pandemic. Therefore, "public health and safety" is added as a new topic this year. Employee feedback in the company also indicates that it is a vital issue to CAL.

Note 2: CAL identified, assessed, and adjusted the rankings of material issues in terms of the three aspects according to the GRI Standards. On the x-axis was the impact of CAL's operations on economic, environmental, and social; on the y-axis was the influence on stakeholder assessment and decision making; and on the z-axis was the importance of different material issues to CAL. Following the rankings in the materiality analysis, CAL listed 6 key issues, 13 important issues, and 5 issues of concern. The 24 material issues were put on the materiality matrix with key issues labeled in red.

Importance of and Changes in Material Issues for 2020

Rankings of Material Issues	Material Issues	Category	Changes in the Ranking of the Level of Concern	Importance to CAL
1	● Public Health and Safety	☆	*New*	As COVID-19 spread across the globe, public health and safety measures against the virus before, during, and after transportation are attracting a lot of attention. All passengers, ground crew, air crew and other service personnel must be equipped with adequate protective equipment and measures and correct knowledge of the virus in order to work together to keep the virus at bay
2	● Flight Safety Management	☆	▼	Zero flight safety accidents form the basis for creating sustainable customer value
3	● Risk and Crisis Management	☆	—	Risk management plays a key role in our sustainable development. Faced with ever-increasing categories of risk, CAL is committed to reducing risks and improving our resilience to crises
4	● Financial Performance	☆	▲	The pursuit of profit through operating and financial performance is the foundation of our stable operations
5	● Labor Relations and Engagement	☆	—	Maintaining harmonious labor-management relations is a priority for Company. CAL is committed to strengthening diversified communication with employees and creating an equal and friendly work environment
6	● Governance and Integrity Management	☆	▼	A robust corporate governance framework and sound ethical corporate management are fundamental to corporate sustainability
7	● Market Competitiveness	⚠	▲	Faced with an ever-changing aviation industry and the emergence of new airlines, CAL optimizes our route network, develops potential markets and customers, and makes good use of group resources to stay competitive
8	● Privacy and Information Security	⚠	▼	With the popularization of information systems, and in order to comply with domestic and foreign information security laws and regulations, CAL continuously improves our information security governance system and protection capabilities, and prioritizes information security control in daily business operations. The protection of personal data and customer privacy is closely tied to our reputation and customer trust
9	● Brand Management	⚠	▼	Brand management provides a direction for execution. Increased brand awareness can lead to identification with a brand, trust, loyalty, and ultimately a driver of consumer decision making that form a positive cycle
10	● Climate Change Mitigation and Adaptation	⚠	▼	As global climate change and energy consumption become ever-more pressing concerns, CAL fully fulfills our environmental protection responsibilities and obligations by actively participating in and responding to environmental protection initiatives at home and abroad and reducing environmental impacts. CAL implements continuous improvement in order to be constantly enhancing climate risk and opportunity identification, quantification, and management while strengthening our carbon management and climate resilience
11	● Passenger Service Management	⚠	▼	CAL aims to provide quality products and services, to meet passengers' needs and become the preferred airlines in Taiwan
12	● Fleet Development and Management	⚠	▼	CAL continuously strengthens fleet quality and introduces environmentally-friendly models, to build an efficient worldwide air transport network and provide more comfortable and safer travel experiences for passengers

Rankings of Material Issues	Material Issues	Category	Changes in the Ranking of the Level of Concern	Importance to CAL
13	● Sustainable Employment and Talent Attraction	⚠	▲	CAL establishes a sound training system and structure to attract and train aviation professionals; we value the development of employee competency in order to promote sustainable employment
14	● Occupational Safety and Health Management	⚠	▼	CAL aims to provide a safe and healthy workplace, promote a variety of health promotion activities, and reduce both occupational accident rates and construction risks to improve employee cohesion
15	● Sustainable Innovation and Development	⚠	▲	We continue to innovate in products and services, and provide value creation capabilities to meet customer demand for technological services
16	● Freight Service Management	⚠	▲	We optimize freight services through price differentiation and special cargo delivery, in order to provide quality freight services for customers
17	● Sustainable Supply Chain Management	⚠	▼	CAL strengthens sustainable value for the overall supply chain by managing our upstream and downstream suppliers
18	● Green Service Operation	⚠	▲	With the increased awareness of green consumption, CAL reduces waste and derived processing costs by promoting green consumption and optimizing service processes while investing to improve service efficiency
19	● Human Rights	⚠	▼	We ensure the completeness of our human rights policies, in order to comply with international trends in human rights and to protect human rights
20	● Social Feedback and Engagement	🔍	▲	CAL gives back to society, to create social value as part of our commitment to corporate sustainability
21	● Environmental Management System Development	🔍	▼	We use a lifecycle model to monitor every process in our organization, construct a complete corporate environmental management system, and improve our environmental governance policy and quality of risk management. We are also committed to improving operational efficiency
22	● Energy Management	🔍	▼	We continue to move toward low-carbon operations by focusing on energy conservation and energy efficiency management
23	● Customer Relationship and Satisfaction	🔍	▼	Customer trust and satisfaction are the most important driving force for CAL's continued growth. Providing professional service is our commitment to customers
24	● Resource Management	🔍	▼	"Cost effective, improved efficiency, and zero waste" is followed as a rule. We monitor the operational environment and processes at all stations at all times in order to keep optimizing the corporate environment and energy management and ensure effective allocation and utilization of resources

● Economic / Governance　● Social　● Environmental　☆ Key Issues　⚠ Important Issues　🔍 Issues of Concern　**New** New Issue　▲ Rise　▼ Decline　— Constant

Material Issues Corresponded to GRI Standards

Material Issues (Sorted by the level of concern for each ESG aspects)	Corresponding to GRI Topic-Specific Standards	Boundary						Corresponding Chapter / Section
		Internal (Note)			External			
		CAL	Mandarin Airlines	Tigerair Taiwan	Government	Customers	Partner	
● Flight Safety Management	GRI 404 Training and Education	●	●	●	○	○		2-1 Trust
● Risk and Crisis Management	GRI 102 General Disclosures: 1. Organizational Profile 2. Strategy	●			○			0-1 About the Report 0-2 Letter from Management 3-2 Risk Management
● Financial Performance	GRI 201 Economic Performance	●	●	●	○	○	▲	1-1 About China Airlines Appendix Financial Performance
● Governance and Integrity ● Market Competitiveness	GRI 102 General Disclosures: 3. Ethics and integrity 4. Governance GRI 205 Anti-corruption GRI 206 Anti-competitive Behavior	●			●	○	▲	1-3 Governance Framework 3-1 Ethical corporate management Appendix GRI Content Index
	GRI 415 Public Policy	●			●			
● Privacy and Information Security	GRI 418 Customer Privacy	●			●	●		2-1-4 Information Security Management 2-1-5 Privacy Management
● Brand Management	GRI 102 General Disclosures: 1. Organizational Profile	●			○	○	○	1-2 Sustainability Vision and Strategy 2-1 Trust 2-4 Environment 2-5 Society
● Passenger Service Management	-	●			○	○	○	2-1 Trust
● Fleet Development and Management	GRI 102 General Disclosures: 1. Organizational Profile 2. Strategy	●			○			1-1 About China Airlines
● Sustainable Innovation and Development	-	●			○	○	○	2-1 Trust
● Freight Service Management	-	●			○	○	○	2-1 Trust
● Sustainable Supply Chain Management	GRI 204 Procurement Practices GRI 308 Supplier Environmental Assessment GRI 414 Supplier Social Assessment	●					▲	2-3 Cooperation
● Customer Relationship and Satisfaction	GRI 102 General Disclosures	●			●	○	▲	2-1-2 Passenger Service Appendix Customer Satisfaction Table in 2020

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Contents

Material Issues (Sorted by the level of concern for each ESG aspects)	Corresponding to GRI Topic-Specific Standards	Boundary						Corresponding Chapter / Section
		Internal (Note)			External			
		CAL	Mandarin Airlines	Tigerair Taiwan	Government	Customers	Partner	
● Public Health and Safety	GRI 403 Occupational Health and Safety	●	●	●	○	●	○	COVID-19 Special Column
● Labor Relations and Engagement	GRI 401 Employment / GRI 402 Labor / Management Relations	●	●	●	○	○		2-2 Human Resources
	GRI 407 Freedom of Association and Collective Bargaining	●	●		○			2-3 Cooperation
● Sustainable Employment and Talent Attraction	GRI 202 Market Presence	●	●	●		●		2-2 Human Resources
	GRI 404 Training and Education	●	●	●		○		
	GRI 405 Diversity and Equal Opportunity	●	●	●				
	GRI 406 Non-discrimination / GRI 408 Child Labor / GRI 409 Forced or Compulsory Labor	●	●	●	●			2-2 Human Resources / Appendix GRI Content Index
● Occupational Safety and Health Management	GRI 403 Occupational Health and Safety	●	●	●	○			2-2 Human Resources
● Human Rights	GRI 412 Human Rights Assessment	●						2-2 Human Resources
● Social Feedback and Engagement	GRI 201 Economic Performance	●	●	●	○	●		2-5 Society
● Climate Change Mitigation and Adaptation	GRI 305 Emissions	●	●	●	○	○	▲	
● Green Service Operations	-		●	●		○	○	▲
● Environmental Management System Development	GRI 307 Environmental Compliance	●	●	●	●	○	▲	2-4 Environment / Appendix GRI Content Index
● Energy Management	GRI 302 Energy	●			●	○	▲	
● Resource Management	GRI 306 Waste	●			●	○	▲	
	GRI 303 Water and Effluents	●			●	○	▲	
	GRI 301 Materials	●			●	○		

● Direct Influence   ○ Indirect Influence   ▲ Business Influence

Note: The boundary of the Report mainly focuses on CAL. Only some related performance data of Mandarin Airlines and Tigerair Taiwan are disclosed.

永續華航
SUSTAINABILITY WE CARE

Contents

1–5–2 Stakeholder Engagement

GRI 102-40, 102-42, 102-43, 102-44

CAL identified eight major stakeholders including Employees, customers, investors, government, partners (suppliers and contractors), community, media and associations (including aviation organizations). To understand our stakeholders' needs and expectations, we have established relevant, unimpeded communication channels and platforms based on stakeholders' attributes and needs. We also report to the Board of Directors in the first quarter of each year, to disclose details of communications with stakeholders, including key points and frequency of communication.

1 Daily		**1Y** Every year	
31 Monthly		**3Y** Every 3 year	
60 Every 2 month		On demand	
90 Every 3 month		As needed	
6M Every 6 month		**R** Regular	
1/2Y Half a year			

Note: Public health and safety was the issue that attracted most attention from the world and CAL in 2020. It is also one of the most important material issues in the 2020 CAL report. Hence, the issue has been added besides issues of concern to highlight a key area of engagement between CAL and its stakeholders.

Employees

We view our employees as our most valuable assets. CAL has improved and optimized working conditions and the working environment to establish a safe and growing workplace. CAL is dedicated to maintaining harmonious labor-management relations through unimpeded communication channels, thus creating a win-win situation

Topics of Concern

- Public Health and Safety
- Flight Safety Management
- Risk and Crisis Management
- Labor Relations and Engagement

Communication Channel and Frequency

60 90 1. Labor-management meetings

2. Labor unions

3. Employee suggestion boxes

4. Employee feedback website

5. China Airlines newsletter

6. China Airlines Retirees Portal

Key Points of Communication

- Employment and retention of employees
- Employee development, rights and interests, healthy and safe workplace

Communication Results

The employee satisfaction survey is carried out once every two years. In 2019, the employee satisfaction rate was 6.4 (score out of 10)

Given COVID-19 is an extraordinary circumstance, the survey is postponed to 2022 to avoid distortion

Corresponding Chapter Section

2-2 Human Resources

Highlight of Communication Results

Given the impact of COVID-19 in 2020, CAL and the union engaged in negotiations, and both agreed to meet the challenges together. The two sides reached a consensus to cut pay and hours between May and July and to reduce full pay by 25% for Level 1 managers, 20% for Levels 2 and 3 managers, and 15% for other regular employees. The goal was to avoid layoffs by cutting pay and hours

Customers

Customers are our main source of revenue. CAL listens to customers and protects their rights and interests in order to meet customers' expectations

Topics of Concern

- Public Health and Safety
- Flight Safety Management
- Passenger Services Management
- Privacy and Information Security

Communication Channel and Frequency

1. Customer satisfaction survey

1Y 2. Global business meetings

1/2Y 3. Taiwan business meetings

4. Discussions with travel agencies

5. CAL's website, CSR website, Facebook / Instagram, e-mail, and text message

6. Customer service hotline

7. Corporate customer visits

Key Points of Communication

- Customer Relations Management
- Protecting customers' rights and interests: privacy, food safety, and in- light drinking water quality
- Providing an integrated flight update platform during COVID-19

Communication Results

- Passenger satisfaction rate was 88.6%
- Cargo satisfaction rate was 88.5%
- Maintenance factory satisfaction rate was 8.57 (score out of 10)

Corresponding Chapter Section

2-1 Trust

Highlight of Communication Results

CAL provides on its website the "COVID-19 Information Services" to give travelers an integrated information platform

COVID-19 Information Services

Investors

Regardless of amount, all investors are contributors to CAL. CAL treats all investors equally, and makes the information available to each investor as consistent as possible

Topics of Concern
- Public Health and Safety
- Flight Safety Management
- Financial Performance
- Risk and Crisis Management

Communication Channel and Frequency
1Y 1. Shareholders meeting
2. Shareholder's hotline / mailbox
3Y 3. Road shows
4. Interviews

Key Points of Communication
- Operating results
- Flight safety and passenger transport
- Risk management model

Communication Results
Continues to announce and respond with operation-related results according to laws, regulations, and investors' demand

Corresponding Chapter Section
1-3 Governance Framework   2-1 Trust

Highlight of Communication Results
- CAL held the 2020 shareholders meeting on June 23. During the meeting, shareholders raised questions and made suggestions regarding the reasonableness of director remuneration for 2019, plans for the new fleet, and the company's manpower allocation and countermeasures against the impact of COVID-19. All questions were answered and clarified by the chairman or designated staff. Please refer to the 2020 shareholders meeting minutes for details
- CAL was invited to road shows hosted by securities dealers on August 26 and December 1 in 2020. CAL presented an overview of the company's business and the impact of COVID-19 and the company's countermeasures. Please refer to the first and the second road show presentations in 2020 for details

Government

CAL is Taiwan's largest civilian airline. Supervised by the Ministry of Transportation and Communications, the China Aviation Development Foundation is the largest shareholder of CAL and has influence on CAL's operations

Topics of Concern
- Public Health and Safety
- Flight Safety Management
- Risk and Crisis Management
- Climate Change Mitigation and Adaptation

Communication Channel and Frequency
1. Missives
2. Visits
3. Participation in projects
4. Participation in public hearings, seminars, or negotiation forums
5. Organization of or participation in business seminars and audits
6. Participation in initiatives
7. Audits

Key Points of Communication
- Communication and implementation of relevant laws and regulations
- Sharing of important industry information
- Supporting campaigns for business development, establishment, and research activities in civil aviation

Communication Results
- Selected as the top 6%-20% of the excellent corporation award in the sixth Corporate Governance Review
- Selected for the Taiwan High Compensation 100 Index and the Taiwan Employment Creation 99 Index
- Discussed flight safety issues and exchanged information in through seminars to improve flight safety

Corresponding Chapter Section
1-3 Governance Framework   2-1 Trust   2-4 Environment

Highlight of Communication Results
- In 2020, CAL, CADF, and CAA of MOTC co-organized the Aviation Security Risk Management Seminar
- In 2020, CAL co-organized two flight safety management conferences cohosted by CADF and CAA of MOTC
- Attended three CAA meetings on review of carbon offsetting and reduction plans and training
- Participated in the EPA Carbon Label Program.
- CAL received both carbon label and carbon reduction label
- Completed ICAO CORSIA monitoring, reporting and verification (MRV)

Partners (Suppliers and Contractors)

Service provided by suppliers and contractors is one of the key factors for CAL to provide services that satisfy customers

Topics of Concern
- Public Health and Safety
- Flight Safety Management
- Financial Performance
- Governance and Business Integrity

Communication Channel and Frequency
1. Telephone
2. E-mail
3. Coordination meetings
4. Business visits
6M 5. Site inspections

Key Points of Communication
- Sustainable Supply Chain Management

Communication Results
The score of sustainability risk surveys averaged 88.59 in 2020, higher than CAL's target. In addition, a general supplier meeting was held at the end of the year

Corresponding Chapter Section
2-1 Trust   2-3 Cooperation

Highlight of Communication Results
A general supplier meeting was held in December 2020. A total of 44 representatives of 33 suppliers attended the event. It served to raise sustainability awareness and knowledge among suppliers, and helped suppliers gain a better standing of CAL's sustainability philosophy

A General Supplier Meeting was Held in December 2020

Community

Social support is the key to our success. As an economic entity in society, CAL continuously contributes to the economy while fulfilling our corporate social responsibilities

Topics of Concern

- Public Health and Safety
- Governance and Business Integrity
- Flight Safety Management
- Brand Management

Communication Channel and Frequency

1. Charity events
2. Community activities
3. News releases
4. Online mailbox

Key Points of Communication

- Support for social development
- Assumption of social responsibility
- Creating a Sustainable Society

Communication Results

A total of 355,459 individuals benefited in 2020

Corresponding Chapter Section

2-1 Trust   2-2 Human Resources

Highlight of Communication Results

Responding to international relief efforts during the pandemic, CAL organized charter transport for medical supplies, and transported 2,278 cases weighing a total of 73,343kg Furthermore, CAL helped transporting expats in regions more affected by the COVID-19 back to Taiwan. A total of 9 charter flights benefited 1,224 people

Media

Media reports and comments on CAL affect CAL's reputation and image

Topics of Concern

- Public Health and Safety
- Flight Safety Management
- Labor Relations and Engagement
- Passenger Services Management

Communication Channel and Frequency

1. News releases
2. Press conferences
3. Interviews
4. Active communication of industry information

Key Points of Communication

Collection of issues of stakeholders' concern and promotion of transparent communication

Communication Results

Released 118 announcements (including press releases, statements, revenue reports, and news announcements) in 2020

Corresponding Chapter Section

2-1 Trust   2-2 Human Resources

Highlight of Communication Results

CAL was first to implement health measures and create a designated section to make public announcements at the beginning of the pandemic. Other airlines and government agencies followed and also created designated sections later

Associations
(including Aviation Organizations)

CAL participates in association, international organization, and aviation alliance meetings and seminars, to exchange opinions and get an early grasp on changes to aviation- related laws and regulations, thus ensuring compliance of our business activities

Topics of Concern

- Public Health and Safety
- Labor Relations and Engagement
- Safety and Health Management
- Governance and Busines Integrity

Communication Channel and Frequency

1. Participation in project meetings
2. Participation in work seminars
3. Organizing or participating in summits, executive summits, committees, and coordination meetings
4. Participation in government - convened meetings
5. Telephone, e-mail, and exchange platforms

Key Points of Communication

- Collection of trends at home and abroad and promotion of business operations
- Coordination of business relationships and promotion of mutual benefits
- Improvement of flight safety through discussions on safety issues,information exchange, and sharing security management experience

Communication Results

In 2020, CAL participated in meetings and projects, including 26 project meetings on environmental issues, organized by international organizations and aviation alliances such as IATA,SkyTeam, AAPA, and TAA to strengthen cooperation with airlines at home and abroad

Corresponding Chapter Section

2-1 Trust   2-4 Environment

Highlight of Communication Results

- Stayed in close contact with aviation alliances on flight safety and health topics during the COVID-19 pandemic in order to ensure effective safety management and health measures
- Engaged TAA on September 3, 2020 in the request for MOTC to extend airline relief programs and received positive support
- Worked with relevant member airlines within selected aviation organizations, such as AAPA and SkyTeam in reaching consensus on reducing monthly membership fees in response to the COVID-19

1–5–3 Initiatives and Memberships

GRI 102-12, 102-13

CAL actively participates in business development, corporate sustainability, environmental and other specialized initiatives and organizations in the airline industry. Despite the COVID-19 pandemic, CAL invested TWD 33.25 million to participate in initiatives (95% or TWD 31.59 million in business development for the airline industry and the other 5% or TWD 1.66 million in corporate sustainability, and environmental and other specialized initiatives) in 2020. The total amount invested fell by TWD 23 million compared to 2019. The decrease is primarily attributed to external organizations and associations reducing membership fees in response to the coronavirus' massive impact on revenue in the airline industry.

External Initiatives

2017 – 2020

Buckingham Palace Declaration
At the 73rd IATA Annual General Meeting in June 2017, CAL signed the Buckingham Palace Declaration against illegal wildlife trafficking. CAL has worked with 61 or more other airlines to stamp out the transport of illegal wildlife in conformity with the UN's SDGs.

2016 – 2020

The Dow Jones SustainabilityIndices (DJSI)
Since 2015, CAL has taken the initiative to respond to the Dow Jones Sustainability Indices (DJSI) questionnaire, disclosing our management objectives, strategies and practices in terms of the environment, society, and the economy / governance. In 2020, CAL was selected for the DJSI Emerging Markets for the fifth consecutive year and ranked third among the world's airlines. CAL was the only airline in Taiwan that was selected for the index.

2012 – 2020

Pacific Greenhouse Gases Measurement (PGGM)
Since 2012, CAL has participated in the PGGM by installing the In-service Aircraft for a Global Observing System (IAGOS) in its aircraft cabins to collect trans-Pacific high-altitude gas data for global warming and climate studies conducted by science agencies around the world. As of December 31, 2020, CAL has collected high-altitude gas data from 12,810 flights.

2012 – 2020

Carbon Disclosure Project CDP
Aside from being Taiwan's first service provider to independently review greenhouse gas emissions generated from its operations, CAL also stands as Taiwan's first carrier to respond to the CDP questionnaire. Since 2012, CAL has conducted greenhouse gas inventory training and surveys of greenhouse gas emissions for its affiliates on a regular basis and disclosed its climate governance, strategies, risk and opportunity management, indicators and goals, greenhouse gas emissions, and reduction management and performance. CAL is recognized as a benchmark enterprise. In the future, CAL will review and improve carbon management strategies through participation and feedback. In 2021, CAL received a management level from CDP for climate risk management in 2020.

2008 – 2020

Earth Hour
CAL started supporting the event in 2008, and extended participation to CAL value chain partners in 2020. In addition to taking real action, CAL uses advertising to call attention to the effects of global warming and climate change.

2018 – 2020

Task Force on Climate-Related Financial Disclosures (TCFD)
CAL became Taiwan's first airline to publicly sign and adopt the Task Force on Climate-Related Financial Disclosures (TCFD) in 2018. CAL works actively to make TCFD part of the company's management system. In 2019, CAL assisted in completing translation of TCFD to Traditional Chinese, and participated in several industry / government / academic campaigns to promote it. In January 2021, CAL went on to publish an independent TCFD. Results of management internalization are presented through press releases and social media.

Memberships

Airline Development

AAPA

Association of Asia Pacific Airlines (AAPA)
Founding Member

Role and Participation

As a founding member of the AAPA, CAL worked with member airlines, leveraging the AAPA platform on advocacy related to the aviation industry in the Asia Pacific region.

Contributions and Benefits

- Participating in the global aviation industry's discussions regarding ICAO CORSIA, environmental protection, improvements in sustainable fuel efficiency, development of biofuels, consumer rights, and competent authorities' latest regulations.

- In 2020, AAPA worked with international aviation organizations to urge governments to adopt standard health measures against the coronavirus and make preparations for reopening industries.

SkyTeam

SkyTeam
Alliance Board and Executive Board Member

Role and Participation

CAL became the fifteenth member of SkyTeam on September 28, 2011, and was the first airline in Taiwan that joined one of the global airline alliance.

Contributions and Benefits

- SkyTeam helps CAL expand its global network. Cooperation with other member airlines enables CAL to connect Taiwan and major destinations around the world.

- In response to traveler's expectation related to hygiene and safety on air travel triggered by the COVID-19 pandemic in 2020, CAL participated in SkyCare & Protect. A joint effort with all SkyTeam members on collective health measures to keep travel safe.

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SUSTAINABILITY WE CARE

Contents

IATA

International Air Transport Association (IATA)

Member of Sustainability and Environment Advisory Council, Cargo Advisory Council, CSR Working Group, CORSIA Working Group, and Air Cargo Carbon Footprint, and observer of IAAC (Industry Affairs Advisory Council).

Role and Participation

CAL kept in close touch with IATA headquarters and IATA North Asia and participated in meetings, industry committees and task forces; and served as a member of Sustainability and Environment Advisory Council, was involved in environmental discussions relevant to international civil aviation, and supports research and studies of related environmental subjects.

Contributions and Benefits

• Assisting the Executive Committee under IATA plan, supervise and implement the policies and strategies for environmental management and sustainable development of the global aviation industry.

• Participating in the making of technical specifications of ICAO CORSIA and policies pertaining to sustainable aviation fuels and promoting industry training.

• Keeping updated with progress of international carbon control and sustainable aviation fuels and providing information for national legislation.

FSFT

Flight Safety Foundation - Taiwan (FSFT)

Managing Director, Technical Regulation Committee - Convener, Educational Training Committee - Convener

Role and Participation

CAL serves as the managing director and the conveners of the FSFT's Technical Regulation and Educational Training Team, to participate in governance decision-making, establish government-industry-university-institute cooperation mechanism to promote international regulations studying, strategic research and engagement related to international aviation safety and environmental sustainability.

Contributions and Benefits

CAL is responsible for promoting and establishing mechanisms for collecting and studying laws and regulations, educational promotion related to international aviation safety and environmental sustainability, and for giving advice on amendments or countermeasures for improving national legislation and aviation industry competitiveness.

Corporate Sustainability

TAA

Taipei Airlines Association (TAA)

Director

Role and Participation

CAL is one of the founding members of TAA. Established in March 1990, TAA acts as an advisor and coordinator who connects the government and the industry. CAL participates in annual general meetings, as well as director, supervisory board meetings. CAL also participate in regular activities organized by TAA, including but not limited to government meetings, implementation of government policies etc.

Contributions and Benefits

• Listing the airline industry's needs during the pandemic to urge TAA to lobby for more relief programs.

• Participating in regulatory forums and helped TAA get involved in 3 Ministry of Labor workshops. Making recommendations for future regulatory reviews.

• Helped TAA devise plans to develop a healthier airline industry in 2020, and proposed system and regulatory reform.

AAPT

Association of Atmosphere Protection in Taiwan (AAPT)

Executive Director

Role and Participation

CAL participates in the decision-making of organizational management, and promote the strategic engagement of the government-industry-university-institute in response to the issues of global atmospheric protection and climate change.

Contributions and Benefits

CAL helped facilitate the communication between the industry, the government, and the academia about policies, laws, academic research, technology research and development, counseling, and services pertaining to atmosphere protection in Taiwan.

CCS

Center for Corporate Sustainability (CCS)

Advisory Director

Role and Participation

CAL acted as one of the advisory directors. CAL participated in CCS training and operation, and, depending on CCS training topics, served as a speaker to promote the company's sustainability efforts. CAL also participated in a series of training courses on corporate sustainable competitiveness and seminars on the corporate sustainability report and related issues organized by CCS to improve its knowledge of industrial practice and latest trends.

Contributions and Benefits

The Advisory Council is the highest decision-making organization of the Center for Corporate Sustainability. Becoming a member and acting as a director of the Center for Corporate Sustainability allowed CAL to be aware of latest laws and regulations, policy review, technical regulations, and standards for sustainability and to have influence.

1-6
CAL's Sustainability Value

Contents

COVID-19 Special Column

Building Momentum for Reopening of Cargo / Passenger Transport — Combination Strategies

In 2020, countries implemented lockdown and quarantine measures that caused a large number of passenger flight cancellations and in turn a sharp decline in revenue. In addition to working closely with the health authority to implement health management procedures, CAL adopted a combination of operational counterstrategies:

Calling for Relief Programs

The government announced a new bill that provided relief measures applicable to aviation industries. The measures included reduced stopover and landing fees, health supply allowances and subsidies, and guaranteed loans. CAL continued to apply for these measures to ease the burden on the business.

Maintaining Financial Stability

CAL executed adjustments of the administrative management and sales budgets, and cut nonurgent capital expenditures to keep tight control of cash flows. CAL also implemented flexible leaves to allocate human resources and save on labor costs. CAL had been accessing lines of credit since February 2020 in order to ensure ready access to cash.

Making Passenger Flight Changes as Needed

Depending on the quarantine and border measures in different countries, CAL changed and combined flights while continuing flights to key destinations. New and resuming flights were postponed to summer 2021. Capacity was allocated as needed to carry cargo and mail in the belly of passenger aircrafts as a means to increase revenue.
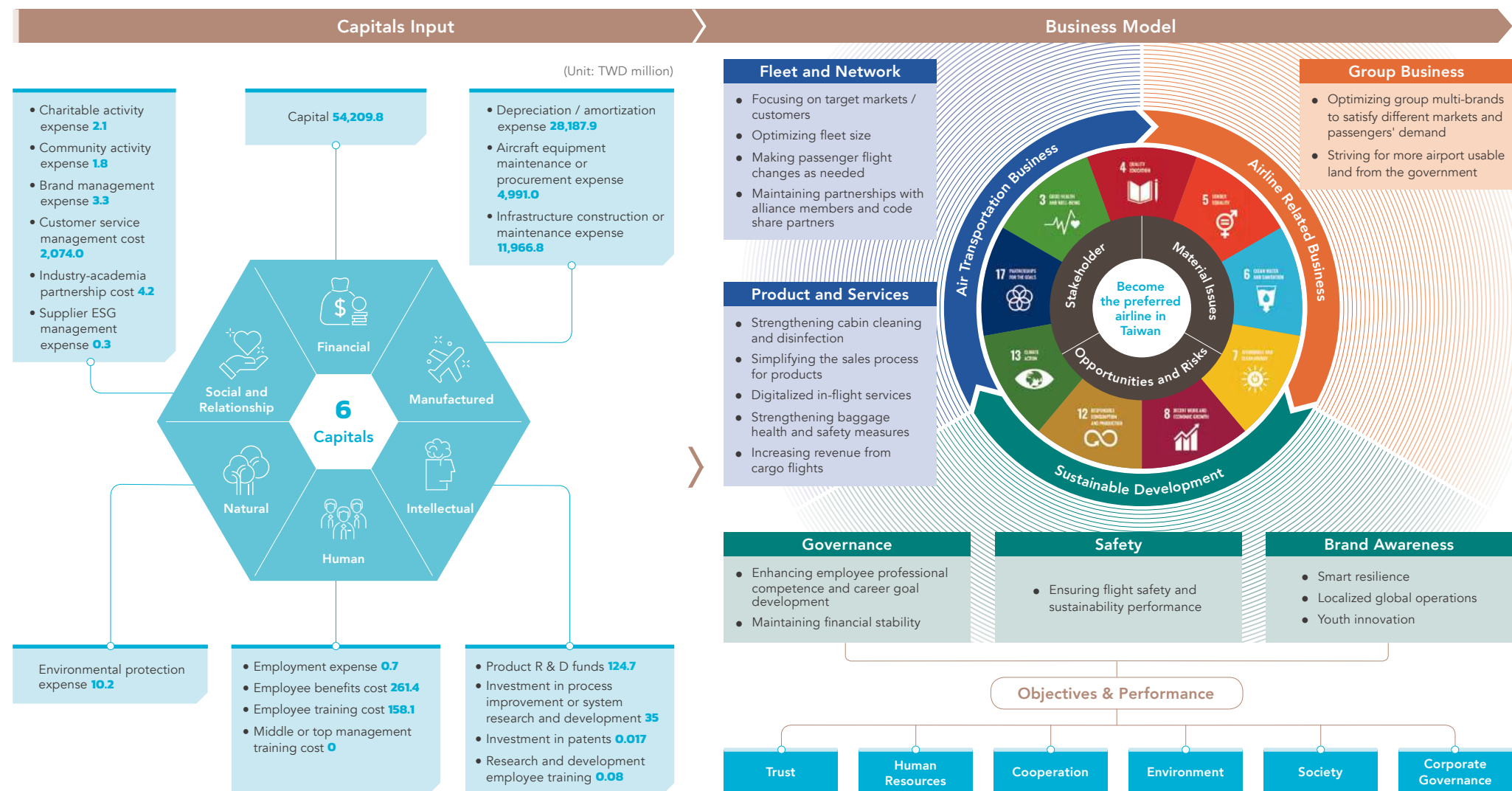
Increasing Revenue from Cargo Flights

CAL started carrying cargo on some passenger flights again in March 2020 in support of transport of global relief and medical emergency supplies. Capacity of cargo flights was raised and utilized fully to carry more and increase unit revenues from cargo.

Optimizing Fleet Size

747-400 passenger aircrafts were retired early due to the coronavirus in order to lower the operating costs further and achieve a better fleet size. The number of aircrafts was 12% smaller and the number of seats 11% smaller compared to 2019. The fleet size was modified as needed with ongoing replacement of old aircrafts with new ones to achieve optimized operations. CAL tried to reinvigorate aircraft assets by leasing out one previously stored 747-400F aircraft to generate cash inflows. In addition, CAL continues with end-of-life 737-800 aircraft sales and A330-300 sale-leasebacks.

永續華航
SUSTAINABILITY WE CARE

1-6-1 Business Model and Value Creation

Capitals Input

Business Model

(Unit: TWD million)

- Charitable activity expense **2.1**
- Community activity expense **1.8**
- Brand management expense **3.3**
- Customer service management cost **2,074.0**
- Industry-academia partnership cost **4.2**
- Supplier ESG management expense **0.3**

Capital **54,209.8**

- Depreciation / amortization expense **28,187.9**
- Aircraft equipment maintenance or procurement expense **4,991.0**
- Infrastructure construction or maintenance expense **11,966.8**

6 Capitals
- Financial
- Manufactured
- Intellectual
- Human
- Natural
- Social and Relationship

Environmental protection expense **10.2**

- Employment expense **0.7**
- Employee benefits cost **261.4**
- Employee training cost **158.1**
- Middle or top management training cost **0**

- Product R & D funds **124.7**
- Investment in process improvement or system research and development **35**
- Investment in patents **0.017**
- Research and development employee training **0.08**

Fleet and Network
- Focusing on target markets / customers
- Optimizing fleet size
- Making passenger flight changes as needed
- Maintaining partnerships with alliance members and code share partners

Group Business
- Optimizing group multi-brands to satisfy different markets and passengers' demand
- Striving for more airport usable land from the government

Product and Services
- Strengthening cabin cleaning and disinfection
- Simplifying the sales process for products
- Digitalized in-flight services
- Strengthening baggage health and safety measures
- Increasing revenue from cargo flights

Air Transportation Business

Airline Related Business

Stakeholder — Material Issues

Become the preferred airline in Taiwan

Opportunities and Risks

Sustainable Development

Governance
- Enhancing employee professional competence and career goal development
- Maintaining financial stability

Safety
- Ensuring flight safety and sustainability performance

Brand Awareness
- Smart resilience
- Localized global operations
- Youth innovation

Objectives & Performance

Trust	Human Resources	Cooperation	Environment	Society	Corporate Governance

Correction

Correction of Data on Page 17 of the 2019 CSR Report
(Unit: TWD million)

- Customer service management cost: 6,952.5
- Capital: 54,209.8
- Depreciation / amortization expense: 29,564.6

Six Sustainability Strategies

Governance — Root sustainable concept in value chain to make positive influence

Safety — Embed the safety culture into products and services

Brand Awareness — Promote local brand and transportation friendly

Fleet and Network — Promote highly efficient fleets and network to forward environmental friendliness

Product and Services — Create sustainable services with sustainable value and technology

Group Business — Spread sustainability to group business to improve cooperation and sustainable development

Business Model

Six Sustainability Strategies

Action Plan

Contents

Value Creation

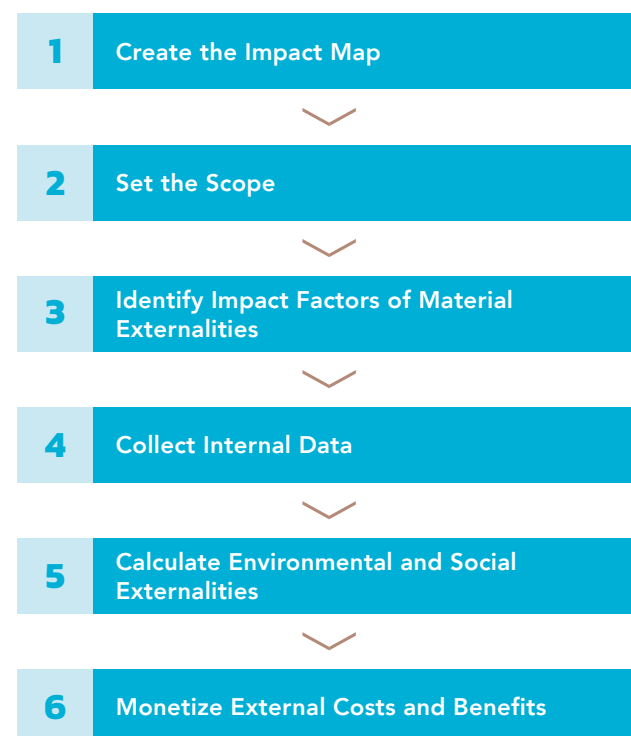|	Output	Outcome	Corresponding Chapter
Financial	Operating revenue: TWD 106,327 million	Revenue reduced by 27% compared to 2019, the EBITA rate decreased by 0.06% compared to 2019	• 1-1 About China Airlines (P.14)
Manufactured	• Punctuality rate of high-level repair and maintenance service 100% • Number of incidents causing casualties or flight crashes: 0 • Number of existing destinations (including new ones): 77 passenger destinations / 36 cargo destinations • Number of passengers / cargo worldwide: 8,038 (million passenger-kilometers) / 6,365 (million ton-kilometers)	• Achieved the target punctuality rate of high-level repair and maintenance service (100%) • Promote a safety culture based on the spirit of "safety awareness, full participation, active management, and implementation" to achieve zero safety incidents • No new passenger / cargo destinations in 2020 • Compared to 2019, global passenger transport decreased by 81.1% while cargo transport increased by 18.68%	• 1-1 About China Airlines (P.14) • 2-1 Trust (P.40)
Intellectual	• Revenue / number of passengers (seats) created by improved products or services: 7,809 • Number of cost-saving patents: 92 • Number of patents obtained: 1 • Number of R&D employees trained: 159	• Improved quality of cabin equipment and optimized quality of audio-visual programs and system stability on A330 • A321neo cabin and equipment design • The "portable onboard wireless streaming media" provided by the 738 fleet • Manpower saved 23.8 man-month / year • Saved TWD 6 million in cost • CAL's intellectual property rights were continuously maintained • The skills of information employees were enhanced in response to the development of or updates to information systems	• 2-1 Trust (P.40) • 2-2 Human Resources (P.59)
Human	• Number of new employees: 208 • New hire / recruitment retention rate in 2020: 51.92% • Retention rate of employees hired before 2020: 99.05% • Employee turnover: 6.83% • Total number of employee training hours: 34 • Total number of middle or top management training hours: Not implemented due to COVID-19	• Cost of employment decreased by 8.4% compared to 2019 • Compared to 2019, the retention rate of employees hired before 2020 increased by 2.47% • Compared to 2019, the voluntary turnover dropped by 102 persons • Related training was organized based on the needs of business operations • Middle or top management training: Not implemented due to COVID-19	• 2-2 Human Resources (P.59)
Natural	• Electricity consumption: 34,522.647 kWh • Carbon reduction: 5,808,373.976 tons • Waste reduction: 1,936,675 kg • Water consumption: 126.77 thousand tons • Number and percentage of green buildings: 2 / 66.67% • Solar photo voltaic investment: Power generated: 117,000 kWh	• Electricity saved through a sound energy management system: 254,407 kWh • Carbon emission reductions achieved through various carbon reduction measures: 48,888 tons • Waste reduction achieved through improved waste management: 107,023 kg • Water saved through continuous water management: 3,164 tons • Elevator power recycled with power regeneration system: 1,177 kWh • Power saved in 2020: 117,000 kWh	• 2-4 Environment (P.82)
Social and Relationship	• Number of charitable activities: 6 • Number of beneficiaries: 25,398 • Number of community activities: 34 • Number of participants: 650 • Number of sponsorships: 11 • Result of brand promotion: TWD 0.7 million • Passenger transport customer satisfaction rate: 88.6 • Number of passenger transport customer complaints: 729 • Freight customer satisfaction rate: 88.6 • Number of cargo customer complaints: 1 • Number of industry-academia partnerships: 22 • Number of industry-academia partnership projects: 5 • Number of participants: 110 • Coverage of sustainable supply chain management: 81.1% • Number / proportion of suppliers under sustainability audit: 26.15%	• Actively use existing resources, take part in charity events, support transportation improvements in remote areas, provide disadvantaged groups with equal benefits and opportunities in society, and create prosperity and happiness with society • CAL has always been committed to enhancing the internationalization of local education. We use our knowledge and skills in the aviation industry, visits by college students at the Company, and education by volunteers in remote areas to help young students learn about corporate culture and facilitate diverse development of children's education in remote areas. • CAL faced the challenges of the COVID-19 pandemic and used its aviation resources to transport medical supplies. We also supported the revitalization of tourism activities in Taiwan and supported athletes to improve the visibility of local brands. We generated operating profits of TWD 2,373,333 in the process. • CAL responded to the issues during the epidemic and engaged different groups in our communication campaigns to improve brand image and communicate the professionalism and trustworthiness of the brand. We developed three brand image short videos including the "National Air Team", "Let love overcome all the distances", and the "Stay Home GIF video". The promotional activities have supported our employees, inspired cohesion, and motivated people as we used this opportunity to improve our brand image. • Compared to 2019, the overall passenger satisfaction rate increased by 0.8 points • The COVID-19 pandemic has affected the balance of supply and demand and cargo services in the air cargo transportation market. Customer satisfaction for cargo services declined slightly as they were confronted with freight and cargo services that were different from what they had experienced. • Cargo services in various stations have been affected due to the impact of the epidemic on manpower resources and we could not meet customer expectations. • The purpose of industry-academia partnerships was to develop national aviation professionals • The coverage of sustainable supply chain management reduces 9.96% in 2021 compared to 2020 • The number / proportion of suppliers under sustainability audit in 2021 is the same as 2020	• 2-1 Trust (P.40) • 2-2 Human Resources (P.59) • 2-3 Cooperation (P.76) • 2-5 Society (P.106)

1-6-2 True Value of China Airlines

In order to embrace mutual prosperity along with our stakeholders and endeavoring to create sustainable value for all stakeholders, CAL has integrated six forms of capital (financial, natural, manufactured, intellectual, human, and social) to its corporate vision and strategy, introducing the concepts of true value to monetize the environmental and of social externality's costs and benefits. This true value is viewed as an important reference point for corporate sustainability, and it helps all stakeholders understand the Company's sustainability performance.

True Value

According to the results, CAL's traditional financial performance (EBITA) was reduced by 0.06% to TWD 28.35 billion in 2020 compared to 2019 due to the impact of the COVID-19 pandemic. The true earnings generated in economic, environmental, and social aspects came to around TWD 27.07 billion in 2020, reflecting a decrease of TWD 1.28 billion and TWD 2.37 billion compared to EBITA and true earnings in 2019 respectively due to the positive benefits created by the respective increases of 15% and 8% in "Renewable energy usage" and "Green fares." In line with the characteristics of the aviation industry, "Greenhouse gas (GHG) emissions" and "Noise pollution" were the main sources of external costs. The negative benefits of GHG emissions and noise pollution were reduced by 2% and 34% respectively in 2020 from 2019, showing CAL's active engagement in environmental sustainability initiatives such as "GHG reduction," "Noise pollution," "Renewable energy usage," and "Green fares." In CAL's true earnings in 2020, environmental external costs totaled TWD 16.1 billion, and positive benefits created by additional economic value and social externalities totaled TWD 14.8 billion.

Procedures for Assessing True Value

1 Create the Impact Map

2 Set the Scope

3 Identify Impact Factors of Material Externalities

4 Collect Internal Data

5 Calculate Environmental and Social Externalities

6 Monetize External Costs and Benefits

True Value of China Airlines

(Unit: TWD thousand)

Earning (EBITA): 28,358,999

⊕ 14,822,277

⊕ 1,330

⊖ 16,141,928

⊕ 39,724

⊖ 1,449

True Earning Decrease 2.37 billion

Decrease 1.28 billion

2020 True Earning: 27,078,954

2019 True Earning: 28,377,290 / 29,457,853

Economic Value-Add
⊕
- Employee expenditure and benefits
- Public expenditure
- Green procurement

Environmental Externalities
⊕
- Renewable energy usage
- Water recycling
- Waste recycling
- Green fares

⊖
- GHG emissions
- Air pollution & emissions
- Water resource consumption
- Noise pollution
- Waste treatment

Social Externalities
⊕
- Employee training
- Cooperative education

⊖
- Occupational injuries

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Achieving Sustainable Development Goals

Contents

Sustainable Development Goals for Six Value Task Forces

Task Force Corresponding SDGs	Corresponding Material Issues	2020 Objectives	Illustration of Progress	Key Results and Performance	Plan for Improvement	Short-term Goals (2023)	Medium-term Goals (2025)	Long-term Goals (2030)
Corporate Governance	• Governance and Integrity Management • Risk and Crisis Management • Financial Performance • Brand Management • Fleet Development and Management	Achieving 100% of sustainability tasks for the year and establishing the employee awareness improvement plan		1. Provided employee CSR awareness training 2. Conducted one sustainability vision training session for the affiliates to raise CSR awareness A total of 5,140 people received the training	Providing ongoing employee CSR training	Achieving 100% of sustainability tasks for the year and carrying out the employee awareness improvement plan	Regularly reporting progress on CSR tasks to the Corporate Sustainability Committee and holding at least two CSR training sessions for affiliates	Disclosing sustainable development of airline transport affiliates
		Implementing operating mechanisms for SDGs		1. Reviewed SDGs for each task force on a rolling basis 2. The Corporate Sustainability Committee reviewed the progress of each task force every year 3. The task forces delivered status reports on a quarterly basis	Enforcing operating mechanisms for SDGs on an ongoing basis	Implementing operating mechanisms for SDGs	Assisting industry partners in building up capacity for sustainable development	Supporting global sustainability initiatives to expand the industry influence
Society	• Social Feedback and Engagement	Increasing proportion of sponsorship for charity events		38% sponsorships in 2020 involved charities as part of the commitment to the wellbeing of local disadvantaged groups and to supporting better transportation in rural areas	Combining industry resources to opportunities for disadvantaged groups or rural residents to ride the plane or learn about aviation equipment and related knowledge	Planning long-term charity projects	Developing opportunities for students to receive international education	Improving the quality of education in underdeveloped areas / developing countries
		Organizing at least one long-term social welfare project		The COVID-19 pandemic this year affected the overall aviation market. Due to operational and pandemic prevention considerations, this project could not be implemented. In response to international support initiatives for the global pandemic, CAL supported the central government and used its core resources to provide multiple flights for the transportation medical supplies and charter flights for the repatriation of citizens living in regions more affected by the coronavirus	Investing business resources and taking advantage of CAL's business strengths to help local brands gain international exposure	Regularly participating in charity activities that improve the international visibility of Taiwan	Promoting economic growth and employment assistance in underdeveloped areas / developing countries; and improving social well-being	Enhancing the benefits of sponsorships

Task Force Corresponding SDGs	Corresponding Material Issues	2020 Objectives	Illustration of Progress	Key Results and Performance	Plan for Improvement	Short-term Goals (2023)	Medium-term Goals (2025)	Long-term Goals (2030)
Trust SDG 3, 4, 8, 13, 17	● Public Health and Safety ● Flight Safety Management ● Passenger Service Management ● Freight Service Management ● Privacy and Information Security ● Sustainable Innovation and Development ● Market Competitiveness ● Customer Relationship and Satisfaction	Implementing personal data management systems in accordance with GDPR and personal data protection laws		1. Created a personal information management system 2. Conducted personal data inventory and personal data risk assessments 3. Encouraged all employees to complete personal data training 4. Created a personal information audit system 5. Organized a personal data management review meeting	Planning the introduction of international standards into personal data protection	Implementing personal data management systems, in accordance with GDPR and personal data protection laws	Receiving ISO27701 Privacy Information Management certification in the collection, processing, and use of personal data in the Passenger Service Management Procedure (including Taiwan and EU headquarters)	Maintaining validity of ISO27701 Privacy Information Management certificate, and keeping a score of 90 or higher in the DJSI personal data protection criteria
		Increasing the Cargo customer satisfaction rate to 88%		The Cargo service customer satisfaction was 88.5% in 2020	Continuing to update and upgrade the Cargo system	Cargo service customer satisfaction		
						88%	89%	90%
		Introducing robotic process automation (RPA) to optimize internal operating procedures and customer service mechanisms; installing Chat Bots		1. Introduced robotic process automation and related applications 2. Organized general RPA training courses 3. Installed a customer service bot to answer questions	1. Promoting installation of RPA applications in CAL sales departments to increase depth and width of application services 2. Securing development of core business application systems and infrastructures, and launching innovative application services as needed	Continuing to secure development of core business application systems and launch innovative application services as needed in order to increase revenue and reduce costs for the company and enable more efficient routines	Promoting smart airports: Establishing a smart airport at Terminal 3 of Taiwan Taoyuan International Airport; and improving customer satisfaction through digital innovation initiatives	Promoting smart tourism: Achieving horizontal and vertical integration of tourism-related industries to provide a one-stop smart travel eco-system
		Continuously participating in aviation organizations and increasing influence		To reduce the infection risk at gatherings, aviation associations suspended all meetings this year	Continuing participation in aviation associations to increase CAL's influence in these associations	Performing aviation data study and analysis for future release	Publishing aviation study results to improve aviation industry technical capacity	Developing innovation initiatives with other airlines to drive innovation momentum
		Strengthening the promotion of just culture		CAL completed the triennial all-hands safety management system (SMS) training, and conducted an all-hands safety culture questionnaire. A total of 11,403 people completed the training	The results of the 2020 all-hands safety culture questionnaire will be provide a basis for the 2021 safety culture campaign.	Enhancing the SMS performance review mechanisms	Strengthening the safety culture	Continuously enhancing SMS
Human Resources SDG 4, 5, 8	● Labor Relations and Engagement ● Human Rights ● Sustainable Employment and Talent Attraction ● Occupational Safety and Health Management	Organizing eight insider sharing sessions to provide an opportunity for internal cross disciplinary networking		Completed eight insider sharing sessions (on topics including cargo / passenger transport, international alliances, aviation administration, and ground services). A total of 755 people attended the events	Continuing to hold the events and explore different topics	Organizing eight insider sharing sessions to provide an opportunity for internal cross disciplinary networking	Completing the establishment of all internal online training materials in various professional fields	Application to Taiwan's aviation talent development
		Establishing CAL's aviation management talent pool		Completed building talent pools for different levels of management (including a master talent pool, management training courses, and advanced management courses), and modifying related training mechanisms to develop talent for the company over the long term and lay the foundation for passing on knowledge and experience	Working with trends in the airline industry and the demand for talen management, and optimizing aviation management talent training mechanisms	Optimizing CAL's aviation management talent training mechanisms	Establishing the optimal learning path for CAL's aviation management talent pool	Promoting Taiwan's aviation talent development
		Percentage of female manager reaching 24.5%		The percentage of female managers has risen to 27.24% in 2020	Reviewing the percentage of female managers and making it part of the hiring plan	The percentage of female managers reaching		
						24.75%	25%	27%

永續華航 SUSTAINABILITY WE CARE

Task Force Corresponding SDGs	Corresponding Material Issues	2020 Objectives	Illustration of Progress	Key Results and Performance	Plan for Improvement	Short-term Goals (2023)	Medium-term Goals (2025)	Long-term Goals (2030)
Cooperation (SDG 8, SDG 12)	● Sustainable Supply Chain Management	Maintain SAQ Score at 85 points	Goal Attained	1. No high risk suppliers were identified in the 2020 sustainability self assessment questionnaire 2. The average annual score was 88.59 in 2020	Continuing to follow up and provide assistance in order to keep raising sustainability scores	Maintain SAQ Score at		
						86 points	87 points	89 points
		Optimize risk management for sustainable supply chain, implement SAQ, and audit 30% of critical tier-1 suppliers by 2020	Goal Attained	1. Met the target of auditing 30% of the key first-tier suppliers (i.e. 26 companies) in 2020 2. Completed auditing all 19 high risk suppliers in 2020	Continuing to meet the audit target in the next phase according to plan, and expanding the scope of risk questionnaires	Optimize risk management for sustainable supply chain, implement the SAQ, and audit 70% of critical tier-1 suppliers and 50% of critical tier-2 suppliers by 2023	Optimize risk management for sustainable supply chain, implement the SAQ, and audit 100% of critical tier-1 suppliers and 100% of critical tier-2 suppliers by 2025	Providing supply chain training, improving assistance mechanisms, and implementing ongoing SAQs
Environment (SDG 6, SDG 7, SDG 12, SDG 13, SDG 14, SDG 15)	● Climate Change Mitigation and Adaptation ● Green Service Operations ● Environmental Management System Development ● Energy Management ● Resource Management	Improving annual aviation fuel efficiency by 1.5% (flight operations)	Goal Not Attained	Staying a leader among Asia Pacific airlines with fuel efficiency at 0.2586 tons per 1,000 RTK	Continuing to implement the IATA four-pillar strategy to reduce carbon emissions (technology, operational efficiency, infrastructures, and economic measures)	Improving annual aviation fuel efficiency by 1.5% and achieving CORSIA carbon-neutral growth from 2020 (CNG2020)		
		Reducing carbon emissions from ground operations by 38% as compared with 2009	Goal Attained	Reduced carbon emissions from ground operations by 39% compared to 2009	Utilizing energy management systems in ongoing energy saving and carbon reduction activities	Carbon emission reduction compared to 2009		
						41% (ground operations)	44% (ground operations)	50% (ground operations)
		Implementing TCFD (Taskforce on climate-related financial disclosure) evaluation and disclosure	Goal Attained	Released climate-related financial disclosures	Continuing to strengthening climate risk and opportunity management procedures	Strengthening decision-making mechanisms to integrate climate-related financial disclosure (TCFD) information	Implementing and optimizing internal carbon pricing	Facilitating Taiwan's sustainable aviation fuel strategy
		Reducing general waste (non- recyclable) by 2% compared with 2018	Goal Exceeded	Reduced domestic waste by 16.7% in 2020 (excluding a 16.38% reduction due to operations)	Refining plastic reduction and leftover food management	Reducing general waste production from ground operations in relation to 2018		
						5%	7%	12%
		Industrial waste recycling ratio reaching 40%	Goal Exceeded	Recycled and reused up to 51% of industrial waste in 2020	Assessing items available for recycling and reuse on an ongoing basis	Achieving a recycling and reuse rate of industrial waste		
						43%	45%	50%
		Reducing water consumption from ground operations by 1.5% compared with 2018	Goal Exceeded	Reduced water consumption from ground operations by 15% in 2020 compared to 2018	Continuing to add more recycled water sources and water conservation campaigns	Reducing water consumption from ground operations in relation to 2018		
						3.6%	5%	7%
		Reducing paper consumption by 5% compared with 2018	Goal Exceeded	Reduced paper consumption by 32% in 2020 compared to 2018	Reiterating the procedure for requesting copy paper and reminders	Reduced paper consumption in relation to 2018		
						14%	20%	30%
		Embargoing illegal wildlife species and prohibiting use of illegal species as food ingredients	Goal Attained	Continued with the promise and practice of embargoing transport of endangered species and prohibiting the use of illegal species as food ingredients	Continued with the promise and practice of embargoing transport of endangered species and prohibiting the use of illegal species as food ingredients	Embargoing illegal wildlife species and prohibiting use of illegal species as food ingredients		

Goal Exceeded   Goal Attained   Goal Not Attained

Note 1: The importance of material issues to CAL may correspond to more than one task force; and the table lists only most relevant task force.

Note 2: Material issues shown in red bold type are also key issues.

Contents

CHAPTER

2

Value Creation

2-1 Trust

2-2 Human Resources

2-3 Cooperation

2-4 Environment

2-5 Society

2-1
Trust

HIGHLIGHTS

Preemptive protective measures

CAL actively cooperates with the national disease prevention regulations in response to the COVID-19 pandemic. We implemented advanced preparation and protection measures to ensure the health and safety of passengers and crew members to jointly protect public safety and health.

ISMS and PIMS introduced to certify core information systems

The Company began implementing annual reevaluation of the core Information Security Management System (ISMS) and certification of the Privacy Information Management System (PIMS) in 2020 to ensure that the management system can effectively operate and control risks. The Company also obtained credit card transaction system data security certification in 2020 to ensure the security of the Company's credit card transaction environment and protect passenger rights.

Improving distribution capability

CAL obtained certification for Level 4 New Distribution Capability of the International Air Transport Association (IATA) on August 20, 2020 and became the first airline company in Taiwan to obtain the certification. Level 4 certification signify improvements in technical capabilities. If it is widely adopted in commercial applications, it can effectively reduce the cost of booking fees for the global distribution system (GDS).
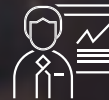
Hosted aviation security seminar

CAL, China Aviation Development Foundation, and CAA of MOTC co-organized an aviation security risk management seminar in 2020.

9th passed IOSA Certification

CAL has successfully passed the IATA Operational Safety Audit (IOSA) of the International Air Transport Association (IATA).

IOSA / 9th

Management Approach GRI 103-1, 103-2, 103-3

➤– Importance of Material Issues

Zero accident is the foundation for creating sustainable value for customers. Therefore, providing reliable and safe service is not only the core value of CAL, but also our way to sustainability. As a professional transportation service provider, the sustainable operations of CAL depend on the quality of transportation service provided. To create sustainable value for customers, CAL is dedicated to protecting customers' privacy, providing premium service that meets their expectations and needs, and continuing optimizing the quality of service.

➤– Commitment and Long-term Goals

• Commitment

Flight safety is CAL's most solemn and important commitment to customers and the public in its 61 years of history. We are committed to compliance with regulations and zero flight safety accidents and we pledge that we shall do all we can to ensure the safety of all passengers and cargo on each journey. We shall also uphold our consistent service ideals of "respect for customers" and "protecting customer rights" during the global COVID-19 pandemic by monitoring international development while complying with national policies and full consideration of customer interests to create a reliable and high-quality service experience. We have adopted a brand-new national flight team slogan during the pandemic — "We fly, we fight. We will all be fine." We shall continue to fulfill our corporate mission of "creating more wonderful moments through flying".

• Long-term Goals

2023

1. Implementing personal data management systems in accordance with GDPR and personal data protection laws
2. Increasing the cargo service customer satisfaction rate to 88%
3. Continuing to secure development of core business application systems and launch innovative application services as needed in order to increase revenue and reduce costs for the company and enable more efficient routines
4. Performing aviation data study and analysis for future release
5. Enhancing the SMS performance review mechanisms

2025

1. Receiving ISO27701 Privacy Information Management certification in the collection, processing, and use of personal data in the Passenger Service Management Procedure (including Taiwan and EU headquarters)
2. Increasing the cargo service customer satisfaction rate to 89%
3. Promoting smart airports: Establishing a smart airport at Terminal 3 of Taiwan Taoyuan International Airport; and improving customer satisfaction through digital innovation initiatives
4. Publishing aviation study results to improve aviation industry technical capacity
5. Strengthening the safety culture

2030

1. Maintaining validity of ISO27701 Privacy Information Management certificate, and keeping a score of 90 or higher in the DJSI personal data protection criteria
2. Increasing the cargo service customer satisfaction rate to 90%
3. Promoting intelligent tourism: Achieving horizontal and vertical integration of tourism-related industries to provide a one-stop smart travel eco-system
4. Developing innovation initiatives with other airlines to drive innovation momentum
5. Continuously enhancing the SMS

➤– Objectives and Plans GRI 102-44

Key Point	SPI (Note 1) / KPI	2020			2021 Objectives
		Objectives	Performance	Achievement	
Flight Safety	Fatal and Hull Loss Accidents	0	0	100%	0
	Runway Excursions (RE)	0	0	100%	0
	Controlled Flight into Terrain (CFIT)	0	0	100%	0
	Loss of Control in Flight (LOC-I)	0	0	100%	0
Customer Service	Overall Passenger Satisfaction	87.8	88.6	100%	87.8 (Note 2)
	Overall Cargo Service Satisfaction	88.0	88.5	100%	88.0
	Overall Maintenance Satisfaction	8.40	8.57	100%	8.40

Note 1: SPI refers to safety performance indicators.

Note 2: In response to the COVID-19 pandemic, the Chairman agreed, after discussions in the meeting for setting quality targets, that the overall customer satisfaction target for 2021 shall be the same as that of 2020.

➤ **Unit in Charge**

Corporate Sustainability Committee —
Trust Task Force and Corporate Safety Committee

➤ **Management Mechanisms**

- The Corporate Sustainability Committee convenes a meeting at least twice every year
- The Corporate Safety Committee convenes a meeting every quarter on a regular basis
- The quality review meeting is convened every half year on a regular basis
- The Trust Task Force submits the KPI report to the Corporate Sustainability Committee every quarter
- The personal information protection management review meeting is convened every year on a regular basis

➤ **Grievance Mechanism**

- **Passenger: Passenger Branch Office —** Website
- **Cargo: Cargo Branch Office —** Website
- **Aircraft Maintenance: Engineering and Maintenance Organization —** E-mail: emo.customer@china-airlines.com

Stakeholder Contact

Passenger Branch Office

Cargo Branch Office
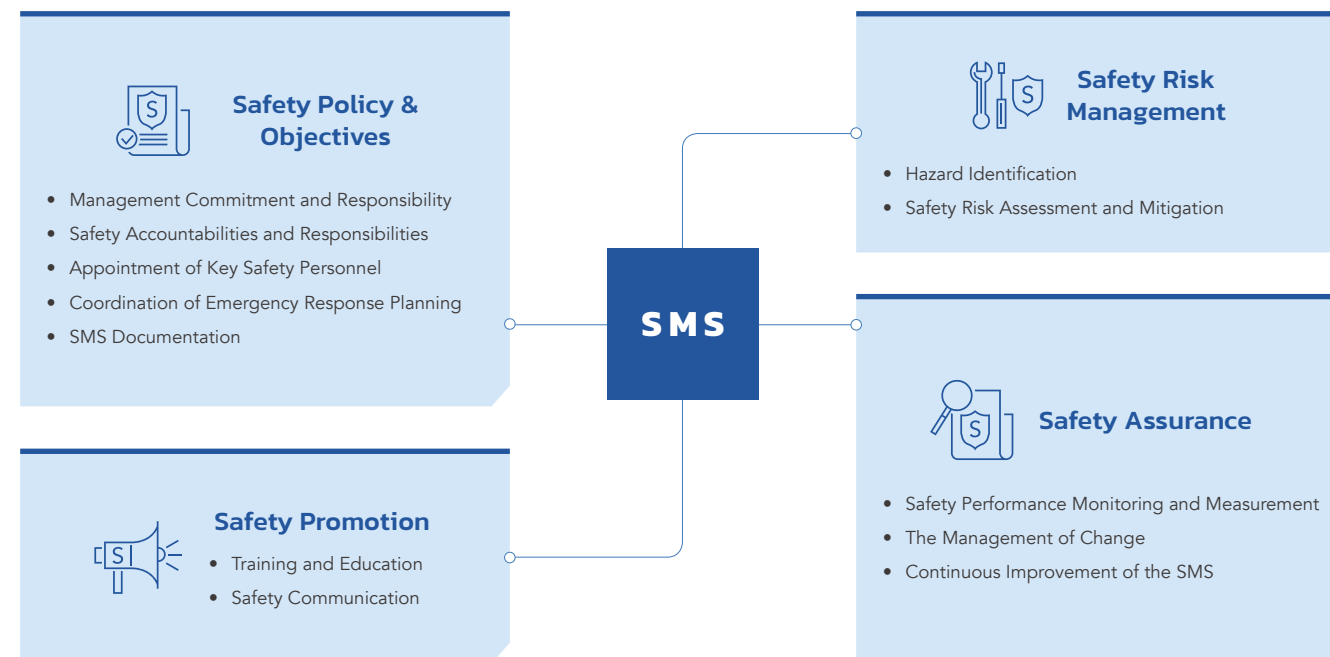
Aircraft Maintenance

2-1-1 Flight Safety

Safety is the core value of CAL and our absolute commitment to customers. We always take a consistent and uncompromising stand on flight safety. With a zero tolerance on flight safety accidents, CAL has comprehensive control over flight safety through management systems. CAL continuously improves overall flight safety and endeavors to reinforce the corporate culture of safety to make sure that securities are fully in place to provide passengers with safe and reliable flights.

Safety Management System (SMS)

CAL follows the requirements in the civil aviation regulations of Taiwan and references the guidelines in the International Civil Aviation Organization (ICAO) DOC. 9859 Safety Management Manual (SMM). CAL has implemented the Safety Management System (SMS) since 2007. After more than a decade, the benefits have started rolling in. The core of CAL SMS is safety risk management. CAL analyzes and manages operational risks systematically through continuous risk identification and management. We also set Safety Performance Targets (SPTs) to implement overall tracking and control, or mitigate risks.

CAL Safety Policy

Safety Policy & Objectives

- Management Commitment and Responsibility
- Safety Accountabilities and Responsibilities
- Appointment of Key Safety Personnel
- Coordination of Emergency Response Planning
- SMS Documentation

Safety Risk Management

- Hazard Identification
- Safety Risk Assessment and Mitigation

SMS

Safety Promotion

- Training and Education
- Safety Communication

Safety Assurance

- Safety Performance Monitoring and Measurement
- The Management of Change
- Continuous Improvement of the SMS

Safety Risk Management

1. Setting and Monitoring Safety Performance Indicators / Targets (SPI / SPT)

Based on past performance and Safety Reporting System, requirements of authorities in charge of civil aviation, plus official safety reports provided by international organizations, CAL sets its annual SPIs / SPTs. The annual safety performance indicators are monitored in executive meetings and reviewed and discussed in review meetings of the safety task force of each unit on a regular basis, to meet flight safety management requirements to meet domestic and international safety standards and attain the highest safety standards.

Safety Management Meeting

Board of Directors Risk Committee
- Corporate Safety Office reports CAL's overall risk

Corporate Safety Committee
- Corporate Safety Office reports the implementation of quarterly safety management
- Discuss critical safety issues

Airline Safety Review Committee
- Report the implementation of monthly safety management
- Report critical safety issues

Safety Action Group
Flight Operation Division, Engineering & Maintenance Organization, Cabin Crew Division, Ground Service Division, System Operation Control Division, Inflight Supply Chain & Marketing Division, Cargo Sales, Marketing & Services Division, and other support divisions
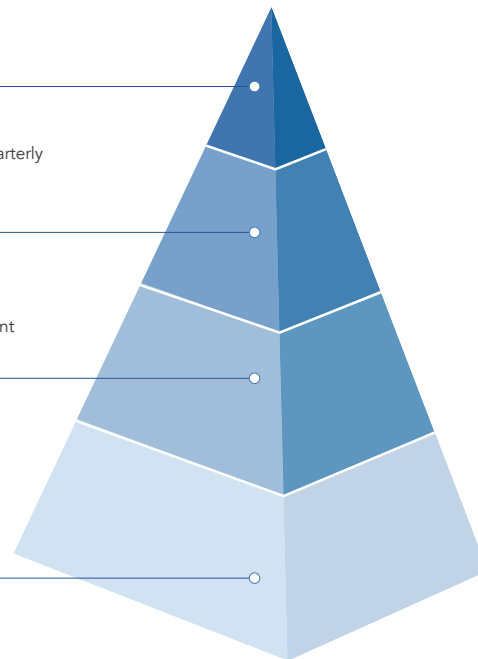
2. Safety Reporting System

To enhance their awareness of flight safety, CAL encourages employees to use the Safety Reporting System to proactively identify potential risks and report possible safety issues in their daily work. Through risk reporting, CAL prevents unsafe incidents from occurring and increases its overall security level. In addition, CAL conducts risk analysis and assessments based on seasonality, trends of flight safety, and changes in internal and external environments. Making a further effort to control risks, we also communicate safety-related discipline and conduct to our employees in announcements or meetings. The Company also established reward mechanisms to encourage employees to file reports. Although the number of flights has decreased significantly due to the impact of COVID-19 in 2020, employees remained committed and actively filed safety reports. A total of 1,058 safety reports were filed this year and rewards were presented 141 times, demonstrating the effectiveness of the active reporting system.
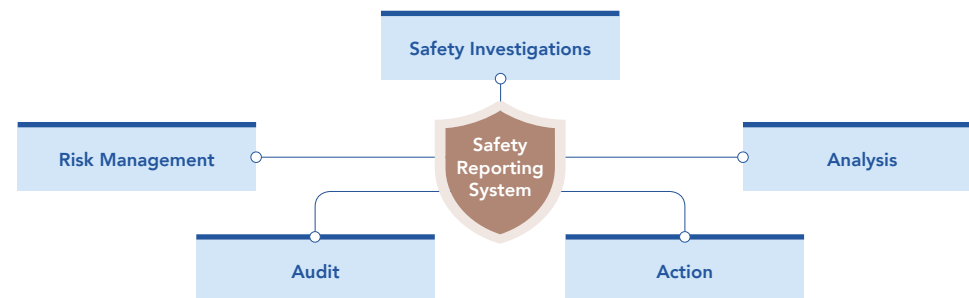
3. Safety Risk Management

Through risk identification, risk assessment, risk control, monitoring, and review, CAL not only mitigates risks to a level as low as reasonably practicable (ALARP), but also predicts potential safety issues in normal system operations and solves them early to prevent accidents from occurring. To instill the concept of risk management into the operation units and strengthen employees' use of risk management, CAL has, since 2015, provided regular safety risk management (SRM) training and assigned frontline units to implement self-evaluations and execute risk management operations. They must implement safety risk management in accordance with internal and external information, changes in the operation environment, adjustment of regulations, and changes in procedures and equipment.

4. Flight Operations Quality Assurance

CAL utilizes Flight Operations Quality Assurance (FOQA) and the Flight Operations Quality Information System (FOQIS) developed by CAL to quickly identify the potential risks of the flight crew operations and promptly provide guidance for them to take corrective measures. Apart from producing monthly trend analysis report of FOQA for CAL's fleet as references, CAL shall conduct a necessary investigation and analysis, take corrective measures, and continuously monitor the effectiveness of subsequent improvements and corrective measures in accordance with the regulations for operations, thereby lowering flight operation risks and ensuring flight safety.

5. Fatigue Management

In addition to fatigue management regulations set forth in domestic civil aviation laws, CAL follows the Fatigue Management Guide for Airline Operators (2nd Edition) established by the International Air Transport Association (IATA), International Civil Aviation Organization (ICAO) and the International Federation of Air Line Pilots' Associations (IFALPA) in 2015 to implement crew fatigue management mechanism using a prescriptive approach. In 2019, CAL incorporated the fatigue management system into the safety policy and introduced a new crew scheduling system (AIMS) and a flight crew fatigue management system (FRMSc-SAFE). Through predictive risk identification and proactive actions, CAL plans to optimize crew scheduling and fatigue management. Due to the impact of the pandemic in 2020, CAL referenced the IATA's "Guidance for managing crew fatigue during a crisis (1st Edition)" to manage crew fatigue. CAL actively reviewed the fatigue conditions and changes in safety behavior to identify potential risks for evaluations and adopt suitable mitigation measures.

Contents

CAL Flight Crew Fatigue Risk Management

Government Rule	CAL Stricter Than Government Rule
CAL Flight Operation Manual (FOM)	**Bio-Mathematical Model (SAFE)**
Rule — Aircraft Flight Operation Regulations	Crew Scheduling Regulations — Airline Information Management System (AIMS)

Reactive → Proactive → Predictive

Reactive
- Crew Fatigue Reports Review and Fatigue Risk Assessment
- Flight Dispatch Changes

Proactive
- Regularly Examine Flight Crew Complement
- Monitoring Flight Crew Flight Time Limitations

Predictive
- Keep Optimizing Rosters
- Bio-Mathematical Model Application

Flight Task Evaluation

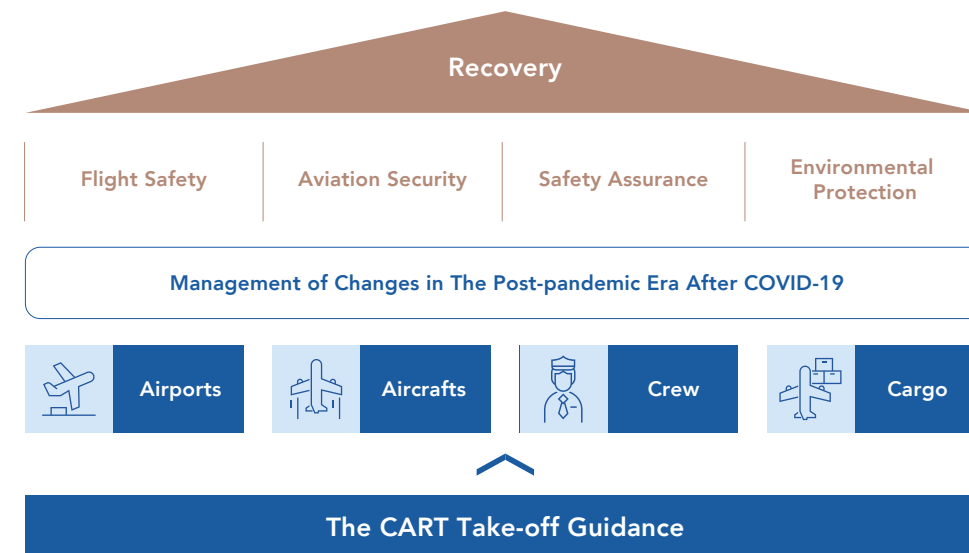| Sectors	STA Zone	Time Zone
Flight Character	Flight Time	STD Zone
Rest Period	Flight Duty Period	

→ **Flight Task Evaluation**

6. Alcohol Test Mechanism

According to the Aircraft Flight Operation Regulations of the Civil Aeronautics Administration, CAL has established the alcohol test mechanism to conduct alcohol tests for operations personnel, such as flight crew, cabin crew, flight dispatchers, and maintenance personnel, and increase their alertness of flight safety.

Implement Changes in Response to the Pandemic and Ensure Flight Safety Management

Due to the impact of the COVID-19 pandemic, the International Civil Aviation Organization (ICAO) published "The CART Take-off Guidance" (TOGD) in 2020 to provide the aviation industry with disease prevention guidelines for airports, flights, crew, and cargo. It requires airlines to adopt public health risk mitigation measures such as employee training, social distancing, facemask usage, regular disinfection, health examination, contact tracing, passenger health declaration, and virus tests. In response to the operational risks created by the pandemic, CAL referenced "The CART Take-off Guidance", disease prevention regulations of Taiwan, and disease prevention guidelines published by civil aviation authorities of different countries to implement comprehensive flight safety risk management. We use comprehensive response mechanisms to mitigate to the impact and changes brought forth by the pandemic. In the post-pandemic era, we use risk management to control and manage the restoration (restart) of operations in each phase. Domestic and foreign units and overseas branches have completed a total of 66 risk management evaluations based on their work duties and implemented mitigation measures based on risk trends to ensure continuous safe operations.

COVID-19 Pandemic Safety Risk Management

Recovery

Flight Safety	Aviation Security	Safety Assurance	Environmental Protection

Management of Changes in The Post-pandemic Era After COVID-19

Airports	Aircrafts	Crew	Cargo

The CART Take-off Guidance

Safety Promotion and Training

To ensure flight safety, CAL organizes educational and entertaining safety events every year to instill the significance of safety among all employees and constantly enhance their awareness of flight safety. Our safety events in 2020 were based on the themes of "safety identification, active implementation, participation, and continuous improvement". We aimed to enable all employees to act safely through experiential learning and positive motivation together reinforcing the safety culture in CAL and achieve the highest flight safety standards.

永續華航
SUSTAINABILITY WE CARE

1. Safety Management System Recurrent Training

CAL completed the safety management system (SMS) recurrent training, and conducted an all-hands safety culture questionnaire. The results of evaluations by external professional institutions help CAL learn about the safety culture of the Company and improve safety management. A total of 11,403 employees in domestic and foreign units completed the training.

2. Safety Promotion — "Safe Experience and Contests"

CAL organized the "Taoyuan Airport Safety Mini-Tour" to provide a learning experience for flight safety and collaboration with a walking tour for the safety operation contact person of each safety work group visited Taoyuan International Airport. To encourage employees to use the bow-tie analysis to identify hazards and formulate appropriate risk mitigation measures, we organized the Bow-Tie group contest for first-line operation units. The contest encourages them to use teamwork and share knowledge to improve employees' safety management skills.

Taoyuan Airport Safety Mini-Tour

Practical Risk Management Group Contest

3. Safety Promotion — Hosted Aviation Security Seminar

CAL, China Aviation Development Foundation, and CAA of MOTC Co-organized an Aviation Security Risk Management Seminar on December 4, 2020.

Flight Crew Management

Professional Training and Evaluation `GRI 404-2`

CAL differentiates risk factors and implements risk management mechanisms based on the three perspectives of "Prediction", "Proactive", and "Passive" through complete internal and external environmental change response trainings, such as training for new airports, routes, aircrafts, systems, protocol procedures, systematic flight training / qualification, flight operation quality assurance (FOQA), and periodic appraisal of trainers / examiners, pilots who graduate from our training programs are highly professional, reliable, and fully capable of safeguarding passenger safety.

Note: The goal of FOQA is to reduce the risk of accidents and hull loss by using past flight data and flight log excerpts to discover abnormal incidents and to analyze each fleet's operational characteristics. We then evaluate the findings to look for and rectify potential safety risks.

1. Stringent Training and Objective Testing

In order to implement our commitment of flight safety with a surge of demand for flight crew on the global market, CAL strictly requires our cadet pilots to complete at least 10 months of training programs at well-known flight training schools in the United States or Australia. To ensure the flight training is solid, they must pass the performance evaluation at the training school and pass the training for new aircraft models, upgraded ranking, and switching between aircraft types.

CAL has introduced evidence-based training (EBT) to replace traditional recurrent training and tests. The EBT is guided by risk and crisis management, utilizing big data collection and analysis to enhance the ability of handling abnormal situation by individual behavior, fleet performance, operation sites, and historical record of events etc. Since January 1, 2018, CAL has implemented annual "Flight Crew EBT" refresher training and fitness tests and achieved 100% EBT for a total of 2,391 flight crew in 2020.

2. Professional Training Facilities

As the first airline to introduce civil flight simulators in Taiwan, CAL is equipped with various types of simulators for flight training. In addition to simulating various adverse weather conditions, simulators can incorporate a variety of contingencies for constant simulation training; they can also display the tolerance limits of aircraft designs and carry out training in any possible extreme and dangerous situations without incurring any risk in the exercise. The training process can also be recorded as a basis for review and improvement for flight skill and expertise.

CAL's flight simulators and ground / water escape training facilities have been certified by international aviation administrations. The flight simulators are available for domestic and international training. CAL will continuously invest in and upgrade training equipment to ensure flight safety.

3. A Comprehensive Management System

The Integrated Pilot Training System (IPTS) was since 2014 to comprehensively E-training records and integrate training course information. In 2020, 348 CAL flight crew have participated in a variety of short- and long-term training courses. CAL also completed the system connection and integration for IPTS with the new crew scheduling system (AIMS) introduced in 2019 to ensure the effective management and use of training resources.

In response to the impact of the COVID-19 pandemic in 2020, CAL has arranged regular flight simulator training, tests, and actual flights for all pilots in accordance with civil aviation regulations. CAL also formulates and implements continuous simulator training programs for all pilots of B737-800 aircrafts whose operations were most affected, and co-pilots of long-range aircrafts with fewer landings to maintain their flight familiarity and attain flight safety quality targets.

Health and Emotional Management

CAL sets strict standards not only for pilot training, but also for pilots' health and emotional management. CAL has adopted proactive planning, crew feedback and prediction in crew roster management to prevent and reduce the physical and mental stress of pilots in long-haul flight duties.

1. Life Management

To prevent and reduce the physical and mental stress of pilots in long-haul flight duties, CAL sets requirements higher than statutory ones and manages flight crew's physical and mental health so that all flight crew members are fully ready for each duty.

2. Stress and Health Management

To enhance flight crew's awareness of stress issues, human factors and crew resource management (CRM) are included in flight crew training and retraining courses. For the flight crew, appropriate stress can improve the quality of work, but excessive stress can affect attention and emotional issues. In view of this, the perception of personal stress is especially emphasized in training, and problem solving and emotional regulation are proposed for flight crew members to choose as the most appropriate way to deal with their stress. CRM training provides the concepts of teamwork and workload management to help flight crew properly face and deal with stresses caused by bad weather and schedule delays and any unexpected situation. CAL provides free psychological counseling service, where psychological consultants work with flight crew members to find feasible solutions to problems they face in their daily life.

3. Alcohol and Drug Management

CAL has established strict regulations and test procedures to prohibit the use of alcohol and drugs. This includes alcoholic beverages and food containing alcohol, as well as narcotic drugs or other drugs that may affect the normal performance of employees. CAL flight crews are not allowed to drink alcoholic beverages 12 hours prior to a flight. Since April 10, 2017, CAL has conducted alcohol test for all flight crew in accordance with the regulations of the Civil Aeronautics Administration.

4. Improved Communication

To improve communication with crew members and cohesion between them, CAL organizes all types of meetings on a regular basis to streamline the channels of communication and quickly respond to and resolve their problems and needs during flight duty period. Through improved communication, we hope to provide a comfortable and secure work environment for all crew members.

Since the outbreak of the COVID-19 pandemic in February 2020, CAL Flight Operations Division has implemented disease prevention measures so that the crew members can work in a safe environment. Related response measures are as follows:

1. Provide crew members with information on the pandemic and provide them with comprehensive disease prevention equipment when they are on duty.
2. Plan disease prevention arrangements for outstation stays and request branch office to provide assistance to ensure crew members stay in hotels in accordance with the Company's disease prevention requirements. Protect crew members from being exposed to risks and prepare snack packages for them when they cannot go out and purchase food in outstations.
3. Establish real time communication channels in CAL real time communication application to ensure instantaneous communication regardless of the time zone.
4. With regard to crew members for whom quarantine at home is inconvenient, Flight Operations Division arranges them to reside at Company's hotel as the home quarantine site.

Proactive Planning

- Monthly review and discuss next month schedules with fleet office
- Better rosters for flight crew's dispatch and rest time
- If performed a night flight, the maximum duty duration is reduced by 2 hours
- Monitor crew pairing by their performance in each fleet
- Schedule a day off after a specific flight duty
- Plan home quarantine dates in accordance with the regulations of the CDC and CAA during the pandemic

Crew Feedback

- Investigate crew report regarding fatigue issue and mitigate by adjusting flight duty, crew number or layover as appropriate
- The dispatcher immediately adjusts the schedule of flight crew if they report fatigue or ask sick leave. The care team also inquires about flight crew's physical and mental conditions

Prediction

- Crew number and crew pattern for new routes will be determined by fleet office after evaluation. The evaluation will also include the regulations of different countries during the pandemic

Inflight Monitoring and Control

CAL System Operation Control Division monitors flights and flight safety worldwide in real time. It uses a variety of communication tools to monitor all site operations and closely monitors all factors that may affect them, including weather conditions and emergencies. The information is immediately relayed to flights enroute, along with contingency plans.

Despite the impact of the pandemic, disease prevention conditions, and sudden closure of routes without warning in 2020, CAL's punctuality rate calculated based on the "punctuality rate of international and cross-strait flights of the national airline" averaged 96.10% in 2020 which was 13.1% higher than the Company's target punctuality rate (KPI was 83%). The dispatch reliability rate exceeded 99% which was also higher than those of domestic peers.

The System Operation Control Division continues to provide passengers with high-quality flight services and continues to improve and tracking and monitoring software to meet regulatory requirements. The System Operation Control Division has set up comprehensive dynamic monitoring for designated seats and provides real-time updates of the latest hazardous weather events to aircrafts to help pilots change routes and avoid hazardous areas. Reputable meteorologists are also employed for weather forecasts for each station to provide reference information for making decisions for flights, increase flight efficiency, avoid hazardous weather at stations, and ensure flight

safety. In terms of airport monitoring, ground monitoring software and hardware are continuously upgraded to connect with the CDM system of domestic and foreign airports for flight information, air traffic radar, and the self-developed CCTV management and monitoring dashboard to monitor flight status with precision. These measures improve the punctuality rate and service quality of flights and reduces inconveniences for passengers.

Maintenance Quality

Ensuring maintenance quality is an important foundation of flight safety. With the Company's Reliability Control Program, we proactively manage the maintenance status of all aircraft. By compiling and analyzing data related to common abnormalities and technical parameters from daily operations, appropriate maintenance strategies and plans are developed; this allows us to maintain the reliability of all systems on the aircraft to enhance maintenance quality and flight safety.

1. Professional Maintenance Capacities

The Company's maintenance organization is certified by 11 countries and regions, including the European Union, the US, and China. We have the largest modernized maintenance facilities, including two hangers that can accommodate 5 wide-bodied aircraft at once, as well as an Engine Test Cell with up to 120,000 lbs. of thrust capability. The Company's maintenance capability can satisfy different level of maintenance checks for various type of aircrafts. To expand maintenance service to airlines in Southeast Asia and East Asia, CAL was approved as a repair station by the Philippines in April 2019. CAL will continue to expand maintenance services for customer aircrafts and third-party equipment and plans to obtain maintenance certificates from countries such as Japan in 2021.

2. Establishing a New Maintenance Training Center

In response to rapidly growing demand for maintenance service at home and abroad, CAL was certified to establish the CAL Technical Training Center (CTC) in 2015. In 2017, CTC also obtained certification from the Civil Aviation Administration of China. CTC was the first certified institution in Taiwan to provide aircraft maintenance training for CAL-EMO and other airlines. Since CTC's foundation, a total of 152 training courses have been offered, and 1,706 trainees have completed training.

3. Elevating the Quality Management System

CAL has acquired ISO 9001 certification and continuously maintain the effectiveness of the system since 1996. In May 2017, the EMO became the first repair station in Taiwan to receive certification for the AS9110 Quality Maintenance Systems - Aerospace from the International Aerospace Quality Group (IAOG). In December 2019, CAL renewed its three-year re-evaluation contract with the accreditation institution. Consistent with its pursuit of improvement of quality, CAL-EMO will periodically conduct Plan-Do-Check-Act (PDCA) through the quality management system for continuous improvement and customer satisfaction.

Note: IAQG members include Boeing, Airbus, GE, and Rolls Royce. To manage and regulate the quality of suppliers, suppliers are required to comply with a series of established standards for quality management system, including AS 9110.

2-1-2 Passenger Service `GRI 102-44`

`COVID-19 Special Column`

Preemptive Protective Measures — Safeguarding Public Health and Safety

As the COVID-19 pandemic loomed over the industry in 2020, CAL immediately implemented "body temperature measurements for work and shuttle buses". CAL also dedicated full efforts to integrating the passenger aircrafts of the CAL group for active business management to ensure the survival of the Company, while fulfilling social responsibilities. Through the hard work, resolve, and strength, CAL has shown to the public that CAL is not only proud to be a member of the "National Air Team" but is also willing to work with institutions and organizations to jointly protect human health and safety. The key disease prevention measures taken by CAL during the pandemic in 2020 are summarized below:

When the COVID-19 pandemic broke out, CAL immediately established a COVID-19 information services section on its official website to respond to the large quantities of flight changes and cancellation in order to provide passengers with flight information (flight status, and flights operating within 43 days), regulations for ticket refunds and changes, and entry regulations of different countries. In response to passenger demands, CAL also launched services such as "buy tickets and change any time", "no ticket changes required for outbound and inbound flights to and from Hong Kong", "full promotion of online check-in services", "additional seat for economy class", "automatic extension of the validity period of member mileage, awards, and award tickets", and "charter flights for passengers in countries where international flights are suspended". These services were provided to respond to passengers' strong demand for disease prevention when boarding aircrafts.

COVID-19 Information Services

In terms of meals, CAL has adjusted the in-flight meals in accordance with the global pandemic ratings announced by the Taiwan Centers for Disease Control (level 1: warning, level 2: alert, and level 3: watching). Preventing diseases, fighting diseases, and reducing transmission risks were adopted as the highest principles. CAL actively provided "Cold Sandwich Boxes" or "One Tray Hot Meal Services" based on changes in the development of the pandemic in different countries and the required in-flight disease prevention requirements of different governments to satisfy passengers' food and beverage need.

To implement national epidemic prevention policies in the cabin, CAL provides all crew members with personal epidemic prevention kits to ensure the health and safety of passengers as well as medical personnel and crew members. CAL also require crew members "to measure and record their body temperature when reporting for duties", "wear comprehensive epidemic protective equipment provided by the Company after boarding", and "wear facemasks at all times except when eating or drinking". Cabin crew are also required to use hypochlorous acid solutions to wipe door knobs and disinfect the environment after passengers use the lavatory to enhance cabin hygiene and cleanliness.

永續華航
SUSTAINABILITY WE CARE

To comply with "Passenger Safety Protection Rules" of the CAA, CAL carry out "real-name registration of changed seats", "maintenance of safe social distancing", "broadcasting of entry regulations and matters for compliance on board", and "simplify catering service procedures" to ensure the effectiveness of domestic epidemic prevention measures.
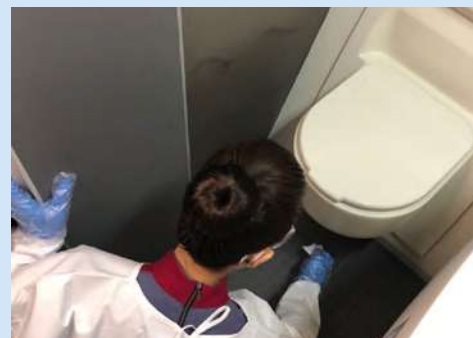
Maintain Social Distancing Onboard, On-board Broadcast of Entry Regulations, Cabin Inspections, and Ensuring the Cleanliness of the Environment

CAL established the "Crew Health Management System" platform to strengthen crew members' health control measures. When crew members end their missions, CAL will help arrange quarantine hotels for those that have entered level 3: Warning areas, are required to measure their body temperature twice every day and fill out results on the aforementioned platform. When crew members report irregularities or fevers, the Cabin Crew Division actively contacts them and helps arrange medical services for them. It also reports to the Medical Affairs Department to create disease prevention records and implement health management of crew members.

In response to the impact of the pandemic, CAL monitors the development of the pandemic at all times. When airport operations are affected by the pandemic and airports adjust entry regulations such as the maximum number of inbound passengers per aircraft or crew member screening procedures, the System Operation Control Division will immediately deliver the latest information to all related units through the Company's internal communication system and take prompt response measures. The System Operation Control Division also monitors aircraft and flight status at all times.

When a passenger on a flight shows signs of illness, the flight crew will actively notify the System Operation Control Division which shall deliver related information to all units through the Company's internal communication system. The units will then arrange quarantine measures, disinfect the aircraft, and change seat covers after the aircraft lands.

CAL has also established multiple disease prevention management measures in all destination airports to meet the entry quarantine regulations of different countries and manpower allocation requirements. The measures include encouraging passengers to check in early online, reminding passengers to maintain social distancing, wearing masks throughout the flight, cooperating with comprehensive baggage disinfection at Taoyuan Airport, body temperature measurement before boarding, and arrangements for employees to work from home in Taiwan and in foreign countries.

Implement Disease Prevention Management Measures for Charter Flight from Shanghai   Source: MNA

永續華航
SUSTAINABILITY WE CARE

Key Disease Prevention Measures in 2020

Flexible Flight Arrangements

1. CAL established the "COVID-19 Information Services" on the official website to provide the latest information.
2. Launched special services such as easy ticket changes and charter flights for passengers in countries where international flights are suspended.
3. Automatic extension of the validity period of member mileage, awards, and award tickets.
4. Integrated group resources to support flights of Mandarin Airlines to domestic destinations such as Penghu and Kinmen to meet passenger demand.

Before Boarding → **During Flight** → **Arrival in Taiwan**

Passengers

Before Boarding
1. Provide a digital menu for business class and premium economy class passengers to browse and choose their meal after booking.
2. Promote the use of the eCheck-In system.
3. Regularly remind passengers to maintain social distancing in the airport and wear facemasks throughout the process.
4. Measure body temperature before boarding. If a passenger's body temperature is over the threshold, the passenger will not be permitted to board the aircraft and will be requested to receive medical attention at a local medical institution.

During Flight
1. Fully implement real-name registration when passengers change seats.
2. Request passengers to maintain social distancing after taking their seats.
3. Increase broadcasts of information on related entry regulations and compliance matters.

Arrival in Taiwan
Cooperate with Taiwan Taoyuan Airport (TPE) in implementing mandatory disinfection for all inbound baggage.

Crew Members

Before Boarding
1. Flexibly adjust meal arrangements based on the development of the pandemic in different parts of the world and the regulations of governments.
2. Implement mandatory requirements for crew members to measure and record their body temperature when reporting for duties.

During Flight
1. Crew members shall wear personal protective equipment provided by the Company at all times during the flight.
2. Crew members must wear face masks throughout the flight (except when eating or drinking).
3. Simplify catering service procedures to reduce the contact risks with passengers.
4. Increase the frequency of cabin cleaning.
5. Use hypochlorous acid solutions to wipe door knobs and disinfect the environment after passengers use the lavatory.

Arrival in Taiwan
1. When crew members return from level 3: Warning areas, CAL arranges Quarantine hotels for them and requires them to measure their body temperature twice every day and fill out results on the "Crew Health Management System" platform.
2. When crew members report irregularities or fevers, the Cabin Crew Division actively contacts them and helps arrange medical services for them. It also reports to the Medical Affairs Department.

Logistics

1. Monitor the development of the pandemic in different countries at all times. When countries adjust their entry regulations, collect the latest information and deliver it to related units to facilitate immediate response.
2. Monitor flight status in real-time to obtain information on the latest developments and initiate response operations.
3. When the pandemic first broke out, CAL immediately established and activated body temperature measurement and office separation mechanisms to protect the health of employees and retain sufficient manpower to maintain the normal operations of the Company in the unfortunate event of disease transmission in the Company.

Integrate Passenger Transport Aircraft Resources of CAL Group

As the COVID-19 pandemic gradually fell in Taiwan in July 2020, we integrated passenger transport aircraft resources of CAL Group to satisfy demand for the transportation of residents of offshore islands and travel demand during the peak season in summer. We made full use of CAL's B738 aircrafts, Mandarin Airlines' E190 and ATR72 aircrafts, and Tigerair Taiwan's A320 aircrafts to increase the number of flights to Penghu and Kinmen. According to statistics, the total number of available seats increased by 114% for flights to and from Penghu and increased by 32% for flights to and from Kinmen from July to October compared to the same period in 2019. The total number of passengers on flights to and from offshore islands increased by approximately 80% compared to the same period in 2019.

Mandarin Airlines / Tigerair Taiwan Added Flights to Penghu and Kinmen

Customer Relations Management

Providing customer-oriented and quality service is the key to earn customer trust. CAL has established the quality policy and has designated a unit in charge of service quality control. Every year, the quality review meeting is held to set annual objectives and review service performance. Moreover, CAL has introduced the ISO 9001 Quality Management System and the TABLEAU big data analysis system to process and analyze customer satisfaction questionnaires to ensure the quality of service beyond passengers' expectations. In 2020, CAL recovered 53,801 passenger satisfaction questionnaires which accounted for approximately 2.3% of the total number of passengers. The overall satisfaction rate was 88.6%.

Service Quality Management Mechanism

ISO 9001 Quality Management System

Quality Policy

Internal Control — Quality Review Meeting

Third-party Audit

Ahead of other domestic airlines, CAL has set up a variety of communication platforms for different groups of customers, including Customer Service on Facebook and bulletin board on the Instagram and WeChat, to collect problems which passengers encounter during their journeys and provide the updated information. By responding to customers' needs with empathy and sincerity, we endeavor to improve their travel experience. To better understand customers' needs, CAL integrates all customer feedback through the Customer Service System (CSS) (in 2020, 42.6% of customer feedback was provided via CAL's website and 57.4% provided in other ways) and has units in charge of responding to customers within a given time limit in the hope of becoming passengers' most trusted airline.

Communication Channel

Service Hotline

Regular Mail

Comment Form
Customers can fill in the comment form and hand it over to ground staff or mail it to our Customer Relationship Department.

Facebook
CAL has created a fan page on Facebook to understand customers' needs and problems instantly and improve service quality accordingly. It is expected to increase adhesion among members and fans and develop new customers.

E-mail
Instead of calling, customers can simply send e-mails to change reservations or confirm their itineraries.

Customer Feedback — Online Feedback System

Customer Satisfaction Survey

Connect with the Innovative Generation with Youthful Thinking

The Company continues to implement the "Youth Innovations" action plan to pursue the goal of increasing "Brand Awareness" in the sustainability strategy. We have launched innovative and unique promotional campaigns and products as we continue to engage the younger generation. The "#WhatTravelBringsYou" campaign launched in 2019 described the meaning of travel in a humorous manner and it has received 24 major domestic and international awards. We also published the "National Team of the Sky" video on YouTube and Facebook to provide records of CAL flights for transporting medical supplies and citizens, which struck a chord with many people. CAL adopted the "XIAO-HUA" as its avatar on social media. It was used to continuously remind passengers to pay attention to disease prevention during the pandemic and share information on CAL's sustainable development achievements. We also worked with high-quality local companies in launching sustainable products such as the "CAL Foldable Platinum Silicone Cups" which won two "Buying Power Awards"presented by the Ministry of Economic Affairs.

Customer Health and Safety and Sustainability

Food Safety

To ensure food safety and environmental sustainability, CAL requires catering service providers to strictly comply with international safety and health standards mechanisms. This covers each process from preparation, storage, and transportation at a standard temperature. Microbiological examinations are required for all products, materials, and food equipment. In addition, quality audits are carried out from time to time, and aimed at requesting catering service providers to correct non-conforming items within given time limits. If these conditions are not met, penalties will be imposed in accordance with their contracts. Training courses are also organized regarding HACCP and catering services, in order to increase employees' awareness of food safety and quality.

International Certification for In-flight Meals

ISO 22000	HACCP	Halal, JAKIM

Onboard Drinking Water Safety

The quality of potable water is an important part of a premium customer's experience. The quality of potable water is strictly controlled by our industry-leading In-flight Potable Water Management Procedures, which are stricter than environmental regulations and bottling facility sanitation regulations.

- The safety of potable water is included in the preliminaries of new destinations
- We have rigorous safety standards for our drinking water suppliers. Audits are performed every year to ensure compliance
- CAL conducts safety audits on potable water at outstations
- CAL implements a maintenance plan for potable water facilities according to the manufacturer manual

Local Procurement

CAL plans and designs meals in line with the "Responsible Consumption and Production" goal and moves toward renewable energy, carbon reduction, and local procurement to achieve "Decent Work and Economic Growth". From 2019 to 2020, we actively used local brands and high-quality agricultural products such as the procurement of large bottles of mineral water from renowned domestic brands. In 2021, we purchased small bottles of mineral water from domestic brands, domestic meat products, and beverages and frozen products made with fresh domestic vegetables. These measures help support local cultural and creative industries as well as quality agriculture in Taiwan as we seek to attain the goals of responsible consumption and production and environmental protection by reducing the carbon footprint, and fulfill our social responsibility to the earth.

Enhanced Disease Prevention in Airports

1. Safe Flight Plan

To effectively reduce the amount of time passengers spend at the airport, Passengers are advised to complete eCheck-in operations before arriving at the airport. Online check-in services can be used for all CI / AE flights departing from applicable airports to reduce the risks of virus transmission during the journey.

2. Social Distancing

CAL sets up signs in airports to remind passengers to maintain social distancing. The Company has produced posters and images on the flight information display system (FIDS) to remind passengers to maintain social distancing. We also requested the employees at check-in counters and boarding gates of different airports to set up posters or use screen displays to post notices for reminding passengers to maintain social distancing.

3. Wear Facemasks and Measure Body Temperature

In response to the COVID-19 pandemic, passengers must wear facemasks at the check-in counter, waiting room, and the cabin at all times in accordance with the government's disease prevention measures and instructions to ensure the safety of all passengers, ground staff, and flight crew. They must complete body temperature measurement before boarding. The standard for forehead temperature measurement is 37.5 degrees Celsius (99.5 degrees Fahrenheit). If the passenger's body temperature exceeds the standard, the passenger will be requested to receive a health inspection at a local medical institution.

4. Baggage Disinfection Upon Entry in Taiwan

Starting from the end of March 2020, all inbound baggage at Taiwan Taoyuan Airport (TPE) must be disinfected. All inbound baggage shall be disinfected with chemical sprays in the basement before they are loaded on the baggage carousel to reduce the risks of infections.

5. VIP lounge Disease Prevention Measures

Although the VIP lounges were temporarily closed due to the pandemic, the Company restarted VIP lounge services at Taoyuan Airport in September 2020 to continue to provide high-end VIP services for passengers. The Company formulated disease prevention catering procedures for VIP lounges on the basis of protecting the health of passengers and employees. During the pandemic prevention period, employees must wear facemasks and gloves, measure the temperature of VIPs,

and provide disinfection alcohol solutions. The VIP lounges canceled the buffet and adopted the "meal box" service in which an employee personally presents the meticulously designed box with nine partitions to each VIP.

Ninety percent of the dishes in the box with nine partitions are made with ingredients sourced in Taiwan. The famous chef of Novotel painstakingly designed and used unique food materials from different places in Taiwan to create different delicacies. The main dish "tea fragrance roast chicken" was marinated with "Alibang Black Tea" tealeaves sourced from Shihmen and Caoling, New Taipei City in Taiwan. The tea leaves used are the "hardcore red heart" parts of the tea, which is one of the four famous tealeaves. The tea buds bathed in the heat of the sun and its color turns dark red after a series of complicated procedures including withering, twisting, and fermentation. The taste is warm and tender and the texture is rich and sweet. It gives off a delectable fruity fragrance after the marinated chicken is roasted. The rice used in the meal box was also carefully selected and the local "Taoyuan No. 3 rice" variety was used. The Taoyuan No. 3 rice has always been known as the "new fragrant rice" which is chewy and gives off a hint of taro fragrance. Its taro-like texture leaves a lasting fragrance in the mouth.

The VIP lounges in Taoyuan Airport provided VIPs with delicious meals and paid closer attention to the disinfection and sanitation of the meal environment. They have fully dedicated themselves to providing passengers with a safer meal environment.

Highlight Services

In 2020, CAL introduced a number of innovations and employee training programs to passenger services to improve service quality. In addition, CAL continuously studied sustainable practices in order to maintain customer service to the highest standards and stay in a leading position in the aviation industry, relevant achievements are listed below:

1. Teamwork in the Creation of the "National Team of the Sky"

Due to the impact of the COVID-19 pandemic, CAL and the national epidemic prevention team have, since February 2020, completed the charter flight for citizens onboard the Diamond Princess in Japan, charter flight from Wuhan, charter flight from Shanghai, and charter from Delhi to bring citizens home safely. We have successfully completed our mission. The Cabin Crew Division organized volunteers to form teams. Cabin crew receive protection equipment training after assignments and comply with the CDC's high-level epidemic prevention guidelines. The flight crew and ground staff worked together to help passengers return home. Wrapped under facemasks, goggles, and protective equipment, they used their eyes and body language to convey CAL's warm welcome when they arrived home. The "National Team of the Sky" worked together and completed yet another wonderful journey through teamwork.

Passengers Boarding the Charter Flight from Wuhan   Group Photo of the Flight and Ground Teams

2. Outstanding Customer Satisfaction

In 2020, we upheld hold the ideals of respect for customers and disease prevention, and provided high-quality services, disease prevention products, and protective measures to all passengers to ensure that passengers can travel safely. The results are shown in our customer satisfaction scores.

2-1-3 Cargo Service

COVID-19
Special Column

Building Momentum for Reopening of Cargo / Passenger Transport — Combination Strategies

CAL cargo services devised response strategies soon after the pandemic started. The team made full use of the cargo transport capacity provided by 18 747-400F aircrafts, and scheduled flights and allocated space as needed. The team also promoted customized cargo charters, and tried to expand in express delivery, e-commerce shipping, and temperature-controlled goods. Meanwhile, the belly capacity of passenger aircrafts was increased, and passenger cabins were repurposed to transport cargo. These measures allowed CAL to maintain a cargo capacity of more than 8.8 billion freight revenue ton kilometers (FRTK), which was an increase of approximately 10% from the previous year (2019). The shipment volume reached 6.36 billion FRTK which was an increase of almost 20% from the previous year (2019).

The impact of the pandemic has caused CAL's overall cargo response strategy to change as time progressed. The outbreak of the pandemic in early 2020 quickly spread to different countries which imposed lockdown of cities / countries. The belly capacity of passenger aircrafts on the market dropped drastically and CAL began organizing large-scale cargo flights to China / Hong Kong to transport medical and disease prevention supplies as
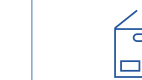
the demand for such products rapidly increased. Due to the restrictions in the disease prevention measures of different countries and Taiwan's disease prevention regulations for crew members, CAL reduced long-haul cargo routes by concentrating on the Luxembourg route for the European routes and concentrating on the Los Angeles and Chicago Airports for the American routes to reduce manpower consumption. CAL also actively made use of idle transportation capacity for charter flights to help different countries transport disease prevention materials.

The tourism market could not recover quickly in the second quarter and the short-term market capacity continues to be limited. However, the increase in the demand of disease prevention supplies increased freight rates on the market and the crash of oil prices reduced operating costs. CAL adjusted its business strategy and actively increased cargo aircraft flights to airports in Western United States, Europe, and other regional routes to an average of more than one thousand flights each month. CAL added passenger and cargo flights to Oceania to help transport local agricultural and fishery products and effectively replenish emergency imports for these areas. Due to changes in the policies of China and the United States on disease prevention supplies, the export supply of disease prevention supplies such as facemasks gradually shifted from China to Southeast Asia towards the end of May, and the Company also began expanding passenger and cargo flights to Southeast Asia in June.

The passenger transport market was devastated by the pandemic but demand for cargo transport has remained strong. CAL maintains a positive outlook on the cargo transport market and plans to retain certain 747-400F cargo aircrafts, which were set to be replaced when 777F cargo aircrafts arrive, for a period of time to make full use of the market opportunities. CAL will continue to adjust the aircraft replacement schedule based on changes in the future cargo market.

Four Cargo Services

EXPRESS	CUSTOMIZED	SPECIALIZED	GENERAL
Introduction You will get the premium express cargo service and handle with money back guarantee. CAL handles Equation shipment with top priority from acceptance to delivery, and guarantees boarding on the first available flight.	**Introduction** A complete, top quality solution will be offered. Designed to meet your requirements, it is a perfect scheme under the tripartite contract among the Shipper, Freight Forwarder and CAL Cargo.	**Introduction** This is a specialized solution for special cargo with experience, attention and expertise that can transport to the final destination quickly and safely.	**Introduction** This general cargo solution is an airport to airport service with economic and reliable ways to manage your goods.
Advantages - Airport-to-airport express service - Top priority for load planning - The earliest pick-up time - The latest possible booking - Extensive worldwide network - Money back guarantee	**Advantages** - Customized service with loading priority and fixed rate - Regular performance report - Advanced techniques ensuring cargo safety - Various cargo types and long-distance freight capacity - A broad global service network	**Advantages** We have variations for precious artwork, heavy & oversize shipments, dangerous goods, perishable goods, live animals, pharmaceutical products, valuable goods, and all types of vehicles. Each variation is tailored to fit the specialized handling and loading procedures, as well as guarantee reliable service from our staff.	**Advantages** 24 / 7 online track and trace - Standard drop-off and delivery times at each station

Quality Cargo Service

According to the latest IATA statistics, CAL's FTK ranked sixth worldwide and first in Taiwan in 2018. CAL is committed to green transportation. In addition to continuously upgrading our passenger fleet, we will introduce the Boeing 777 Freighter in 2020 to greatly improve fuel efficiency. With extensive passenger and cargo fleet and network, CAL has been the industry's first choice to deliver diversified products, such as engines, perishables, temperature-controlled cabinets, precision equipment, and e-commerce cargo. In the future, CAL will optimize cargo service and provide better service quality for its customers.

1. Special Cargo Service

CAL cargo aircrafts fly around the world and have a wealth of experience in carrying general goods, precision instruments, large equipment, precious antiquities, live animals, and other special goods. CAL makes good use of the Boeing 747-400F cargo aircrafts to transport special-sized goods to provide safe and professional transportation services under the close supervision of dedicated CAL personnel.

CAL often helps transport critical national cultural relics and relief supplies. With its diverse experience in transportation and excellent quality of service, CAL has promoted cultural exchanges

between Taiwan and other countries. In response to the pandemic, CAL also provides new service models such as cargo flights with passenger aircrafts and using the passenger cabin for cargo transport. These measures help ensure employee safety and support disease prevention policies as we actively develop a variety of flexible cargo transport business models to ensure continuous operations of international logistics.

2. Upgraded Cold Chain Service

In response to increased demand for air transport of temperature-controlled goods (such as pharmaceuticals and vaccines), CAL has significantly improved its cold chain service. This included transportation of temperature-controlled containers, SOP for active / passive temperature-controlled cargo, and upgraded refrigeration / freezing equipment. In April 2019, Taipei Station passed the audit and obtained the CEIV Pharma certification, making CAL Taiwan's first airline to earn this certification. In the future, CAL will offer customized, refined cold chain service to provide diversified and quality temperature-controlled cargo service for customers around the world.

CAL actively prepares cold-chain transportation for vaccines and pharmaceuticals With comprehensive risk assessment and personnel training as well as compliance with the regulations of domestic and foreign civil aviation authorities and the aircraft manufacturers, CAL began relaxing restrictions on the maximum amount of dry ice permitted for various aircrafts and developed active / passive temperature-controlled container products for the transportation of vaccines under safe conditions. CAL actively provides major vaccine and pharmaceuticals manufacturers with logistics solutions to contribute to the protection of citizens' health. This demonstrated the innovation and flexibility of the CAL cargo transport team and demonstrated to citizens CAL's commitment and strength for becoming the "National Team of the Sky".

3. Cargo Safety Management

CAL has strengthened risk management measures, such as Safety Report System, cargo service management platform, ground damage database, and abnormal weather reporting mechanisms. CAL has also established a risk prevention mechanism with the risk assessment of the Safety Report System to prevent irregularities. In addition, CAL implemented walkaround check to enhance the management of warehouse and hanger operations. CAL also implements improvements based on the feedback provided in the quarterly service quality questionnaire for the ground service agency to ensure the quality of services.

4. e-Air Waybill & e-Freight

CAL promotes the e-air waybill and exchanges information with forwarders through electronic transmission, which reduces the operating costs of airlines and forwarders and avoids delays caused by input errors and missing documents. According to the latest e-AWB penetration rate released by IATA in 2019, CAL achieved its annual target ahead of schedule and ranked among the world's top 10 airlines.

In 2020, CAL continued to carry out paperless operations and e-air waybills for cargo service to / from Hong Kong, Singapore, Frankfurt, and the Americas. Starting from April, CAL expanded paperless operations for cargo service to / from Kuala Lumpur, Penang, Tokyo, Osaka, Fukuoka, Nagoya, and Amsterdam. CAL also gradually reduces the use of any documents for cargo on board the aforementioned routes to fulfill our responsibility for environmental sustainability.

5. Apron Mobility

Through wireless transmission, all cargo information and loading statuses are instantly transmitted to mobile devices for users to monitor cargo status after shipment from the warehouse and load cargo correctly.

The apron mobile plan was launched in 2017 and mobile system was used starting from August 2018. Before the launch, GHAs were trained and the programs and procedures were modified based on test results to avoid loading errors and omissions when pallets / containers are loaded onto aircrafts. By using handheld mobile device as a channel of communication with GHAs, CAL has reduced the idle time of field supervisors and improved cargo service personnel's productivity.

6. Professional Training

CAL organizes professional training courses, including dangerous goods regulations training / retraining, live animal and temperature-controlled goods regulations training, and heavy (Above 10 tons) & over-sized (Above 6 meters) cargo and engine delivery training on a regular basis to improve service quality and ensure that goods are carefully managed and professionally handled throughout the transportation process. To transport special goods, CAL has also trained professional handlers and formulated operational regulations to provide safe and professional transportation services.

7. Embargo on Illegal Animals and Plants

CAL supports IATA and UN's Sustainable Development Goals by signing the Buckingham Palace Declaration. CAL has also taken the following four concrete actions to fight against illegal wildlife trade and achieve environmental and ecological sustainability: "Expression and demonstration of agreement to tackle the illegal wildlife trade," "Information sharing and detection," "Practical measures to stop the transportation of illegal wildlife products," and "New mechanisms tackling illegal wildlife trade."

8. Authorized Economic Operator (AEO)

Being an authorized economic operator (AEO) helps CAL stay competitive in expanding business in the international trade supply chain and to cooperate with trading partners. After earning the AEO certification on January 19, 2012, CAL has carried out self-inspections based on safety evaluation items and certification standards every year and applied to the Customs for a field certification and audit every three years. Next year marks the ninth year after the certification. Starting from September 2020, the Cargo Sales, Marketing & Service Division has formed a management committee comprising the Cargo Sales, Marketing & Service Division, Corporate Safety Office, Human Resources Division, Information Management Division, Administration Division, Cargo Sales & Service, Taiwan, Engineering Division, and Inflight Supply Chain & Marketing Division to carry out annual self-inspections. A team from Taipei Customs of the Customs Administration conducted on-site inspections at CAL on December 1, 2020. CAL has applied for the calibration for the authorized economic operator (AEO) and was found to meet regulations in the review.

2-1-4 Information Security Management `GRI 206-1, 418-1`

Cyber Security Framework

CAL IT operations meet the standards of international cyber security standards and domestic cyber security regulations which are implemented in regular ICT operations. For this purpose, CAL has established the CAL Cyber Security Team with the Vice President of the Information Management Division as its convener. The convener reports the status of cyber security management to the Board of Directors every year. Chairman Su-Chien Hsieh is well qualified and has extensive experience in management and cyber security. He has earlier served as the chairman of Sabre Travel Network Taiwan Ltd. (Sabre), and is familiar with cyber security governance. He implements timely monitoring of information operations from an independent and objective perspective.
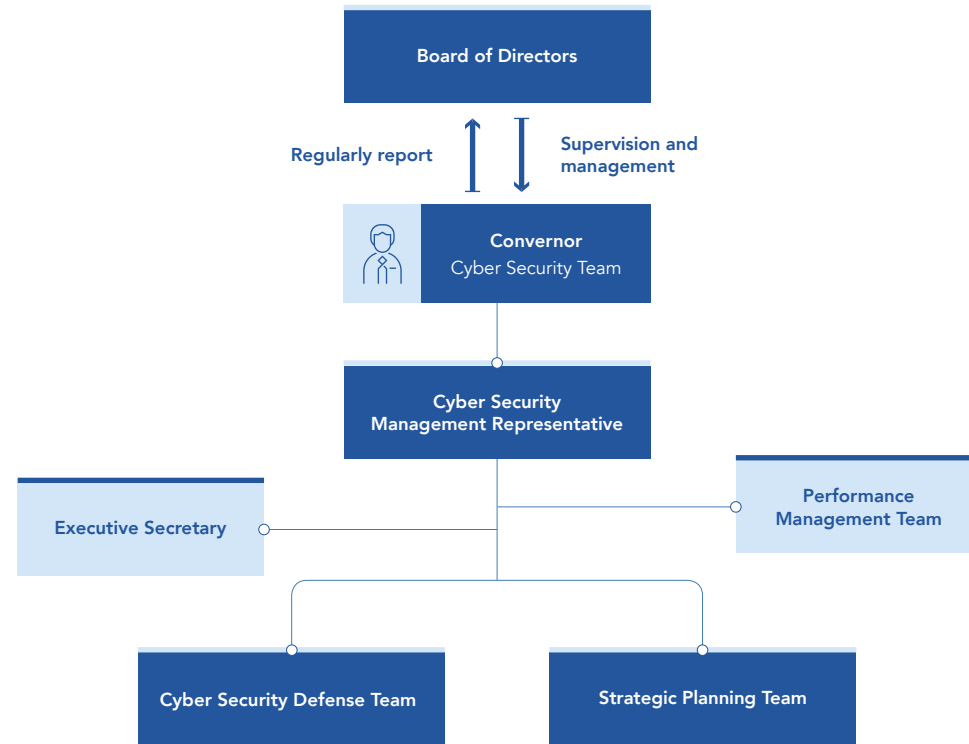
Cyber Security Management

In response to ever-changing nature of cyber-attacks, CAL has deployed relevant defense mechanisms and engaged external experts to conduct penetration tests and cyber security checks (including network architecture, detection of malicious activities, etc.) every year. In addition, CAL proactively reports cyber security issues and carries out contingency drills to review the effect of defense and resilience to such incidents. In each stage of system development and maintenance, weakness identification and repair are performed with various testing technologies to ensure the availability of service usage.

Cyber Security Operation & Maintenance

1. Regular Evaluations and Exercises

CAL conducts risk assessment of information and information and communication systems every year in accordance with the Cyber Security Management Act, and evaluates the cyber security responsibility levels of the core information and communication systems in aspects of confidentiality, integrity, availability, and compliance. We also develop a business continuity plan for the core information and communication systems and conduct business continuity exercises at least semi-annually to ensure that the Company can rapidly and effectively restore normal operations and

minimize potential losses. In addition, we also review and evaluate the business continuity plan to ensure the availability and integrity of the plan.

2. Cyber Security Education and Training

Each year, at least 4 cyber security and information technology personnel shall receive the cyber security professional program training or the cyber security competence training for not less than 12 hours. All employees must receive at least 3 hours of cyber security training every year and at least one social engineering exercise is implemented every 6 months to strengthen information security awareness. By using diverse methods for cyber security training, the Company also incorporates ethical management into employee performance evaluations and human resources policies. CAL has established a clear and effective rewards and disciplinary system to ensure compliance and implementation with the code of conduct for the workplace. The Information Management Division conducts self-inspections and compliance assessments every six months. Audits are carried out by the audit unit independently to ensure the operations of overall mechanism.

3. Notification of Cyber Security Incidents

The cyber security incident notification and response mechanism is initiated based on the level of cyber security incidents, and emergency preparedness, notification and response procedures are in place to control their impact and post-incident recovery. In this regard, CAL develops the security incident notification & contingency drill plan at the beginning of each year and completes internal cyber security exercise by the end of each year.

Notification Flowchart

Cyber Security Certification and Audit

The Company has established a more comprehensive management system to maintain the effectiveness of the certification. The Company implemented the annual Information Security Management System (ISMS) re-inspection for the core ICT systems in 2020 in accordance with ISO/IEC 27701:2013. The Company also made first attempt to implement the ISO/IEC 27701:2019 Privacy Information Management System (PIMS) standards that ISO released in August 2019. We expanded the requirements and implementation of the PIMS on the existing ISMS and obtained the certification in November 2020. Per examination by the Information Management Division in 2020, neither the monitoring nor warning information from the defense system, which detects threats to information security, was confirmed to be a security incident caused by hacker intrusion or virus infection.

Measures for Responding to the COVID-19 Pandemic

In response to the COVID-19 pandemic, Information Management Division of the Company established the "Office Isolation and Employee Home Isolation Information Operation Response Regulations" in February 2020. It also established the "Information Management Division Major Pandemic Response Regulations" and "Application System Operations and Maintenance Major Pandemic Response Regulations" so that if employees in Taiwan and abroad working from home encounter cyber security incidents or other disasters that cause the information system or network to fail, they can immediately report the failure and implement response measures. The Information Management Division regularly inspects firewall records and supervises network usage of VPN connections in accordance with company regulations. It also removes accounts without usage records, expired accounts, and accounts of transferred / former employees to reduce cyber security risks.

2–1–5 Privacy Management `GRI 206-1, 418-1`

Personal Data and Privacy Protection

CAL is committed to protecting personal data and customer privacy. We fully comply with the Personal Data Protection Act of the Republic of China, General Data Protection Regulation (GDPR), California Consumer Privacy Act (CCPA), and other relevant personal data protection regulations. This is expressly provided in the "Privacy Protection Policy and Statement" on the Company's official website. The applicable scope includes all employees of the Company as well as cases where the Company provides the personal data of a party to specific third parties. The Company shall also require such third parties to abide by the aforementioned "Privacy Protection Policy and Statement". CAL also established operation quality documents to regularly evaluate third-party contractors and audit personal data protection.

Personal Data Management Framework

To enhance our internal audit and personal data management, we have appointed a Data Protection Officer (DPO). We established the Data Protection & Quality Management Office in 2019 and created a personal data management system to implement, operate, monitor, review, maintain, and improve the Company's personal data protection targets and policies and ensure compliance with regulations. The Company has established a personal data management organization in accordance with the Personal Data Management System. The convener organizes the establishment of the Personal Data Management Committee to take charge of the implementation of the personal data management system. The organization of the aforementioned Personal Data Management Committee is shown in the figure. The responsibilities of the units are described in the operation quality documents for the procedures and operations of the Company's Personal Data Management Committee.
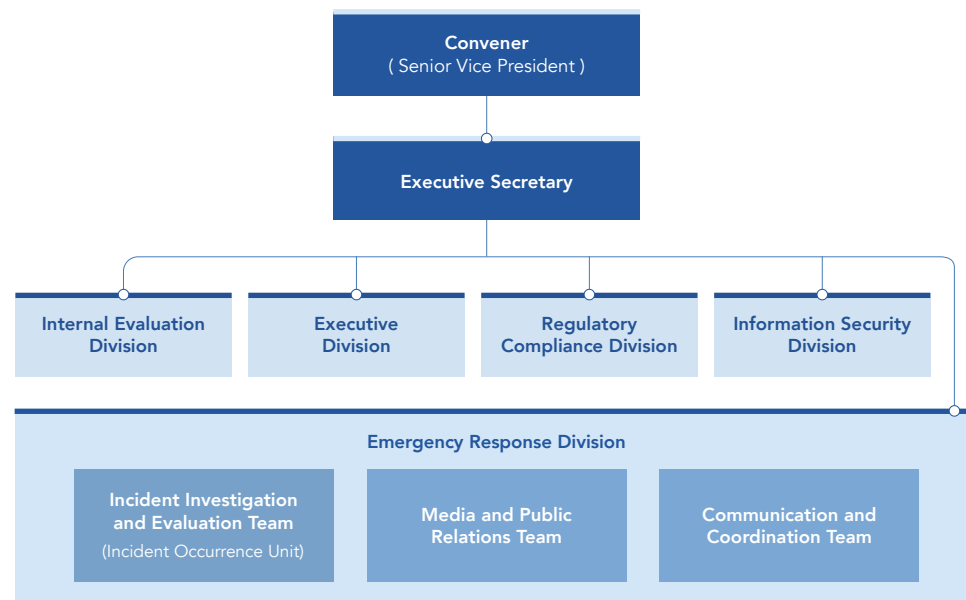
Inquiry Channels for Personal Data Rights

The Privacy Protection Policy and Statement on the Company's official website specifies how CAL collects, processes, or uses personal data in a reasonably secure manner within the specific purpose authorized by each customer, there is no secondary use other than the purposes authorized by customers and ensures that the customer can exercise their rights to inquiries, amendment, removal, restriction of personal data use, and withdrawal of consent under the applicable data protection law / regulation. Where a customer wishes to exercise any of the aforementioned personal data rights, the customer may use the "Enquiry and Request for Personal Data" online form or the DPO mailbox (DPO@china-airlines.com). The Company shall assign a designated unit based on the internal division of duties to process the case, and respond to the customer's request as soon as possible within the statutory period specified in the applicable data protection law / regulation.

Personal Data Risk Assessment Mechanisms

In order to implement legal compliance and identify the related risks in processing of personal data, the Company established operation quality documents to visualize and document all personal data processing. The members of the execution team formulate, review and update the business information framework and personal data inventories for the aforementioned personal data inventory operations each year. They also regularly review the categories of personal data held by the Company, execute risk assessments every year, and propose improvement plans based on the results of the assessment.

Personal Data Incident Response Mechanisms

For theft, alteration, leakage or loss of data, CAL has also prescribed a contingency plan and sound personal data protection mechanisms in accordance with the Regulations Governing Personal Information File Security Maintenance Plan and Processing Method for the Civil Air Transport Enterprise to ensure the accuracy and security of personal data.

CAL executed desktop personal data incident simulations and exercises in 2020 to ensure that related units handle personal data incidents in accordance with procedures in a prompt and appropriate manner. We also use the results of the exercise to review the effectiveness of operating procedures and the horizontal communication and response capabilities between units.

Personal Data Accident Contingency Flow

Personal Data Internal Audit and Training

The Company established the "Personal Data Audit and Continuous Improvement Management Procedures" to review whether the personal data management targets, management procedures, and safety management systems are fully implemented in accordance with plans, and ensure the effectiveness of the personal data management system. The personal data audit standards are established in accordance with the Personal Data Protection Act of the Republic of China, GDPR, Regulations Governing Personal Information File Security Maintenance Plan and Processing Method for the Civil Air Transport Enterprise, local personal data law / regulation, the "requirements for

Convener (Senior Vice President)

Executive Secretary

- Internal Evaluation Division
- Executive Division
- Regulatory Compliance Division
- Information Security Division

Emergency Response Division

- Incident Investigation and Evaluation Team (Incident Occurrence Unit)
- Media and Public Relations Team
- Communication and Coordination Team

properties of customers or external providers (including personal data)" in Article 8.5.3 of ISO 9001: 2015 Quality Management System, and related operation quality documents of the Data Protection & Quality Management Office for the execution of personal data audits. An internal audit is performed every year for auditing domestic personal data. The Company also audits oversea branch offices based on the personal data inventory progress. The "Corrective Action Response Form" issued based on the results of the audit is submitted to the "Personal Data Management Committee" for review. The Committee also tracks the corrective and preventive measures and the improvements for the results of risk assessments.

The Company provides all employees with regular training to enhance their personal data protection knowledge and code of conduct. The internal assessment teams regularly receive training for personal data management and audits. The Company organized personal data protection e-learning training in 2020 and more than 10,000 flight crew, ground staff, and maintenance personnel completed training. The Company also publishes personal data newsletter every quarter to update latest news / information and case studies with employees.

Privacy Protection Policy and Statement

2020 Personal Data Protection Milestones

1. Expansion of personal data protection to domestic and foreign branches
2. Completed personal data inventory, internal audit, and risk assessment across divisions / departments in Taiwan and foreign countries
3. Organized personal data protection training for all employees
4. Carried out regular contingency drills on personal data incidents
5. Held annual personal data management review meeting

Annual Personal Data Incidents

1. Internal: 0
2. External: (leak of customer data) 1

Note: The contingency team has been formed by relevant departments / divisions to handle personal data accident in accordance with Personal Data Accident Contingency Management Procedure. It effectively prevents damage within the required time and proposes review and improvement plans after the accident.

Future Plans

Flight Safety

1. Renewing Flight Safety Certifications

After obtaining the IATA Operational Safety Audit (IOSA) certification in 2005, CAL has participated in revaluation every two years in accordance with IATA regulations to ensure flight safety. The Company passed the IOSA revaluation for the ninth time in 2020. Due to the pandemic, the reevaluation was a comprehensive inspection performed through a remote audit. However, as the IOSA Remote Audit certificate is only valid for one year, the Company will organize the tenth IOSA Renewal Audit this year (2021) to continue to meet the highest international safety standards and offer passengers quality and reliable services.

2. Enhancing Resilience to Abnormal Flight Operations

CAL will continuously enhance aircraft monitoring systems, aircraft control personnel's professional knowledge, and emergency response to improve on-time performance and provide passengers with quality and reliable service.

3. Improving Weather Forecast Effectiveness and Enhancing Resilience to Abnormal Flight Operations

The Company signed a contract with Weathernews Inc. (WNI), a Japanese weather information company, for the purchase of an exclusive early warning system for volcanic ash clouds. The objective and accurate third-party information is used as the basis for dispatching and assigning flights. We also continue to enhance the professional weather knowledge of flight management personnel to ensure flight safety.

4. Improve Internal Communication Efficiency

The Company makes full use of its internal communication system to enhance the delivery of flight information and changes to all units. We established a communication platform on Team+ at the beginning of the pandemic to quickly announce flight Information and changes to all units.

Passenger Service

1. Enhancing Mobile Devices and Official Website Services

We will launch more user-friendly apps, website functions, and self-service initiatives online.

2. Cabin Management System Upgrade and CRM

To effectively monitor flight and important passenger information and increase overall customers' satisfaction, we have upgraded the Cabin Mobile Service Management System (iCS 2.0) and incorporated special remarks and other basic information of passengers and flights. The data is processed through backstage management and screening and the CRM system uses big data analysis to convert the data into effective information which can be used by related units.

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Contents

3. Upgraded Airport Services

To promote touchless services, reduce contact between airport personnel and passengers, and increase the security control level, the Company activated facial recognition boarding services with airport equipment in airports in the Americas such as San Francisco (SFO) and New York (JFK). Passengers can use the facial recognition system for boarding. If passenger data cannot be accessed by the facial recognition system, passengers can still obtain assistance from personnel on duty at the gate.

4. The Company will Continue to Implement Passenger Satisfaction Survey during the Pandemic to Maintain Service Quality

Cargo Service

1. Adjusting Capacity Flexibly in Response to Market Needs

CAL will continue to develop the network adjustment plan and optimize crew scheduling based on market needs to improve labor-management relations.

2. Introducing the Boeing 777 Freighter

Featuring superior performance and fuel efficiency, the Boeing 777 Freighter (B777F) will be introduced on major routes to effectively reduce operating costs, increase competitiveness, and achieve environmental sustainability in noise management and carbon emissions.

3. Continuously Promoting Premium Air Freight Cargo & Customized Service

With extensive cargo handling experience and B777F features, CAL aims to deliver more precision equipment, aviation supplies, temperature-controlled cargoes, and other high-priced cargoes, add more value to sales with excellent service, and promote revenue diversification.

Information Security

Obtaining Cyber Security Certifications

We obtained the PCI DSS and ISO 27001 Information Security Management System surveillance audit and the ISO 27701 Privacy Information Management System certification in order to maintain the validity of our credit card receipt system and privacy protection, reduce cyber security risks, and protect passengers' rights and interests.

Privacy Management

1. Personal Data Management System

The post-pandemic era has accelerated the digitalization of all industries as telework becomes an emerging trend. It has given rise to increased cyber security risks and requirements, and demonstrated the importance of personal data risk management. The Company complies with government policies during the pandemic and adopted various preventive measures and guidelines for workplace safety and sanitation (e.g., body temperature measurement and access control). We shall adhere to applicable personal data law / regulation and in an honest and good-faith manner, to use personal data within the necessary scope for specific purposes to legally collect, process, and use customers' personal data, and fulfill data security maintenance obligations. CAL will continue to implement the personal data management system, strengthen crisis management ability to personal data breaches and reduce risk of personal data accidents, and maintain customer trust.

2. Personal Data Protection Audit

The Company shall continue to execute the personal data protection audits for all domestic units. As the personal data protection audits in foreign countries are affected by the COVID-19 pandemic, the Company shall adjust the 2021 personal data audits for offshore sites in accordance with the government's disease prevention policies, and execute the personal data protection audits in the form of document reviews.

2-2

Human Resources

HIGHLIGHTS

108 people with disabilities employed

CAL was the only company in the industry to receive the Golden Wingspan Award.

CAL employed 108 people with disabilities.

TWD 13.92 billion

Invested in salary and benefits.

99.43% union participation

99.43% of employees participating in labor unions.

Management Approach `GRI 103-1, 103-2, 103-3`

➤ Importance of Material Issues

We view our employees as family. We are always willing to communicate with respect and strive to reach a mutual understanding through negotiation. We endeavor to create a more harmonious work environment based on an equitable, cooperative, and mutually respectful relationship. In such a work environment, labor and management reach a consensus through open, transparent negotiations and are more willing to communicate on collective agreement issues.

➤ Commitment and Long-term Goals

• Commitment

We view our employees as our most valuable assets. CAL has improved and optimized working conditions and the work environment to establish a safe and growing workplace. CAL respects each individual labor union and communicates on their stated demands with empathy, views the labor rights of every employee as our first priority, and gives the same level of respect and resources to all labor unions with neutrality.

Apart from regular labor-management meetings held by the Head Office and the China Airlines Employees Union (CAEU), a number of functional committees formed by management and CAEU have been established. CAL follows up and reports the results of follow-ups in the following meetings. CAL is dedicated to maintaining harmonious labor-management relations through open, efficient channels of communication, hoping that both the management and employees can work together to achieve equality and reciprocal outcomes.

• Long-term Goals

2023

1. Organizing eight insider sharing sessions to provide an opportunity for cross disciplinary networking
2. Optimizing CAL's aviation management talent training mechanisms
3. Percentage of female managers reaching 24.75%

2025

1. Completing the establishment of all internal online training materials for all specialties
2. Establishing the optimal learning path for CAL's aviation management talent pool
3. Percentage of female executives reaching 25%

2030

1. Applying to Taiwan's aviation talent development
2. Promoting Taiwan's aviation talent development
3. Percentage of female managers reaching 27%

➤ Unit in Charge

Corporate Sustainability Committee — Human Resources Task Force

➤ Management Mechanisms

- The meeting of Corporate Sustainability Committee, at least twice every year
- The Human Resources Task Force reports to Corporate Sustainability Committee, every quarter
- A labor-management meeting, every quarter on a regular basis
- The meeting of Occupational Safety and Health Committee, every quarter on a regular basis
- A personal information protection management review meeting, every year on a regular basis

➤ Objectives and Plans

Issue	KPI	2020			2021 Objectives
		Objectives	Performance	Achievement	
Occupational Safety and Health	Reduce the Frequency-Severity Indicator (FSI) by 5%	FSI 0.42	FSI 0.28	100%	FSI 0.42
	Pass the certification of occupational safety-related management systems	Passing ISO45001 and CNS45001 certification	Passed	100%	Pass the certification of ISO45001 and CNS45001 review
Labor-management Relations	Convene labor-management meetings	4 times	6 times	100%	4 times
Labor Rights	Convening seminars on sexual harassment prevention	1 online	1 online (e-Learning training)	100%	1 onsite

Note 1: Frequency-Severity Indicator (FSI) = $\sqrt{}$(Disabling Injury Frequency Rate, FR) × (Disabling Injury Severity Rate, SR) ÷ 1,000)

Note 2: 2016-2018 averages in the air transport industry published by the Ministry of Labor: FR = 4.14; SR = 102; and FSI = 0.65

➤ Grievance Mechanism

Employee Relationship Department: Human Resources Division —
E-mail: wecare@china-airlines.com

Stakeholder Contact

2-2-1 Human Rights Management Framework `GRI 406-1, 412-1`

To enforce the idea of human rights, CAL has established its human rights policies and related measures based on the UN Guiding Principles on Business and Human Rights, international trends, and local laws / regulations. CAL's human rights policies apply to CAL Group members and suppliers. The Human Resources Task Force under the Corporate Sustainability Committee is responsible for the management of human rights management in order to enhance CAL's ability to respond to human rights risks in the value chain.

China Airlines Human Rights Policy

Regulations and Procedures on Human Rights

Employee Code of Conduct

Employees should support company policies on human rights, fairly treat and respect for every employee, avoid infringing on the rights of others or become accomplice to human rights abuses. We not only implement policies to protect the human rights of employees, but have also established a management mechanism to ensure employee care. We do not use forced labor. We do not adopt race, gender, age, family, political affiliation or religious beliefs as the criteria for employee assignment, performance evaluation or promotion.

Human Resource Manual / Employee Complaints Regulation / Sexual Harassment Complaints and Disciplinary Actions Regulation

- Proclaimed employee human rights protection includes basic stipulations, freedom of employment, humane treatment, and prohibition of discrimination or sexual harassment.
- In August 2020, e-Learning on sexual harassment prevention was held, and 9,768 employees completed the training (100% completion rate).

Corporate Social Responsibility and Sustainable Development Best Practice Principles — Child Labor Prohibited

Hiring people younger less than 16 years old is strictly prohibited to fully compliant with legal minimum age for employment. To safeguard the physical and psychological health and safety of employees whose age are below 18, hazardous assignments are strictly prohibited.

Supplier Code of Conduct

Human rights standards were specified in the Supplier Code of Conduct include:

1. Prohibition of child labor / 2. Anti-discrimination / 3. Remuneration and working hours / 4. Freedom of labor / 5. Respect for freedom of assembly and association, and the right to collective agreement

Anti-discrimination Policies and Courses

Front-line staff must attend non-discriminatory policy courses for boarding passengers with physical and mental disabilities to ensure the interests of passengers.

In addition to complying with CAL Group's human rights policies, Mandarin Airlines and Tigerair Taiwan have incorporated management measures for equality and anti-discrimination and whistle-blowing channels into their regulations and organize training on a regular basis. In 2020, Mandarin Airlines organized a "Mandarin Airlines and Me" workshop on sexual harassment prevention, and a total of three sessions were held and attended by 33 employees. In September 2020, Tigerair Taiwan organized a seminar on Prevention of Sexual Harassment in the Workplace, in which 34 employees participated.

Procedures for Identifying Material Human Rights Issues

Identify the framework based on CAL Human Rights Policy

⌄

Human Resources Task Force Identifies and Reviews Human Rights issues of CAL Value Chain

⌄

Corporate Sustainability Committee Verifies Identified Issues

⌄

Unit in Charge Develops Improvement Measures

⌄

Human Resources Task Force Implements following Improvement

⌄

Disclose Identification Results and Improvement Actions
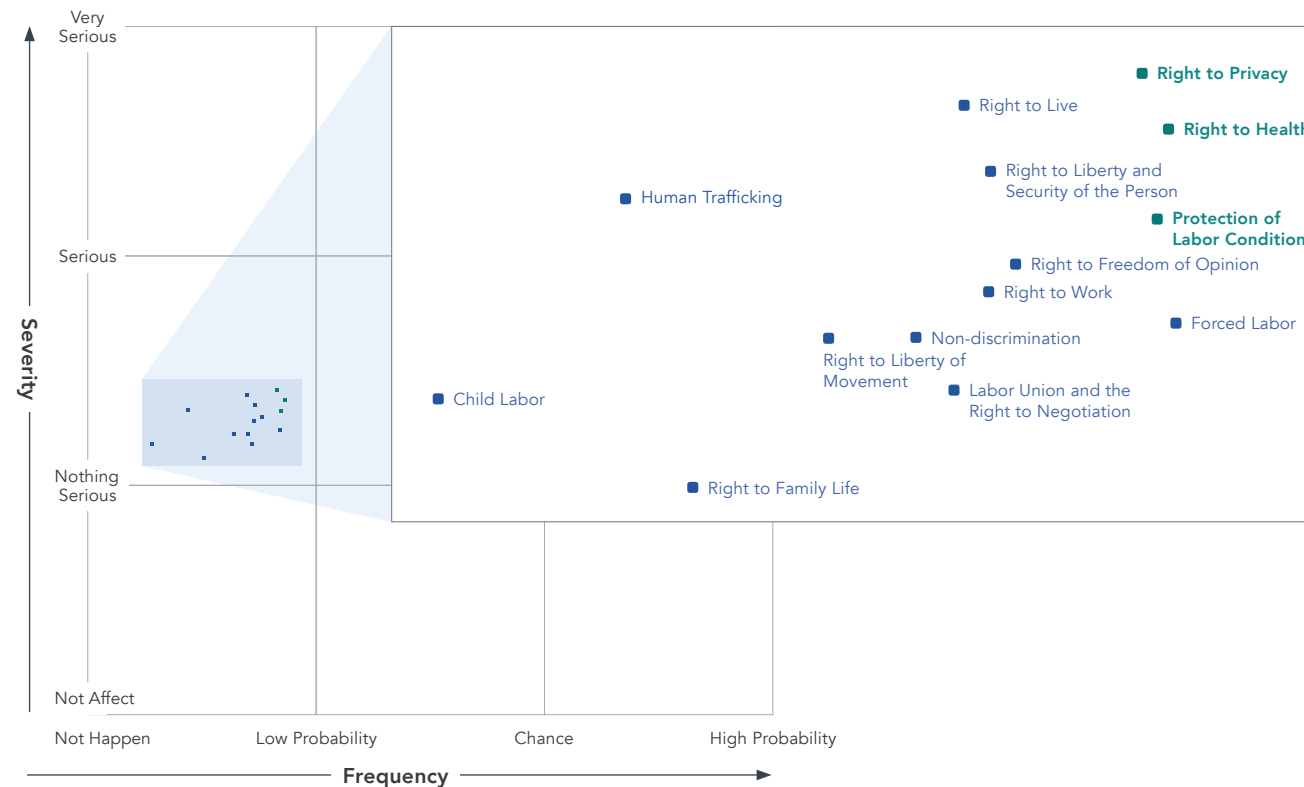
Human Rights Risks Identification Results

CAL has identified human rights risks independently in accordance with the United Nations Guiding Principles on Business and Human Rights. The Human Resources Task Force first selects material human rights issues of the year through internal and external stakeholder engagement and issues risk identification questionnaires to stakeholders in the value chain. In 2020, it analyzed the material human rights risk issues of the year based on 258 valid questionnaires, while reviewing the occurrence nodes of human rights risks and material risk issues throughout the value chain in order to perform human rights due diligence and develop mitigation and remedial measures. The overall human rights risk level for CAL in 2020 was low, but we are still responding to three relatively major risk issues, including the right to privacy, right to health, and the protection of labor condition

Material Human Rights Issues Identified

Mitigation and Remedial Measures for Material Human Rights Risks

In order to ensure the integrity of the human rights framework, CAL, in accordance with the United Nations Guiding Principles on Business and Human Rights on due diligence, worked with external consultants to develop and implement a human rights due diligence mechanism to review the mitigation and remedial measures for material human rights risk issues. Based on the three material risks identified in 2020, except that the protection of labor condition does not apply to the downstream of CAL's value chain, CAL has launched three major risk mitigation and remedial measures at each node of the value chain for various groups, including general, disabled, or minority employees in the upstream and midstream as well as general, children, disabled, and minority customers in the downstream. Relevant information is described below. For details, please refer to the appendix Management of Material Human Rights Issues in 2020.

The human rights risk management in CAL's entire value chain is described as follows:

Upstream (Supply Chain Partners)

Regarding the human rights management of upstream supply chain partners, CAL has gradually established a risk management mechanism of the sustainable supply chain since 2015. The management mechanism includes risk identification, on-site review, and tracking and improvement, while the management dimension includes governance, environment, society, and the general aspect. Among them, the human rights risk issues are the main management focus of the aspect of society. CAL has launched human rights issues that need to be managed in accordance with the Sustainable Supply Chain Management Policy and Supplier Code of Conduct. In addition to issues, such as child labor, discrimination, and freedom of association, the protection of labor condition and occupational safety and health issues related to the right to health are all the focus of CAL's evaluation and audit. As for the right to privacy, it is related to the information security management issues in the general aspect, which is also an existing management item in CAL's sustainable supply chain risk management mechanism. Each year, CAL adopts a periodic sustainable supply chain management mechanism to keep abreast of the management situation of various human rights risk issues by supply chain partners and their mitigation and improvement approaches in the case of high-risk situations. In 2020, in response to the COVID-19 pandemic, CAL required its suppliers to provide a healthy, safe, and hygienic workplace to promote overall safety for the workforce. For more sustainable supply chain management measures, please refer to Chapter 2-3-2 Sustainable Supply Chain Management in the Cooperation section of this report.

Midstream (CAL's Operations)

In terms of employee privacy management, the Company has set up a "personal information management system;" By implementing the maintenance and management of personal data files, the impact of personal data file violations can be reduced. The labor conditions of employees are all focused on moving towards being superior to the laws and regulations, as well as industry standards. Various committees with labor participation are run regularly to continuously improve and ensure the labor rights of employees. With regard to the management of employees' right to health, CAL has set up the Occupational Safety and Health Committee and introduced the ISO 45001: 2018 and TOSHMS occupational health and safety management systems to identify and control occupational accident risks in the workplace based on the level of the risks, to ensure employees'

safety and health at work. For more details on the management measures of employees' labor conditions and right to health, please refer to Chapters 2-2-2 Recruitment and Retention, 2-2-4 Employee Rights, and 2-2-5 Healthy and Safe Workplace.

In addition to the material human rights risks identified in 2020, CAL upholds an open attitude toward employees' joining in the union. As each CAL employee is an ex-officio member of the corporate union, they can participate in various union affairs or be directly selected as leaders in the union. CAL regularly holds negotiation meetings with the corporate union to listen to the voice of the union; employees can also join occupational unions outside the Company according to their own wishes, and CAL maintains an equally open attitude toward employees' joining of external occupational unions and does not resist substantive negotiations with any union.

CAL has established diversified communication channels, including regular labor-management negotiation meetings, an employee care mailbox, a sexual harassment mailbox and associated grievance hotline, the "Speak Your Mind" Employee Portal, and Team+, an internal messaging software so that employees can put forward their opinions or suggestions. In addition, CAL has formulated the Employee Grievance Regulations. When employees' rights and interests are infringed or handled improperly, they can file a complaint in accordance with the regulations. If they disagree with the results of the complaint, they can re-file the complaint to protect their own basic rights. In 2020, there were eight complaints from CAL employees, mainly related to disciplinary matters, all of which have been responded to and closed. As of the end of December 2020, there was one case of a workplace violation complaint filed by three complainants to Tigerair Taiwan, namely verbal abuse and psychological violence complaints, which were reviewed and handled in accordance with the procedures.

Employee Grievance Cases from 2018 to 2020

Item	2018	2019	2020
Performance Review	5	1	4
Concessional Flight Tickets	10	2	0
Leave of Absence	2	0	2
Disciplinary Actions	5	1	1
Occupational Disasters	2	5	1
Total	24	9	8

Employee Grievance

CAL Employee Grievances
- E-mail: wecare@china-airlines.com

CAL Grievances against Sexual Harassment
- TEL: (03) 399-8922
- E-mail: SHC@china-airlines.com

Mandarin Airlines Employee Grievance / Grievances against Sexual Harassment
- TEL: (02) 2514-2050
- E-mail: SHC@email.mandarin-airlines.com

Tigerair Taiwan Employee Grievance
- E-mail: talktome@tigerairtw.com

Tigerair Taiwan Grievances against Sexual Harassment
- TEL: (02) 7735-6930
- E-mail: talktome@tigerairtw.com

We pledge ourselves to put an end to sexual harassment. Continuing education on sexual harassment prevention is conducted annually for new recruits and existing employees, and course materials are available for employee access on the CAL website. CAL also puts up posters in duty rooms, communicating definitions and types of sexual harassment, as well as grievance channels, to front-line employees. Employees can file sexual harassment grievances via the sexual harassment mailbox, hotline, or e-mail account. If the sexual harassment perpetrator is a CAL employee, the Human Resources Division will initiate an investigation and convene a meeting of the Complaint Review Committee within 7 days after receiving the grievance. No less than half the members of the Complaint Review Committee are female. If the incident is defined as a case of sexual harassment, disciplinary actions or other measures will be taken; and, depending on each incident, psychological counseling may be arranged for both the perpetrator and the victim. If the perpetrator of the incident is not a CAL employee, CAL will assist the victim with legal aid. Mandarin Airlines has published a statement about the ban on sexual assault and

harassment and posted information on sexual harassment prevention on the EIP website. An annual report on grievances regarding sexual harassment is made by the end of every year for follow-up. Besides Mandarin Airlines, Tigerair Taiwan also takes sexual harassment seriously. Every new employee of Tigerair Taiwan is required to complete the training course on regulations concerning sexual harassment prevention and grievances through the regulations which disclosed on the employees' public portal. There were no sexual harassment cases in 2020 for CAL, Mandarin Airlines, or Tigerair Taiwan.

Grievances against Sexual Harassment from 2018-2020

| Item	2018	2019	2020
Number of Grievances	3	2	0
Number of Filing	2	1	0
Category	Improper behavior	Improper behavior	-
Outcome	Administrative disciplinary actions	Administrative disciplinary actions	-

Downstream (Customers)

For customer privacy protection, CAL has hired an external professional consultant team to serve as the consultant for CAL's personal information protection mechanism, introduced the personal information management system, and set up the Personal Information Management Committee for maintenance and management of personal data files. Each division / department of CAL has also completed personal information risk assessments in 2020 and formulated the Privacy Protection Policy and Statement regarding the collection, use, acquisition, or change of customers' personal data, revision of privacy protection/security statement and commitment to maintaining confidentiality of information, which are all publicly disclosed on the Company's official website. Regarding the customers' right to health, CAL has long been aiming at zero flight accident. As early as since 2007, it has implemented the "safety management system" to ensure and improve the safety level of its products and services through risk identification as well as analysis and management. CAL also has a "Flight First-Aid Advisory System," which allows customers to obtain professional medical advice if they are feeling unwell during check-in, boarding, or flight. In response to the COVID-19 pandemic in 2020, a series of

preventive measures have been implemented from check-in to arrival at the destination to protect passengers' health. These measures include requiring passengers to wear masks throughout the flight, maintaining social distances, adjusting flight arrangements, and adjusting the in-flight catering to meet passengers' dietary needs. For more management measures to ensure customers' right to health, please refer to Chapter 2-1-1 Flight Safety in the Trust section of this report.

2-2-2 Recruitment and Retention `GRI 102-8, 202-2, 401-1, 405-1`

Human Resource Management System

The Company recruits and selects employees according to the needs of human resources and the duties required. The recruited employees receive preservice training based on their duties and take up their posts after passing pre-service training (continuous on-the-job training is required after taking up their posts). Their performances will be evaluated on a regular basis. According to the regulations, outstanding performers will be rewarded or reported for promotion, and appropriate rotations will be arranged. At the end of each year, employees will be rewarded based on Company's business performance; and the Company has also established favorable employee benefits and multiple channels of communication. CAL regularly conducts employee satisfaction surveys, then reviews feedback and makes improvement accordingly in order to increase employee retention willingness.
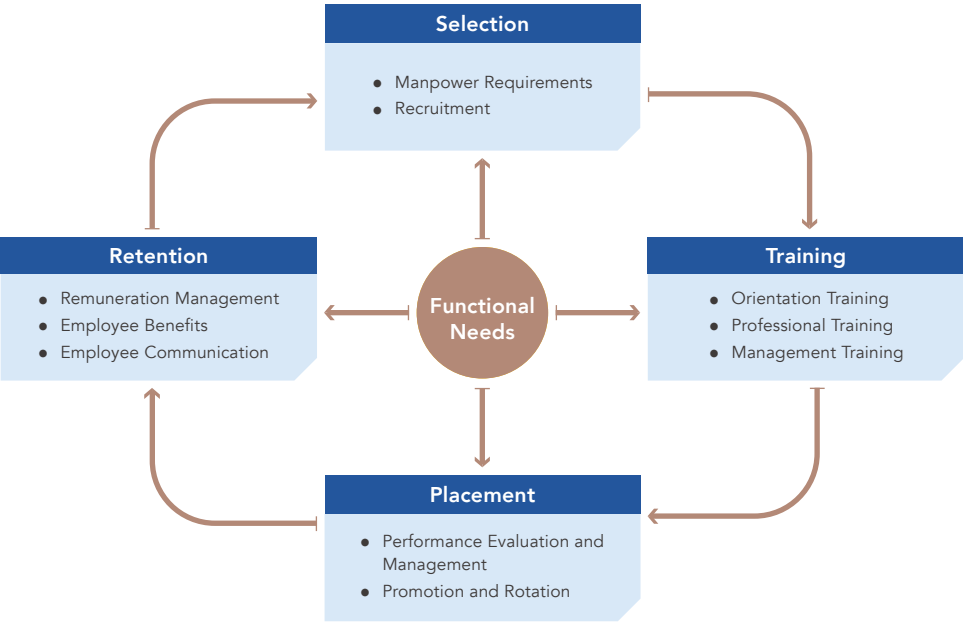
Workforce Structure of CAL Group

As of the end of 2020, the total number of employees of CAL, Mandarin Airlines, and Tigerair Taiwan were 11,390, 951, and 728, respectively. The number of employees employed by the three airlines is in compliance with the regulations (detailed Workforce Structure tables in the Appendix).

Category	Total	Male	Female
Full-time Employees	11,347	5,862	5,485
Contracted Employees	43	23	20
Total	11,390	5,885	5,505

Note: The total number includes 79 indigenous employees (males 40 and females 41) and 108 disabled employees (males 77 and females 31)

Category	Total	Male	Female
Full-time Employees	951	460	491
Contracted Employees	0	0	0
Total	951	460	491

Note: The total number includes 8 indigenous employees (males 0 and females 8) and 4 disabled employees (males 3 and females 1)

Category	Total	Male	Female
Full-time Employees	728	325	403
Contracted Employees	0	0	0
Total	728	325	403

Note: The total number includes 6 indigenous employees (males 3 and females 3) and 4 disabled employees (males 2 and females 2)

Gender Equality and Diversity

We place great importance in gender equality. In 2020, female employees of CAL accounted for 48.33% of the total CAL workforce and 27.24% of all managerial positions were held by females. At Mandarin Airlines, female employees accounted for 51.63% of the total workforce, and 25.51% of the managerial positions were held by females. At Tigerair Taiwan, female employees accounted for 55.36% of the total workforce, with female managers representing 44.83% of all managerial positions. Due to the nature of the aviation industry, CAL has a higher demand for professionals in certain fields of expertise, leading to a male / female gap that is common in society. CAL is committed to providing a comfortable work environment that is conducive of balanced career development for all employees, regardless of gender. In order to safeguard the well-being and right to work of female employees, when a female flight attendant is pregnant, she may apply for unpaid leave or request a transfer to ground services. Upon completion of maternity leave, she may then apply to resume her duties as a flight attendant. In addition, two breastfeeding rooms have been set up at CAL Park for female employees to use at any time. We also provide our male employees benefits that are better than required by the Act of Gender Equality in Employment. A male employee may apply for 5-day paternity leave with full pay during childbirth. In addition, to help our employees achieve work-life balance, CAL has signed agreements with 10 daycare centers and kindergartens in 2020 to provide special discounts for CAL employees.

CAL values diversity in the workforce. In 2020, CAL employed 79 (0.69%) indigenous employees and 108 (0.95%) employees with disabilities. In addition to our commitment to expanding employment among indigenous people, we have employed staff with disabilities at a higher proportion than prescribed by law since September 2015. CAL received the Excellency Award at the Golden Wingspan Awards in 2016. We have redesigned job descriptions for employees with disabilities with a focus on improving working conditions and making adjustments to job requirements and career development. We also provide shuttle buses and regularly-scheduled health examinations for our employees with disabilities. In addition, we have signed long-term service contracts with visually impaired massage therapists to provide employees with free on-site massages, thereby providing job opportunities for the visually impaired and enhancing our employees' health at the same time.

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Workforce Diversity of CAL Group in 2020

China Airlines

		Male	Female
Business	Under 30	197	433
	31-50	744	1,089
	Above 51	422	330
Air service	Under 30	137	519
	31-50	1,032	1,857
	Above 51	418	349
Maintenance	Under 30	366	28
	31-50	1,119	53
	Above 51	698	14
Others	Under 30	49	91
	31-50	333	510
	Above 51	370	232

Mandarin Airlines

		Male	Female
Business	Under 30	45	120
	31-50	81	133
	Above 51	26	16
Air service	Under 30	9	40
	31-50	72	90
	Above 51	30	4
Maintenance	Under 30	10	0
	31-50	72	8
	Above 51	51	3
Others	Under 30	12	24
	31-50	24	36
	Above 51	28	17

Tigerair Taiwan

		Male	Female
Business	Under 30	65	127
	31-50	53	92
	Above 51	17	6
Air service	Under 30	30	107
	31-50	88	52
	Above 51	31	0
Maintenance	Under 30	3	0
	31-50	11	1
	Above 51	12	0
Others	Under 30	5	8
	31-50	7	7
	Above 51	3	3

Local Employees

The flight network of CAL spans across the globe, and a large number of job opportunities are available. This results in contributions to local employment and economic development. About 86.63% of all CAL employees are based in Taiwan. The composition of CAL's international employees includes foreign pilots from 20 countries, and flight attendants from Vietnam, Japan, and Thailand. We also employ local employees at our 159 destinations cities in 29 countries around the world. CAL endeavors to provide a friendly work environment for our international employees, with equal opportunities and benefits to our Taiwanese employees.

Recruitment

Due to CAL Group's business growth and fleet / flight network expansion in recent years, we have recruited in various areas to meet the requirements of our growing business. To fulfill our commitment to social responsibility, we continue to promote industry-academia collaboration programs and employ people with disabilities. In 2020, CAL recruited 208 employees, including 129 full-time employees and 79 contract employees, accounting for 1.83% of the total workforce. Mandarin Airlines recruited 44 full-time employees, accounting for 4.63% of the total workforce. Tigerair Taiwan also employed 47 full-time employees and 39 contracted employees, accounting for 11.81% of the total workforce.

Local Employment of CAL Group in 2020

Company	Region	Employees	Management
China Airlines	Taiwan	98.80%	100.00%
	China	97.22%	44.74%
	Asia	93.31%	47.37%
	Americas	66.22%	32.50%
	Europe	45.56%	33.33%
	Oceania	63.16%	23.08%
Mandarin Airlines	Taiwan	100.00%	100.00%
	China	91.18%	16.18%
Tigerair Taiwan	Taiwan	96.70%	100.00%
	Asia	100.00%	100.00%

New Employees of CAL Group in 2020

Full-time Empoloyee
129
44
47

Contracted Empoloyees
79
0
39

Total **208** (1.83%)
Total **44** (4.63%)
Total **86** (11.81%)

Age | **Gender** | **Region**

Age:
31-50 **66** (32%)
▼30 **122** (59%) ▲51 **20** (9%)

Gender:
Male **85** (41%) Female **123** (59%)

Region:
Taiwan **122** (59%) China **2** (1%) Asia **68** (33%)
USA **9** (4%) Europe **3** (1%) Oceania **4** (2%)

Age:
31-50 **9** (21%)
▼30 **27** (61%) ▲51 **8** (18%)

Gender:
Male **30** (68%) Female **14** (32%)

Region:
Taiwan **42** (95%) China **2** (5%)

Age:
31-50 **18** (21%)
▼30 **63** (73%) ▲51 **5** (6%)

Gender:
Male **38** (44%) Female **48** (56%)

Region:
Taiwan **86** (100%)

Employee Turnover

Over the past three years, the average employee turnover of CAL has been 6.11%. Each of our employees is safeguarded by an employment contract, and each contract clearly sets forth provisions regarding rewards, disciplinary actions, and employment termination. In addition, rules concerning termination of employment and the number of days required for a notice of resignation comply with the Labor Standards Act. With respect to locations where employee turnover rates are relatively high, we evaluate local labor-related regulations and wage levels and refer to comments made by resigning employees and local supervisors to see whether adjustments are needed in our salary and benefit practices. We also utilize internal systems and incentive programs to reduce turnover rates (please refer to the appendix Employee Turnover Rate table).

At CAL, the employee turnover in 2020 increased by 1.21% compared to that in 2019, and the involuntary separation rate increased by 22.71% compared to that in 2019 mainly due mainly to the heavy impact of the COVID-19 pandemic. There were 59 employees who left due to human resources streamlining management and expiration of contracts in 2020. No significant difference in turnover was reported in other separation categories. Voluntary turnover numbers dropped significantly by 102 people compared to 2019. CAL will continuously optimize internal management to maintain low turnover.

At Mandarin Airlines, employee turnover in 2020 arose by 0.08% compared to 2019, mainly due to seasonal short-term demand for labor, then after the employees' contracts expired there was no contract renewal due to a lack of demand for labor; some resigned due to personal career plans. In the future, Mandarin Airlines will provide a variety of communication channels for existing employees and improve employee benefits to retain staff.

Tigerair Taiwan's turnover decreased by 1.91% in 2020 over 2019, primarily due to personal career plans. In addition, due to the impact of the pandemic this year, 15 trained flight attendants also terminated their training. Tigerair Taiwan will continue to focus on improving its competitive advantages, and provide diversified work environment and opportunities to retain outstanding employees.

Employee Turnover Rate of CAL Group from 2018 to 2020
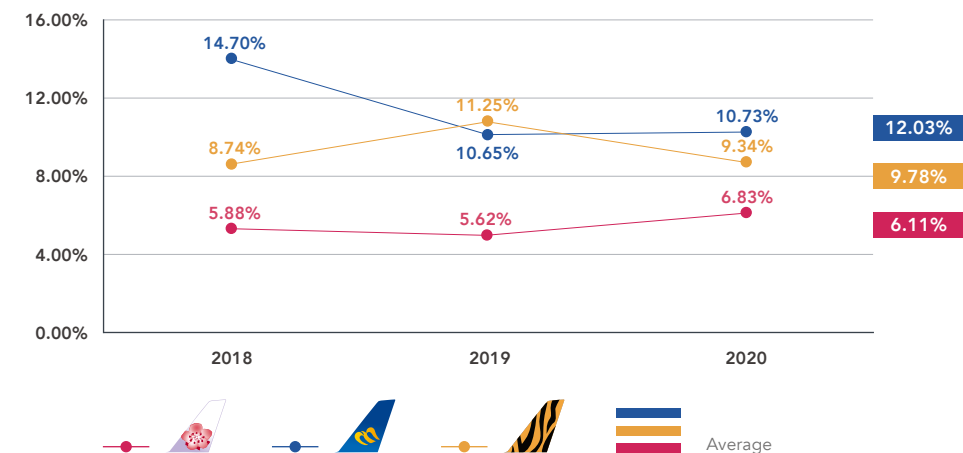
2018: 14.70%, 8.74%, 5.88%
2019: 10.65%, 11.25%, 5.62%
2020: 10.73%, 9.34%, 6.83%

12.03%
9.78%
6.11%

Average

Employee Retention

Periodic Performance Evaluations Conducted on a Fair and Objective Basis

CAL conducts an employee performance evaluation three times a year. Except for employees who have worked for less than a certain period of time, all employees are covered in the performance evaluation. Apart from evaluations on general performance, core function assessment indicators and approaches are also adopted based on each employee's professional characteristics and in consideration of the actual working conditions of the employee under evaluation. With respect to all managerial levels, a specific annual Management by objectives (MBO) framework has been established based on CAL's business strategies in addition to job assessment indicators.

To make the assessment process impartial and objective, each employee is evaluated by several supervisors, and performance grades are also allocated according to different job rankings. In addition, to ensure that the performance evaluation provides employees positive feedback and assistance and facilitates communication and interaction between supervisors and employees, interviews are also included in the performance evaluation.

A two-way assessment scheme has been formulated for evaluating the performance of all flight attendants. Flight attendants who have worked for more than one year are evaluated and assigned ratings based on their attendance, reward / disciplinary actions, and performance within a reasonable range and based on employee classification to avoid subjective impressions which could detract from the impartiality of the performance evaluation.

Sound Remuneration System

Every year, CAL offers employees reasonable remuneration packages, related benefits, and insurance coverage based on CAL's overall salary policy and earnings. Performance-based salary adjustments and promotions are also possible for outstanding employees, ensuring that the promotion process is conducted in accordance with the principles of transparency and fairness. In addition, we provide various types of allowances and benefits (such as dividends, education and training, employee stock options, concessional airfares, and work allowances) and flexible benefit programs (such as retirement packages) to meet employees' various needs. Apart from enhancing the bond between employees and the management, this arrangement can also raise employee satisfaction and retention rates.
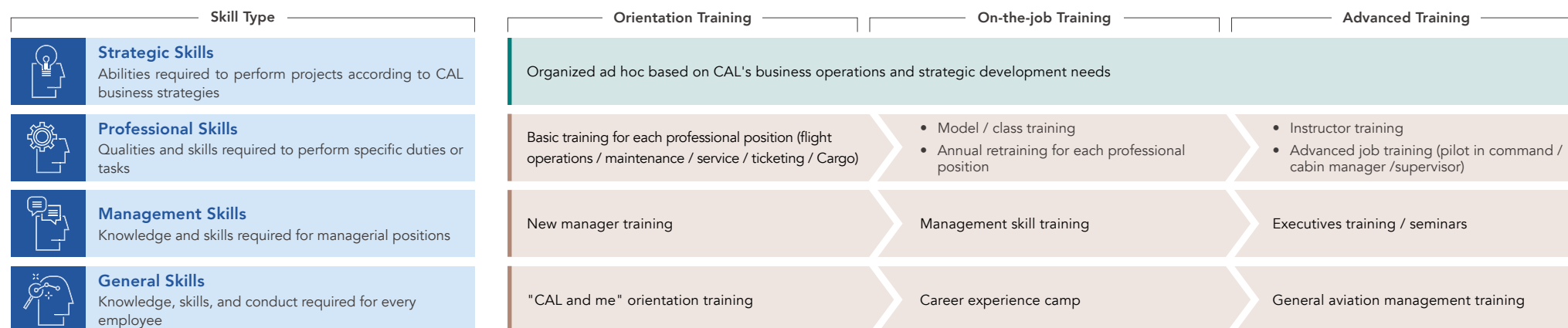
2-2-3 Employee Development   GRI 404-1, I 404-2

Sound Training System and Framework

CAL has established a sound training system and framework to develop aviation professionals. We adopt diversified training methods, including on-site and online training courses, invest in training hardware and software. CAL values the functional development of employees and integrates fundamental aviation training with hands-on practice. In addition, CAL organizes business strategy and management related training for all managerial levels and employees with potential on a regular basis to improve their horizons and expertise.

Based on the demand of education and training, the Training Advisory Committee has been established to plan annual education and training activities for all employees. The primary strategic goal of CAL's training and development program is to enhance employees' job skills. Adopting the training framework of China Airlines Lecture Hall, CAL ensures that all employees are equipped with skills to perform their duties and job functions.

CAL has established the Talent Development Committee, chaired by the President, with senior vice presidents serving as members. The Talent Development Committee is responsible for regularly reviewing and improving training for potential talents. Each department refers potential talents to the Talent Development Committee, which then determines their qualifications and development paths. During training, potential talents are provided with appropriate job rotations and management skill training, in order to build their management capacity and experience. For a long time, both at home and abroad, CAL has sought out and successfully trained many potential talents to serve as unit chiefs. CAL will continue to provide them with opportunities to develop their careers, in hopes of achieving corporate sustainability.

In 2020, CAL invested about TWD 158 million in employee training and development (the average amount is about TWD 14,000). The total number of training hours (including onsite and online courses) exceeded 350,000 (the average hours is about 34.5), and the completion rate of training reached 99.36% (please refer to the appendix Training Statistics of CAL Group tables).

Training Framework

Skill Type	Orientation Training	On-the-job Training	Advanced Training
Strategic Skills Abilities required to perform projects according to CAL business strategies	Organized ad hoc based on CAL's business operations and strategic development needs		
Professional Skills Qualities and skills required to perform specific duties or tasks	Basic training for each professional position (flight operations / maintenance / service / ticketing / Cargo)	• Model / class training • Annual retraining for each professional position	• Instructor training • Advanced job training (pilot in command / cabin manager /supervisor)
Management Skills Knowledge and skills required for managerial positions	New manager training	Management skill training	Executives training / seminars
General Skills Knowledge, skills, and conduct required for every employee	"CAL and me" orientation training	Career experience camp	General aviation management training

Note: In addition to the above training programs, CAL encourages employees to participate in work-related trainings organized by the Ministry of Labor's Workforce Development Agency, by offering training allowances to employees who pay tuition at their own expense (20% of tuition).

Sound Internal Recruitment and Rotation System

CAL is committed to upholding the principle of assigning each staff member to a proper position. We offer regular job rotations and internal training courses to improve our employees' job skills and overall productivity. Each department determines whether to rotate employees, based on their labor needs; in addition, we have established an internal recruitment system, so that employees can participate in the selection processes in accordance with their wishes and ambitions. This allows CAL to utilize its human resources in a flexible manner and ensures that employees are assigned to the most proper positions, resulting in a win-win situation for both parties. Due to coping with the heavy impact of COVID-19, CAL had adjusted business strategy, the percentage of open positions filled by internal candidates (38.36%) was affected.

To utilize management with flexibility and to ensure that they are assigned to the most proper positions with improved competency, CAL conducts a management review and rotation evaluation on a regular basis. Managers working in domestic departments and outstations or joint venture companies for three years will be included in the management review and rotation evaluation based on relevant regulations.

Human Capital ROI

Through education and training, employees can grow along with CAL's strategic and business goals. Meanwhile, corporate assets will also accumulated in value and provide CAL with a solid foundation for long-term viability. CAL has recently adopted the Human Capital Return on Investment (HCROI) metric as a benchmark tool. In addition to estimating earnings from investing in human capital, the metric can also be included in Company's long-term performance indicators. Although the COVID-19 pandemic significantly reduced revenue from passenger transport in 2020, CAL has effectively controlled related operating costs and achieved higher revenue from cargo transport compared to 2019. The overall ROI was therefore higher than 2019.

2018	2019	2020
1.09	1.00	1.26

Note: Human Capital ROI = Income - [Operating expenses - (Salary + Benefits)] / (Salary + Benefits).

Details of Employee Development Programs to Accommodate the Company's Business Objectives for 2020

Employee Development Program	Business Benefits	Quantitative Impact of Business Benefits	Proportion of Employees Participation in the Program
Strengthen Passenger Transport Revenue Management Skills Conduct a series of training on revenue management skills for passenger transport staff in line with the renewal of the revenue management system (Around TWD 945,000 in training investment)	1. Improve the professional skills and knowledge of passenger and cargo transport marketing personnel 2. Improve the accuracy of passenger transportation resources utilization to increase passenger transportation revenue	It is estimated that passenger revenues will increase by approximately 2% (Note) which is more than expected (Due to the impact of COVID-19, the effectiveness of the investment could not be revealed).	Proportion to total employees: 1.0%
Add on Cargo Revenue Related Training 1. Strengthen cargo operation personnel's related cargo transport professional knowledge 2. Increase the number of flight crew members for cargo aircrafts (Around TWD 44.37 million in training investment)	Enhance cargo marketing effectiveness and fleet capacity to increase cargo aircraft revenue	Cargo aircraft revenue for 2020 increased by TWD 26,793 million compared to 2019	Proportion to total employees: 1.2%

Note: "Source: History of revenue management from leg to O&D", Journal of Revenue and Pricing Management (2016) 15, 236-241.

Industry-Academia Collaboration

CAL has promoted its campus talent development program since 2013 by taking advantage of its abundant practical experience and sound aviation training facilities and courses. In response to the government's policy on industry-academia collaboration and talent development, CAL has cooperated with colleges and universities nationwide to offer internship programs that last for six months to one year in variety fields.

CAL also offers interns scholarships and allowances and arranges training courses for them. To start an internship, interns are required to pass the training courses first. In 2020, for the tenth consecutive year since 2011, CAL was awarded as a Top 20 Youngsters' Favorite Brand by Cheers magazine. Through industry-academia collaboration, CAL will continue to provide students with opportunities to gain aviation expertise and make their career plans, and thus help CAL recruit potential talents.

In 2020, a total of 110 students participated in the industry-academia collaboration programs and summer internship programs.

2020 Ground Service Division Internship Training Course Completion Ceremony

2020 Ground Service Division Industry Student Training Course

Industry-Academia Collaboration in 2020

Education Technology and Visual Design	Fu Jen Catholic University; Tamkang University

Information Technology	Ming Chuan University; Hsing Wu University

Ground Services (1-year term)	Dayeh University; Chung Yuan Christian University; China University of Science and Technology; Wenzao Ursuline University of Languages; Tainan University of Technology; Chang Jung Christian University; National Kaohsiung University of Science and Technology; National Taiwan Ocean University; National Yunlin University of Science and Technology; National Taipei University of Nursing and Health Science; Feng Chia University; Kainan University; I-Shou University; Vanung University; Overseas Chinese University; Shih Chien University (Kaohsiung Campus); Fu Jen Catholic University; Ming Chuan University; Takming University of Science and Technology; Hsing Wu University; Providence University; Lunghwa University of Science and Technology

Ground services (short-term)	Chung Yuan Christian University; Yuan Ze University; Soochow University; Kainan University; Vanung University; Shih Chien University; National Taipei University of Business; Fu Jen Catholic University

Cargo Transport (6-month term)	Chang Jung Christian University; National Chung Hsing University; National Formosa University; National Kaohsiung University of Science and Technology; Feng Chia University

Kaohsiung Office (6-month term)	Chung Yuan Christian University; Meiho University; National University of Kaohsiung; National Kaohsiung University of Science and Technology; National Yunlin University of Science and Technology; National Chi Nan University; Feng Chia University; I-Shou University; Shih Chien University (Kaohsiung Campus); Providence University

2-2-4 Employee Rights

GRI 102-41, 201-3, 401-2, 401-3, 402-1, 405-2

CAL attaches great importance to the opinions and well-being of our employees. In addition to regular reviews of employees' salary and benefit and labor-management meetings, CAL has established a number of communication channels and activities to enhance cohesion. CAL also respects the independence of labor unions in accordance with the law and promotes positive communication with labor unions.

Employee Care

Salary and Benefits

CAL firmly believes that employees are the most valuable assets and that it is important to protect both employee benefits and shareholders' equity. For these reasons, CAL provides competitive salaries and benefits for all employees. The salary and benefit package of each employee will not differ according to gender, race, religion, political affiliation, or marital status. Whenever the minimum wage of a particular global location is raised, we promptly review our salary standards and make necessary adjustments in a timely manner. In 2020, CAL adjusted salaries by 1.67% on average. Employees who are required to work overtime due to the nature of their employment receive reasonable overtime pay, in accordance with regulations. No employee is forced to work against his or her will.

Male / Female Salary Ratio of CAL Group in 2020 (Female Salary is 1)

Company						
Category	Base Salary	Bonus	Base Salary	Bonus	Base Salary	Bonus
Business Operations	1.30	1.25	1.03	1.05	1.39	2.42
Flight and Cabin Crews	2.04	3.36	1.23	2.17	3.24	2.80
Maintenance Personnel	1.11	1.12	1.03	1.52	0.10	3.53
Others	1.21	1.20	1.04	1.24	1.36	2.07

Note 1: Female salary is 1 in this Salary Ratio Table.

Note 2: Flight and cabin crews include pilots and flight attendants, pilots were mostly male, while flight attendants were mostly female. Pilots' salaries are higher than flight attendants', resulting in a large difference in the male / female salary ratios; others include executives higher than the rank of vice president, auditors, accountants, information technology personnel, and other employees that are not within the aforesaid categories.

Note 3: Base salary: basic pay; bonus: pay outside base pay.

Note 4: The maintenance personnel of Tigerair Taiwan are all male.

In accordance with the Taiwan Stock Exchange Corporation Rules Governing the Preparation and Filing of Corporate Social Responsibility Reports by TWSE Listed Companies, the Company disclosed its number of full-time employees not in a managerial position as 10,035 in 2020 a decrease of 283 from the previous year. The total salary of full-time employees not in a managerial position was TWD 15,087.426 million, an decrease of TWD 1,985.101 million year-over-year, the average salary of full-time employees not in a managerial position was TWD 1.503 million in 2020, an decrease of TWD 0.152 million, and the median salary of full-time employees not in a managerial position was TWD 0.99 million in 2020, an decrease of TWD 0.231 million.

Full-time Employees Not in a Managerial Position	Numerical Value	Difference from the Previous Year
Number	10,035	▼ 283
Total Salary (TWD million)	15,087.426	▼ 1,985.101
Average Salary (TWD million)	1.503	▼ 0.152
Median Salary (TWD million)	0.99	▼ 0.231

Pension Scheme

CAL attaches great importance to the rights and interests of our employees. CAL reports the management of the pension reserve fund to the Labor Pension Reserve Supervisory Committee on a quarterly basis. Prior to the end of each year, CAL allocates the amount required for the following year based on actuarial calculations and relevant laws and regulations. In terms of allocation rates, the rate for the new labor retirement plan is 6%; the rate for the old labor retirement plan is 15%, which reaches the statutory upper limit, and this amounts have been fully allocated in accordance with Paragraph 2, Article 56 of the Labor Standards Act to ensure that employees receive the retirement benefits to which they are entitled.

Salary, Benefits and Pension Reserve Fund of CAL Group in 2020

(Unit: TWD million)

Company	Item	2018	2019	2020
	Salary	16,580	15,998	13,659
	Benefits	203	213	261
	Pension Reserve Fund	6,184	6,347	6,241
	Salary	780	864	850
	Benefits	6.79	6.88	3.69
	Pension Reserve Fund	384	352	390
	Salary	724	870	720
	Benefits	3.65	4.85	4.29
	Pension Reserve Fund	1.90	2.53	1.54

Note 1: Benefits offered by CAL / Mandarin Airlines included travel allowances, allowances for the elderly, scholarships, Labor Day gift money, spring parties, and anniversary expenses.

Note 2: Benefits offered by Tigerair Taiwan included travel subsidies, club allowances, birthday cash gifts, Mid-Autumn Festival and Dragon Boat Festival gift vouchers, spring parties, and family day activities.

Unpaid Parental Leave

CAL has set up a sound unpaid parental leave system, allowing employees to take care of their families while retaining their positions with CAL. To encourage qualified employees to apply for unpaid parental leave, CAL guarantees that applicants will not receive a performance evaluation below an "A" grade for the year. Male employees are also entitled to unpaid parental leave, including the option to apply for 5-day paternity leave with full pay before and after childbirth. If the period of paternity leave coincides with a business trip or a regular day off or public holiday, paternity leave may be taken within 15 days following the business trip or holiday. CAL offers better leave than that stipulated in the Gender Equality in Employment Act. After analyzing instances of unpaid leave taken by employees in recent years, we found that the majority of the employees who did not return to their duties or who returned to work but worked for less than a year did so because of the need to care for family members or due to changes in their career plans (please refer to the appendix Unpaid Parental Leave of CAL Group tables).

Unpaid Parental Leave of CAL Group in 2020
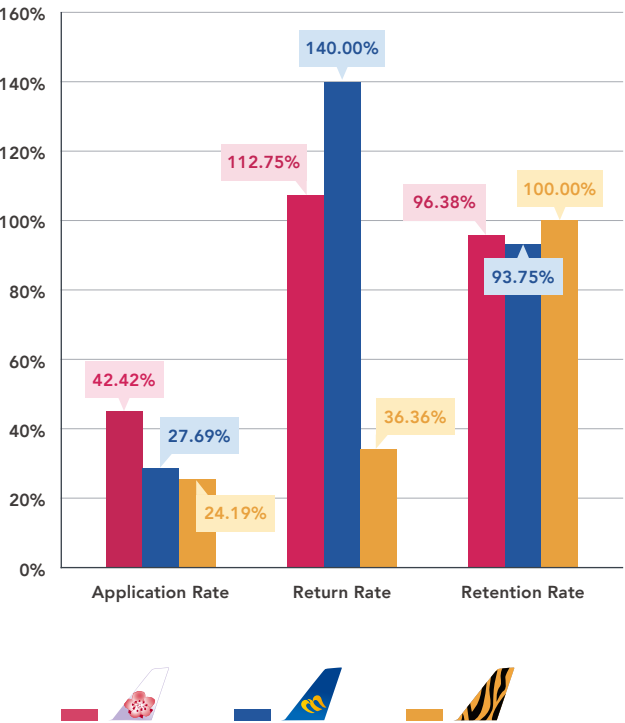
Benefits for CAL Employees

Year-end Bonuses / Dividends
At the end of each year, a year-end bonus is allocated from CAL earnings. Employee dividends are also distributed in accordance with employee performance and CAL's yearly management goals.

Retiree Portal (Retiree Association)
CAL has assisted its retirees and employees in establishing a global retiree association and the CAL Retiree Portal. Every year, the Retiree Association organizes one to two quarterly activities to promote interchange between retirees. CAL also offers grants to the Retiree Association to provide positive assistance and encouragement.

Employee Benefits
Employee benefits include wedding cash gifts, childbirth cash gifts, disaster subsidies, travel allowances, scholarships, allowances for the elderly, emergency loans, birthday cash gifts, Labor Day gift vouchers/cash gifts, and allowances for funerals.

Annual Leave Scheme
CAL offers annual leave better than that stipulated in the Labor Standards Act.

Childcare
CAL has entered into preferential childcare contracts with 10 daycare centers across Taiwan to assist employees with childcare arrangements.

Group Health Insurance
Group health insurance covers medical, accident and serious illness insurance. Dependents may also be enrolled in the group insurance scheme at favorable rates.

Commuting
Apart from regular commuter shuttles at fixed sites, there are also shuttle buses for shift workers, cabin crew members, and employees with disabilities stretching from Keelung, Taipei City and New Taipei City to Taoyuan and Zhongli.

Concessional Flight Tickets
Employees and their spouses, parents, and children enjoy free and concessional flight tickets to more than 50 destinations around the world. Code-shared concessional flight tickets from other airlines are also offered.

Employee Stock Ownership Trust
Participation is voluntary. For employees who agree to join the employee stock ownership trust, a fixed amount is deducted from their monthly salary based on their pay grade.

Resignation Program
Employees in the general track after 10 years of service and employees in the specialist track after 10 years of service and reaching the age of 54.

Unpaid Leave

Care for Dependents
Applicable when an employee's spouse or direct relative is seriously ill or when necessary.

Illness
Applicable when an employee is seriously ill and has not recovered after taking relevant leave in accordance with regulations.

Advanced Education
All employees, regardless of school or discipline, must be enrolled in a discipline that is relevant to their current position or meets the needs of the company and is recognized by the Ministry of Education of the Republic of China.

Employee Communication

Each and every employee matters to CAL. We maintain multiple channels of communication with our employees, such as regularly scheduled labor-management meetings, and strive to find solutions to problems. We have established an employee care mailbox, a sexual harassment mailbox with an associated grievance hotline, and also a "Speak Your Mind" employee communication mailbox. In addition, our Team+ internal company messaging software enables employees to express their opinions and make suggestions at any time. When facing significant operational changes that will affect employees, CAL gives notice in compliance with relevant labor regulations and promptly communicates with labor unions and employees. Information on material issues and employee rights is made available on CAL's website or e-mailed to all employees. When employees express concerns about certain internal regulations or practices, CAL seeks to clarify the issue and communicate with the employees more frequently.

Versatile Communication Channels

1. Quarterly Labor-management Meetings

Meetings are held on a regular basis, allowing CAL to communicate with CAEU representatives. Meetings between front-line divisions / departments and corresponding CAEU branches are held separately.

2. Supervisor Mailbox

CAL encourages employees to express opinions and give suggestions through the Level 1 supervisor mailbox.

3. "Speak Your Mind" Employee Portal

CAL encourages employees to express opinions and give suggestions through the "Speak Your Mind" Employee Portal on the Intranet.

4. Employee Care Mailbox

The Human Resources Division has set up an employee complaint e-mail (wecare@china-airlines.com) to protect employees' rights and interests.

5. Team+

This internal company messaging system is offered to employees for free, to facilitate two-way communication and instant reporting to supervisors.

Labor Unions `GRI 102-41`

CAL cooperates with different labor unions and remains committed to maintaining open communications in order to negotiate reasonable agreements. We show the same respect to all unions in accordance with law. After 2019, CAL did not have any major labor disputes or strikes in 2020, thanks to active communication with labor unions. In particular, the China Airlines Employees Union (CAEU), which has the highest participation rate of CAL employees, is a member of the Chinese Federation of Labor. There are six subordinate branches under CAEU, which are classified based on the location of members / business:

Branch 1: Divisions in Head Office

Branch 2: Flight Operations Division

Branch 3: Cabin Crew Division and In-flight Supply Chain & Marketing Division

Branch 4: Maintenance Division, Engineering Division, and Quality Assurance Division

Branch 5: Taipei Branch, Ground Service Division, and Cargo Sales, Marketing & Service Division

Branch 6: Kaohsiung Branch

There are six subordinate branches within the Mandarin Airlines Employees Union (MDAEU):

Branch 1: Divisions in Taipei Head Office, Taichung Branch

Branch 2: Flight Operations Division and Operation Control Center

Branch 3: Inflight Services Department

Branch 4: Customer Service Division (Taipei, Kinmen, and Taitung)

Branch 5: Engineering & Maintenance Division

Branch 6: Customer Service Division (Taichung, Magong, Hualien, and Kaohsiung)

All employees of CAL, with the exception of the top-level executives as stipulated in the union constitution, have joined the CAEU, which is the first of its kind in Taiwan's aviation industry, and is governed by a collective agreement signed by both parties in 2002. In January 2017, Mandarin Airlines entered into a collective bargaining agreement with the MDAEU. The CAL / Mandarin Airlines collective agreement pertains to union assistance; labor-management meetings and dispute resolution; employment and termination; working hours; leave and vacation; salary; allowances and bonuses; personnel transfers, rewards, and disciplinary actions; as well as benefits, training, and occupational safety and health clauses. The agreement is subject to renewal every three years in accordance with the law. CAL is now renewing the collective agreement with CAEU to maintain stable labor-management relations.

CAL / Mandarin Airlines cooperates and communicates with CAEU / MDAEU through various channels as a partner and based on mutual dependence, and the two parties have established various channels of communication over the years. All resolutions will be handled once they are reported. In addition, meeting minutes taken at labor-management meetings held at the Head Office

are published and made available to all employees on CAL's website / Mandarin Airlines' website. CAL / Mandarin Airlines is dedicated to maintaining harmonious labor-management relations through open, efficient channels of communication. In 2020, due to the pandemic, CAL and the CAEU reached an agreement to hold two labor-management meetings in writing at the beginning of the year when the pandemic was at the most severe. A total of six meetings were held throughout the year to take into account both labor-management communication and joint pandemic prevention.

Union Participation Rate of CAL and Mandarin Airlines

Company	Item	2018	2019	2020
	Number of Participants	10,500	10,201	9,811
	Participation Rate	99.20%	99.48%	99.43%
	Number of Participants	856	851	852
	Participation Rate	92.84%	90.72%	96.49%

Note 1: The number of CAL participants refers to the number of people being members of CAEU in the year (including employees in Taiwan); hourly-basis employees, interns, contracted employees, and executives higher than the rank of vice president are not included.

Note 2: The number of Mandarin Airlines participants refers to the number of people being members of MDAEU in the year (including employees in Taiwan below the rank of vice president (inclusive) and expatriate executives in Mainland China); hourly-basis employees and contracted employees are not included.

Note 3: Tigerair Taiwan does not have a labor union currently.

Note 4: The collective bargaining coverage rate of CAL / Mandarin Airlines is equal to the labor union participation rate.

Employee Engagement

CAL has established diversified and unobstructed communication channels to listen to employees' suggestions attentively in line with its belief that employees are the Company's most important asset. Through an employee satisfaction survey, CAL understood employees' opinions of and needs for the Company and each unit, which served as a reference for CAL to provide a stable work environment. This would further increase employees' work efficiency and create a virtuous circle-based excellent corporate culture. CAL conducted the employee satisfaction survey in 2019. The survey covered six major dimensions, including Organizational Health, Corporate Culture, Leadership, Job & Career, Working Environment, and Compensation and Benefits (effective response rate was 6.4, of which 6.5 for males and 6.2 for females, with no significant difference) (for details, please refer to page 67 in the). The employee satisfaction survey is conducted every two years in principle, and was originally intended to be conducted again in 2021, but was postponed to 2022 due to the pandemic. In 2020, CAL will continue to invest in a number of enhancements and improvements for its employees, as shown in the table below.

Relevant Improvements	Corresponding Dimension
In order to increase the contact between cabin crew and the office during the pandemic, and to meet the needs of related message promotion, five microfilms were shot to optimize the message transmission and gain the attention of the crew.	• Organizational Health • Corporate Culture

Relevant Improvements	Corresponding Dimension
Strengthened message transmission (including strengthening the communication function of mobile devices) to let the team members know the Company better and to bridge the distance between the team members and the colleagues at the Company / office.	• Organizational Health • Corporate Culture • Leadership
Organized four expert sharing sessions with 755 participants, to deepen the understanding of other units to facilitate future cooperation. More than 50 cross-disciplinary seminars were held separately by each unit according to their environment.	• Organizational Health • Job & Career • Working Environment
The Flight Operations Division added two-way communication after the technical symposium, affair interchange meeting of chief pilots, and actively exchanged ideas and communicated with employees, as well as identified problems and assisted in solving the problems for them in the front line. Held once a month, the average number of participants is about 100.	• Corporate Culture • Leadership • Working Environment
The Ground Services Division held more than 30 staff communication meetings to listen to the voices of the junior supervisors and staff members and to explain the Company's policies (including the impact of the pandemic on the Company's operation and the explanation of the shift reduction plan). The top-level supervisors and assistant supervisors gave lectures and answered colleagues' questions to achieve two-way communication and understanding.	• Organizational Health • Corporate Culture • Leadership • Working Environment
The Company arranged for supervisors to go to the staff unit or the agent unit for training, so as to enrich the professional skills of the staff and cultivate talents for the management talents.	• Organizational Health • Corporate Culture • Leadership • Job & Career

COVID-19
Special Column

Protection of Employees' Rights during the COVID-19 Outbreak

Due to the impact of COVID-19 pandemic in 2020, the global aviation industry has suffered significant losses, and many international airlines have responded by laying off employees. In order to take good care of its employees, CAL has implemented various policies to streamline its workforce after harmonious communication between employers and employees (temporary hiring delay, relaxation of unpaid leave rules, workforce adjustment, special leave, and reduction of working hours}. CAL also assisted employees in applying for government subsidies during the reduced working hour period (Peace of Mind Employment and Recharge and Training programs). In addition, CAL constantly reminds employees of the relevant pandemic prevention information, and provides frontline personnel with pandemic prevention equipment. CAL is committed to protecting the health of the employees and their rights at work by implementing various pandemic prevention measures in accordance with relevant government regulations.

2-2-5 Healthy and Safe Workplace

GRI 403-1, 403-2 403-9, 403-10

CAL has established an Occupational Safety and Health Committee in accordance with law. The committee is tasked with the objective of preventing occupational hazards and protecting the safety and health of all employees by reviewing, coordinating, and making recommendations pertaining to safety and health related matters. The President acts as the chairperson. One deputy chairperson and one executive secretary are appointed. Members consist of Level 1 managers, occupational health and safety employees, engineers, and medical personnel from the designated divisions / departments as well as representatives appointed by labor unions. A meeting is held once every three months to review and analyze occupational incidents. All incidents are followed up and reported to the management so that related health management solutions can be subsequently developed. In 2020, a total of 12 safety and health proposals were reviewed and discussed, all of which have been closed. Meeting minutes were published on the EIP website; a total of 125 occupational safety reports were compiled, all 125 were improved and closed with an achievement rate of 100%.

Five Major Goals of CAL's Occupational Safety and Health

Comprehensive occupational safety and health management system

Reinforce the corporate safety culture and enhance personnel's safety awareness

Enforce risk management mechanism and effectively resolve threats

Strengthen safety and health education & training to reduce incidence of occupational injury

Build a safe, healthy and comfortable working environment

Proportion of Labor Representatives in Occupational Health and Safety Committee of CAL Group in 2020

(Unit: %)

Company	Composition of Occupational Health and Safety Committee	2018	2019	2020
CAL	Proportion of Labor Representatives in Taipei Branch	36.36	36.36	36.36
	Proportion of Labor Representatives in Taoyuan	38.46	38.53	37.73
	Proportion of Labor Representatives in Kaohsiung Branch	37.50	37.50	37.50
	Proportion of Labor Representatives in EMO	34.78	34.78	34.78
Mandarin Airlines	Proportion of Labor Representatives	33.33	33.33	33.33
Tigerair Taiwan	Proportion of Labor Representatives	38.46	38.46	41.18

Note: Labor representative proportion = (Occupational Health and Safety Committee labor representatives / Occupational Health and Safety Committee total members) × 100%.

Dual International Certification of Occupational Health and Safety

To implement safety and health management more efficiently, systematically, and in accordance with both international trends and domestic and foreign standards, CAL has established an independent safety and health management system and enhanced risk controls in line with international standards. On April 20, 2019, CAL obtained ISO45001: 2018 and TOSHMS certifications for our safety and health management system, which adopts the PDCA model. Through the risk management mechanism, risk classification management is carried out according to each type of operation and job category into the following three categories:

Category	Hazard Risk Classification	Job Type
Category 1	Significant Occupational Risk	For example: flight crew, cabin crew, cargo loading personnel
Category 2	Moderate Occupational Risk	For example: engineering personnel, machinery and equipment operators
Category 3	Low Occupational Risk	For example: office administrators

We have completed the set up of safety and health managers and on-the-job training for each unit, including how to conduct workplace hazard identification, risk classification, how to create management plans, and occupational hazard identification process. We also provide guidance to units at all levels on risk assessment as well as prevention and improvement. In addition, according to the five major operational elements of the Occupational Health and Safety management system and its related implementation, we will effectively control the risk of occupational hazards through regular audits, improve the management of occupational disease prevention, enhance the performance of occupational safety and health management, and implement the occupational safety policy to ensure that employees can work in a safe, healthy, and comfortable work environment.

A total of 873 safety and health inspections were conducted at each work site, and 116 faults were found, all of which were coordinated with the relevant units for improvement. The internal audit of each unit is performed once a year, and the external audit is entrusted to SGS once a year.

Enhancing Operational Safety and Implementing Risk Control over Occupational Health and Safety Management

In 2020, the disabling injury frequency rate (FR) was 1.93; the disabling injury severity rate (SR) was 42; the frequency-severity indicator (FSI) was 0.28; and the absence rate was 0.92%. According to analysis, most occupational hazard incidents were caused by unsafe employee

conduct. However, CAL's FR and SR were lower than the air transport industry average FR (4.14), SR (102), and FSI (0.65) from 2016 to 2018. No student occupational hazard incidents in industry-academia collaboration programs or summer internship programs were reported at CAL workplaces, and no occupational hazard incidents occurred to contracted agents in 2020. We will continue to implement the promotion of occupational hazard prevention and related education and training (please refer to the Appendix for detailed table Comparing the Frequency-severity Indicator and Occupational Injury Statistics Over the Past 3 years, and Occupational Hazards Statistics of CAL Group).

Comparing the Frequency-Severity Indicator Over the Past 3 Years
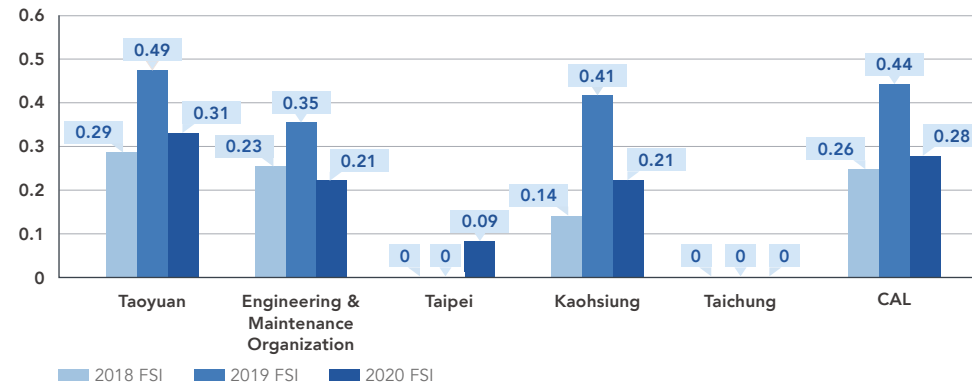
Strengthening Epidemic Prevention Measures in Response to Emerging Epidemics

1. Establish an Emergency Response Mechanism

In response to the various emerging epidemics in recent years, and to prevent unresolved uncertainties brought about by future epidemics, the Company has established a cross-unit mobilization mechanism by level, command system, and operational procedures to integrate relevant units to respond together and remind employees to raise their alertness. At any time, according to the scale of the outbreak, the Company's response mechanism will be activated sequentially, and the Corporate Safety Department will coordinate various prevention and control actions and hold epidemic prevention meetings from time to time.

2. Enhance Risk Management Awareness

Establish a health management reporting system for employees with higher risk of exposure (crew members), as well as an abnormality tracking and handling mechanism; work commute diversion mechanism to and from work, or adjust the office layout, or business travel method; strengthen various epidemic prevention promotion; establish a cooperation mechanism with relevant departments; set up a cross-unit team + group contact platform to ensure consistency of information; activate diversified channels to provide real-time information; and actively encourage employees with fever or acute respiratory symptoms to rest at home until their symptoms improve and then return to work.

3. Enhance Knowledge on Biological Pathogen Hazard Prevention

For general employees, provide education and training on infection prevention for everyone; for employees with higher risk of exposure, provide education and training on the proper use of personal protective equipment; we require contractors to strengthen epidemic prevention measures and

notification of abnormalities; we are extra vigilant with body temperature measurement and record keeping; maintain proper indoor ventilation and regularly replace filters; disinfect work sites; provide related hygiene and health promotion; and provide personal protective equipment and other self-management measures.

4. Management of Epidemic Prevention Supplies

Management, procurement, distribution, safe stock quantity, and storage is standardized by a dedicated unit.

5. Mental Health Support / Employee Assistance Program

Provide epidemic prevention care kits and related assistance measures to employees (crew members) with higher exposure risk level; proactive care.

Future Plans

1. Recruitment

In 2021, CAL will continue to recruit flight crew members, promote industry-academia collaboration programs, and employ more people with disabilities, in order to achieve our commitment to corporate social responsibility.

2. Diversification

Over the past three years, CAL's female employees have accounted for 48.00% of the total workforce. The 2021 target is also set at 48.00%. In terms of CAL's female managers, the proportion has increased year by year over the past three years. In 2023, the target is set at 24.75%.

3. Employee Training

2021 marks CAL's 61st anniversary. In addition to strengthening company products and services, CAL will continue to provide professional training that covers all fields of expertise. Out of a desire to transmit our corporate culture and values, CAL will base our overall employee training goals on Care, Communication, and Pass on experiences, and implement training through Effective Management, Case Studies, and Follow-Up. CAL plans to organize a total of 12 training courses, including general management skills training, with employee problem identification, employee care and communication, management seminars, and group cohesiveness; professional training for instructors and human resources personnel; and general training for all employees, including general aviation management, upward communication, and career experience camps. In addition, we have purchased career development courses for all employees to take as needed.

4. Implementing Occupational Health and Safety Management System (ISO 45001) and Incorporating Occupational Safety and Health in Corporate Culture

By establishing graded safety and health management practices, CAL expects to apply the concepts of occupational safety and health to work and enhance employees' skills to maintain these concepts. Enhance the safety and health management system, and safety and health audits to reduce occurrence of occupational hazards.

2-3
Cooperation

HIGHLIGHTS

5th Time annual supplier conference
Taiwan's first airline to hold an annual supplier conference for five consecutive years.

1st airline to conduct sustainability audits
Taiwan's first airline to perform sustainability audits.

3rd Time received highest scores in supply chain management criteria of DJSI
Granted the highest score in supply chain management criteria of DJSI for three consecutive years.

Management Approach GRI 103-1,103-2,103-3

➤ **Importance of Material Issues**

CAL's vision of "becoming the preferred airline in Taiwan" has firmly established it in Taiwan and around the world. We are committed to the pursuit of sustainable development. We understand that truly sustainable development and value can only be achieved through collaboration with our business partners. Thus, we have formulated the sustainable supply chain management policy, according to international standards and guidelines such as the United Nations Global Compact (UNGC), International Labour Organization (ILO), and ISO 26000:2010 Guidance on Social Responsibility. The sustainable supply chain management policy is applicable to the suppliers and contractors of CAL and its subsidiaries and joint ventures. Hence, we urge that the principles of sustainable development be implemented as part of our overall supply chain management to jointly fulfill our corporate social responsibility.

Sustainable Supply Chain Management Policy Statement

永續華航
SUSTAINABILITY WE CARE

Contents

➤— Commitment and Long-Term Goals

• Commitment

To achieve supply chain sustainability, CAL has committed itself to the development and continuous improvement in the three dimensions of governance, society, and the environment.

• We are committed to

1. Conducting risk and impact assessments to ensure supply chain sustainability and establish fair, transparent mechanisms for supplier management.

2. Selecting economic and acceptable products and services by considering their environmental and social effects.

3. Adhering to ethical business standards by eliminating leakages, vested interests, and corruption.

• We require all suppliers and contractors to

1. Strictly abide by local and international laws and regulations.

2. Implement quality control systems that ensure the quality and safety of products or services provided.

3. Establish information security mechanisms that prevent the misuse of confidential and sensitive information.

4. Comply with local and international human rights and labor standards, and not follow child labor and discriminatory practices.

5. Provide a safe working environment and secure workplace over health and safety issues.

6. Discontinue forced labor and guarantee freedom of association as well as proper working conditions and pay.

7. Reduce the negative impact of products and services on the environment and society in accordance with sustainability-related regulations.

• Long-term Goals

2023

1. Maintain SAQ Score at 86 points

2. Optimize risk management for sustainable supply chain, implement the SAQ, and audit 70% of critical tier-1 suppliers and 50% of critical tier-2 suppliers by 2023

2025

1. Maintain SAQ score at 87 points

2. Expand the scope of supply chain management, implement SAQ audits, audit 100% of critical tier-1 and tier-2 suppliers by 2025

2030

1. Maintain SAQ score at 89 points

2. Provide supply chain training, improve assistance mechanisms, and continuously implement a SAQ

➤— Unit in Charge

Corporate Sustainability Committee — Supply Chain Task Force (in charge of aviation supplies, jet fuel, in-flight catering, and service procurement as well as general affairs)

➤— Management Mechanisms

• The meeting of Corporate Sustainability Committee, at least twice a year

• Supply Chain Task Force reports to Corporate Sustainability Committee, every quarter

• Expand the SAQ to cover the critical tier-2 suppliers

➤— Objectives and Plans

KPI	2020			2021 Objectives
	Objectives	Performance	Achievement	
Convene Annual Supplier Conference	One session	Held in Taipei on December 24, 2020	100%	One session
Conduct SAQ	Response rate at least 70%	Response rate over 75%	100%	Response rate at least 71%
Critical Supplier SAQ Score	85 points	89 points	100%	86 points
Implement Procurement Staff Training	Two sessions	Three sessions to be held in May, July and October respectively	100%	Three sessions

➤— Grievance Mechanisms

CAL's suppliers access information on grievance mechanisms through the QR code below. Grievances will be handled by our dedicated personnel immediately.

• **General Products: Administration Division** — E-mail: tpeuo@china-airlines.com

• **Aviation Parts: Engineering Division** — E-mail: AOG_DESK@email.china-airlines.com

• **E-shopping / Duty free: In-flight Service Supply Division** — E-mail: e-shopping@china-airlines.com

Stakeholder Contact

2-3-1 CAL Value Chain `GRI 102-9`

Compared to other industries, the aviation industry is fairly unique regarding safety concerns. As of 2020, the CAL Group had established 31 joint ventures extending across business sectors including air transport, ground handling service, tourism, aerospace technology, air transport support, and logistics and warehousing. By integrating strengths from each component, the Group expects to optimize its overall quality of service, competitiveness, and value chain.

Material Procurement Types

Category (No. of Tier-1 suppliers / Critical Tier-1 suppliers)	Aviation Materials Aircraft Parts (558 / 14)	Aviation Fuel Fuel Required for Flight (20 / 5)	In-Flight Catering In-Flight Meals Offered to Passengers (29 / 7)	Ground Handling Service Airport Manpower (57 / 1)	General Products Goods Required for Overall Operations (240 / 36)
Description	Aviation materials are keys to flight safety. Therefore, aviation materials must have certificates of qualification, and their airworthiness must be confirmed by related units. / divisions / departments.	Fuel is vital for flight and its cost of procurement forms one contributor to operating costs.	In-flight catering stands as one of CAL's crucial quality services. CAL provides passengers with a complete in-flight experience based on the needs of long-haul and short-haul passengers and nationality requirements.	CAL provides excellent airport services, and improves passengers' satisfaction throughout the journey with the help of its ground staff and agents.	General products refer to basic supplies required for business operations to improve operational efficiency and quality.
Critical Supplier's Definition	Irreplaceable suppliers and yearly accumulated procurement amount is over certain percentage.	Irreplaceable suppliers or the procurement amount is accounted for over certain jet fuel cost in whole year.	Suppliers offer long-haul service. (including the China Pacific Catering Services at Taipei Station)	Irreplaceable suppliers, exclusive ground handling agent which is not affiliated with airlines, and yearly flights handling by the suppliers are accounted for over certain total flights of CAL.	Irreplaceable suppliers or yearly accumulated procurement amount is over certain number.

Note: Material procurement types are defined by the volume of procurement.

Upstream

Aircraft Manufacturing

Ground Handling Service
- Taoyuan International Airport Service Co., Ltd.
- Taiwan Airport Service Co., Ltd.
- Dynasty Aerotech International Corp.
- Jardine Aviation Services Ltd.

Aircraft Leasing

Ground Handling Service Air Transport Support Logistics and Warehouse Aerospace Technology

Midstream

Air Transport Support
- Sabre Travel Network Taiwan Ltd.
- Everest Investment Holdings Ltd.
- China Pacific Laundry Services Ltd.
- Delica International Co., Ltd.
- China Pacific Catering Services Ltd.
- Kaohsiung Airport Catering Services Ltd.

Logistics and Warehouse
- Taiwan Air Cargo Terminal Limited
- Arport Cargo Terminal (Xiamen) Co., Ltd.
- Arport Cargo Service (Xiamen) Co., Ltd.
- Global Sky Express (Taiwan) Ltd.
- Eastern United International Logistics (Holdings) Ltd.
- Chung Hwa Express Co., Ltd.

Aerospace Technology
- China Aircraft Services Limited
- Taikoo (Xiamen) Landing Gear Services Co., Ltd.
- Taiwan Aircraft Maintenance and Engineering Co., Ltd.
- HAECO Composite Structures (Jinjiang) Co., Ltd.
- NORDAM Asia Limited

Airlines
- Mandarin Airlines Co., Ltd.
- Tigerair Taiwan Co., Ltd.

Investment and Leasing Business Group
- CAL-Dynasty International, Inc.
- Dynasty Properties Co., Ltd.
- CAL Park CO., Ltd.
- CAL-Asia Investment Inc.
- Taiwan Airport Service (Samoa) Company, Limited

Tourism and Leisure
- CAL Hotel Co., Ltd.
- Dynasty Hotel of Hawaii, Inc.
- Dynasty Holidays, Inc.

Customer

Downstream

2-3-2 Sustainable Supply Chain Management `GRI 204-1, 308-2, 407-1, 414-2`

CAL has implemented sustainable supply chain management since 2014 and later established the Supply Chain Task Force to be in charge of sustainable supply chain management covering aviation supplies, jet fuel, in-flight catering, and service procurement as well as general affairs. In addition to setting the long-term sustainable development goals in accordance with the UN's Sustainable Development Goals (SDGs), CAL has formulated the "Sustainable Supply Chain Management Policy Statement" and "Supplier Code of Conduct" in accordance with international standards, including the Global Reporting Initiative (GRI), ISO 26000, United Nations Global Compact (UNGC), and International Labour Organization (ILO). CAL also established risk review mechanisms to perform audits, held the supplier conferences for facilitating negotiations, and reported the results to the Corporate Sustainability Committee for review every quarter.

Supplier Code of Conduct

2020 Achievements

1. Performance of Supply Chain Sustainability

Green Procurement

Recently, CAL has not only introduced energy efficient passenger aircrafts including A350-900 and B777-300ER but also shifted to adopt energy-saving equipment such as choosing lightweight materials for onboard equipment. Moreover, CAL has also introduced electric vehicles to gradually replace traditional ground vehicles, thus reducing their fuel consumption and carbon emissions. To reduce the use of plastic as a raw material, we have also supplied environmental-friendly paper towels and magazines printed by FSC-certified paper in all CAL's flights. In addition, CAL also prioritizes the use of local ingredients to reduce the food miles and carbon footprint of food ingredients during transport. Although the total amount of green procurement in 2020 decreased by 47% in comparison with that in 2019 due to the effect of COVID-19 and a significant decrease in flight frequency, CAL will continue to promote and implement green procurement to reduce the impact on the environment.

Local Procurement

Except for certain aviation equipment, components, and some procurement that are subject to international standards, CAL has been dedicated to sourcing from local suppliers (Taiwan, Penghu, Kinmen, and Matsu) to boost the local economy. For example, the juice for business class passengers is sourced from local Taiwanese produce, which can reduce carbon footprints for environmental protection. A significant decrease in the local procurement in 2020 compared to 2019 was due to the impact of COVID-19. However, the rate of purchasing products from local suppliers gradually rose to 98.79%, indicating that CAL still used the limited budget to promote local procurement during the epidemic.

Amount of Green Procurement   (Unit: TWD million)
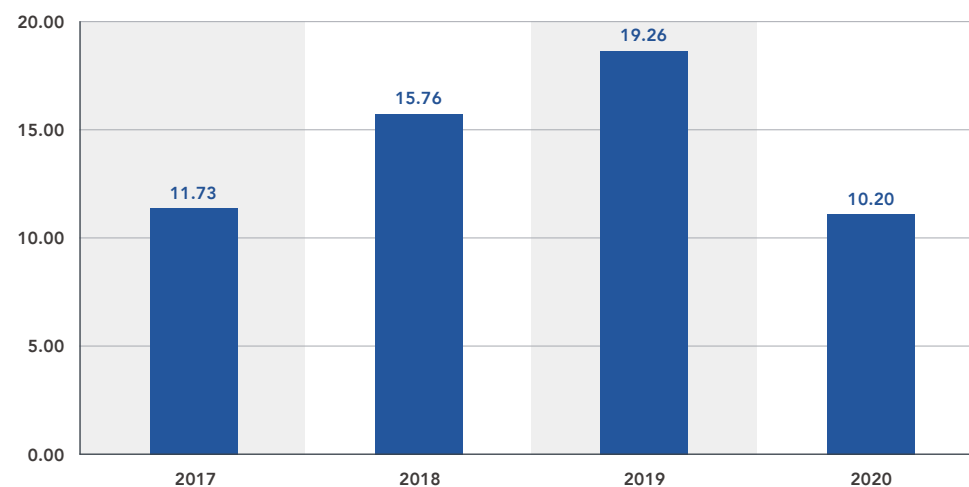
Note: Green procurement includes Category I, Category II, and Category III eco-products specified in the "Regulations for Priority Procurement of Eco-Products (January 15, 2001)."

Amount of Local Procurement
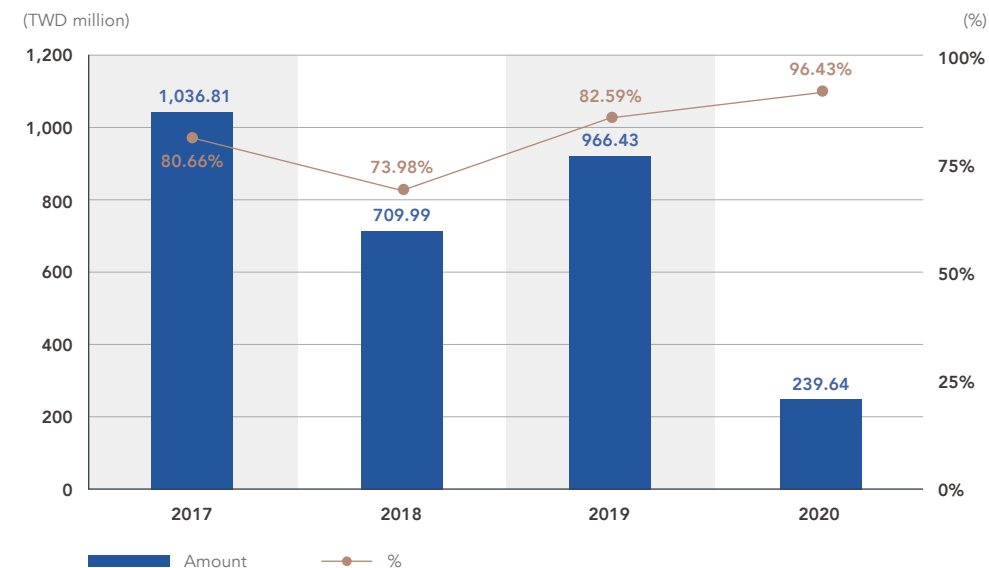
Number of Local Suppliers

(Number)
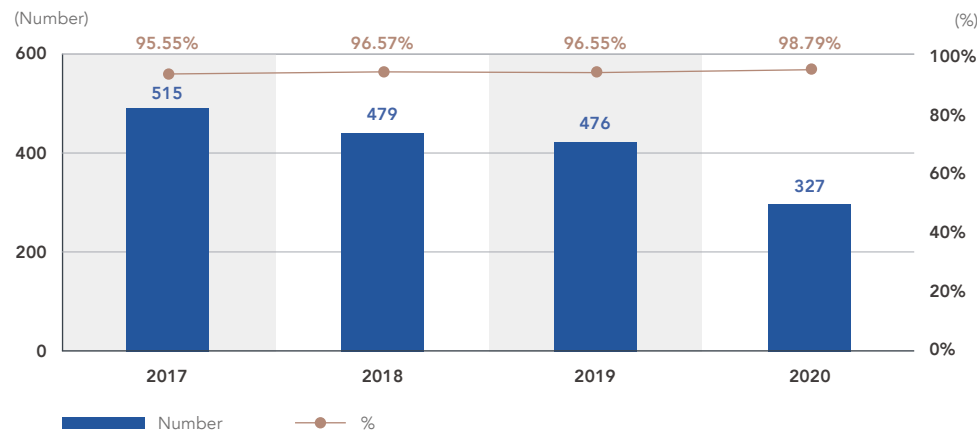
Note 1: The statistics include the Administration Division and the maintenance park and exclude the independent procurement of the fleet, the In-flight Supply Chain & Marketing Division, and the Ground Services Division.

Note 2: Aircraft parts are not included because they are subject to special certification.

2. Risk Assessment of Supply Chain Sustainability

To strictly control supply chain sustainability risk, CAL has conducted a survey for supply chain sustainability risk and formulated our Sustainability Assessment Questionnaire (SAQ) since 2015 based on international initiatives and evaluations such as the GRI Standards, ILO, UNGC, Dow Jones Sustainability Index (DJSI), CDP, and the Universal Declaration of Human Rights. CAL also established a sustainable supply chain management system to improve the accuracy of the results of the SAQ in 2017, the functions of which include specifying the definition of critical suppliers, conducting the Sustainability Assessment Questionnaire (hereinafter SAQ), formulating regulations for review and designing relevant forms, setting different goals for short-term, mid-term, and long-term reviews, and improving the follow-up tracking mechanism. To strengthen the supply chain management, CAL started to identify supplier risks at the beginning of the year, conducted due diligence in the middle of the year, and reviewed the improvements at the end of the year. Supplier training courses were also organized to fully control suppliers with high risks, and relevant reviews were conducted to further reduce supply chain sustainability risks.

As for the SAQ, CAL conducted the SAQ with 79 suppliers (including 63 critical tier-1 suppliers) in 2020, accounting for 68.49% of the total procurement amount of all tier-1 suppliers with a response rate of 81.01. The result of the SAQ shows that the average score of the suppliers was 88.59 in 2020. The average scores in the four dimensions (please refer to the note) were above 84 respectively, showing that most of the suppliers have incorporated the concept of sustainability into these four dimensions. The average score in the environmental dimension was under 80, but CAL has noticed the result and invested more resources in 2019 to enhance its suppliers' environmental performance so it gained a significant growth in 2020. Moreover, CAL achieved the stage target in 2020, auditing 30% of critical tier-1 suppliers.

Note: "Governance" includes ethics, regulatory compliance, and meeting the norm of industrial practices; "Environment" refers to energy and resources management and environmental protection; "Society" includes human rights and labor conditions, and occupational safety and health; "General" includes quality, safety, and information security.

Procedure of Identifying Risk of Supply Chain Sustainability
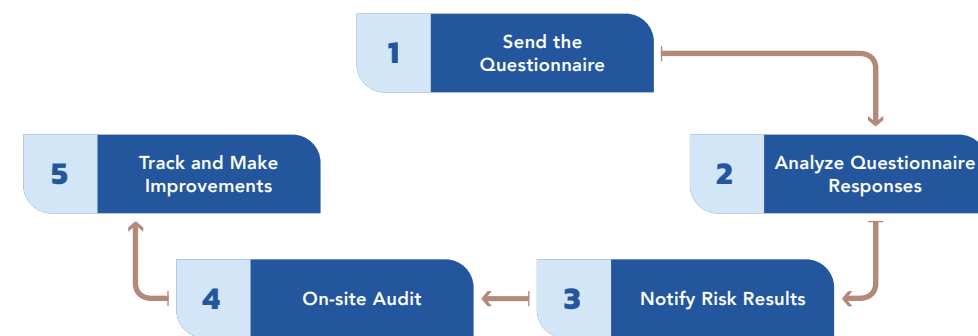
2020 Risk Survey of Supply Chain Sustainability

(Unit: Score)
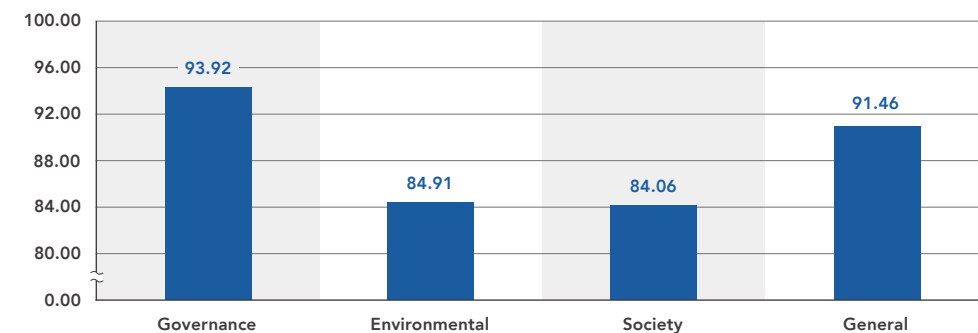
Overall Performance of Supply Chain Sustainability

- In 2020, the score of supply chain sustainability risk assessment was 88.59 points.
- **Governance:** The score remained steady compared to last year, averaging over 90 points. Normally, critical suppliers have internal management mechanisms but CAL will continue to require suppliers to enhance their governance related to ethics and regulatory compliance.
- **Environment**: After completing the CAL's education and training courses and receiving the follow-up tracking, the suppliers have gained a better score compared to last year. Moreover, CAL will keep tracking suppliers' performance in the environmental dimension.
- **Society**: Although the score of this year still reached 80, it slid in comparison with the previous years. It is the dimension that CAL needs to provide guidance and assist suppliers in.
- **General**: The score remained steady compared to last year, placed 2nd among the four dimensions. CAL will continue to request for regular inspections to examine suppliers' quality management and information security systems.

Improvements to Be Made

- **Governance**: Although the score hiked the most compared to last year, it was still the lowest score among the four dimensions; Therefore, CAL will pay more attention to the suppliers with

high environmental risks in this dimension, providing guidance and reviewing them in addition to offering education and training courses to strengthen their concept of environment and urging them to formulate environmental management policies.

- **Environment**: Mainly because suppliers underperformed in operational safety and health, this aspect now becomes the focal point where CAL will provide more guidance to suppliers to improve.
- **Society**: Only one supplier has a quality management system, but CAL will continue to provide guidance and urge them to take corrective measures.
- **General**: Although the governance dimension obtained the highest score among the four dimensions, still two suppliers haven't formulated regulations for fair transaction mechanisms and haven't established a mechanism for avoiding any conflict of interest, which CAL will provide guidance and urge them to take corrective measures.

Improvement Action

CAL will continuously evaluate suppliers with the SAQ to examine their performances in each dimension and will expand the current range of risk assessment surveys in the hope of precisely identifying suppliers with high risks and comply with the current review systems to further understand suppliers' problems, thereby helping them improve. In addition, CAL will keep providing the relevant information and education and training about sustainable development and current epidemic situations to enhance suppliers' performances in supply chain sustainability.

3. Sustainable Supply Chain Audit

There are 2 overall high-risk suppliers in the 2020 SAQ analysis results, and there are no overall high-risk suppliers in the 2021 SAQ analysis results after the China Airlines follow-up audit.To better control the current conditions of suppliers' sustainable supply chain, CAL has set up different audit plans in different stages for sustainable supply chain management and has completed 30% of the audit target of critical tier-1 suppliers in 2020. The audit methods that CAL adopted were conducted on site or through written document and communication reviews based on locations and nature of suppliers and border controls for COVID-19. The audit survey in 2020 showed that suppliers didn't establish an environmental management system (EMS), formulate relevant measures of classification and recycling for recyclable waste to monitor suppliers' environmental performance, provide regular education and training courses on environmental management and regulations, etc. The abovementioned is what suppliers need to improve in the environmental dimension.After receiving the training, follow-up tracking, and guidance provided by CAL, half of the critical tier-1 suppliers have progressed significantly in the environmental dimension. In the future, CAL will redouble its efforts to enhance the environmental dimension and social dimension and will keep tracking suppliers and request them to improve.

4. Assisting Suppliers Reduce Risks

Convene Annual Supplier Conference

CAL convened the fifth annual sustainable supplier conference with 33 participating suppliers (44 partners in total) on December 24, 2020. In the conference, experts shared the global trends of sustainable development and supply chain management; CAL also elaborated on how it promoted the sustainable supply chain for the year and its future goals and plans for sustainable supply chain. Moreover, CAL introduced the correct concept to suppliers for work through two-way interactions

in the workshops. CAL will also place more emphasis on the environmental dimension and social dimension based on the result of the 2021 SAQ and will prioritize what should be improved for suppliers as the theme in the following supplier conferences.

In Alignment with the Global Trend, Continuing Education and Training Courses on Sustainability

CAL will continue to promote sustainable education and training for procurement personnel to further enhance their knowledge about sustainability, which is one of CAL's important goals for sustainability. In 2020, relevant procurement personnel not only continued to participate in training on the sustainable supply chain to better understand the international supply chain standards and to align with the trend, thus handling the current situations, but also focus on how to adjust its current approaches due to the tremendous impact of COVID-19 and the future direction of sustainable management. It is hoped that the personnel can combine the latest information and trends with the knowledge of sustainability through the training and can appropriately adjust the sustainable supply chain. Moreover, CAL will continue inviting external experts to provide education and practical training courses on sustainability audits for all procurement personnel in the hopes of that future procurement can be conducted in accordance with CAL's sustainable supply chain management approaches and operations of the management system.

Future Plans

CAL will continuously strengthen sustainable supply chain management mechanisms aside from further understanding suppliers' sustainable management conditions through annual surveys. To further enhance sustainable management mechanisms, CAL also set a goal to complete the tier-2 supplier review and its risk assessment in 2023. CAL will continue to achieve 100% reviews of critical tier-1 suppliers by 2025.

As for internal management, CAL will ask procurement personnel to attend three external sustainability education and training courses or seminars; As for external management, CAL will continue to provide education and training on sustainability for suppliers to help them and the personnel further understand sustainability.

Apart from the goal of this year that is to consolidate suppliers' concept of sustainability such as the ESG concept through two-way exchanges with suppliers in the annual conference, CAL will continue its fruitful results in 2020 to strengthen suppliers' governance and will focus on the impact caused by the epidemic on its sustainable supply chain to deepen mutual exchanges.

2-4
Environment

HIGHLIGHTS

5th Time selected in DJSI, and got highest scores in environmental reporting and policies, management systems, and climate strategies

Five consecutive times selected in DJSI emerging markets index and got highest score in environmental reporting and policies, management systems, and climate strategies of DJSI in 2020.

1st Taiwanese airlines to publish TCFD disclosures

First airline in Taiwan to publish climate related financial disclosures (TCFD).

7th Time in TCSA Climate Leadership Award

Awarded in TCSA Climate Leadership Award for seven consecutive years since 2014.

1st Airlines in Taiwan to receive Carbon Label and Carbon Reduction Label

Mandarin Airlines of CAL group passed the 3rd party carbon footprint verification again, and became the first airlines to receive the Taiwan EPA "carbon label" and "carbon reduction label" with over 30% carbon reduction.

9th consecutive year in response to CDP

The Company has actively participated in the CDP climate questionnaire for nine consecutive years since 2012 and actively communicates with stakeholders.

Buying Power —
Special Environmental Sustainability Award

Worked with Zen Zhou to develop "CAL Foldable Platinum Silicone Cups", which was awarded a special prize in the environmental sustainability category and a first prize in the procurement category of the Buying Power Awards by SMEA of Taiwan MOEA.

Management Approach   GRI 103-1, 103-2, 103-3

➤ Importance of Material Issues

Extreme weather events, changes in consumer awareness, and increased global awareness of air pollution, waste, and noise derived from climate change continue to challenge the operating environment of the aviation industry. As a leading airline in Taiwan, China Airlines is committed to providing passengers and cargo clients with high-quality products and services while fulfilling its commitment to environmental sustainability.

➤ Commitment and Long-term Goals

• Commitment

CAL is committed to abiding by relevant regulations in civil aviation, environmental protection, and energy, strengthening risk management mechanisms, actively participating in and responding to environmental sustainability-related organizations and initiatives at home and abroad, continuing to strengthen and optimize its own environmental sustainability as its momentum, reducing environmental impact, and cherishing the limited resources on the planet while creating sustainability. With its own role, CAL will lead the aviation industry to jointly protect our home planet for future generations.

• Long-term Goals

2023

1. Improving annual aviation fuel efficiency by 1.5% and achieving CORSIA carbon-neutral growth from 2020 (CNG2020)
2. Reducing carbon emissions from ground operations by 41% compared to 2009
3. Strengthening decision-making mechanisms to integrate climate-related financial disclosure (TCFD) information
4. Reducing general waste production from ground operations by 5% compared with 2018
5. Achieving a recycling and reuse rate of industrial waste by 43%
6. Reducing paper consumption by 14% compared with 2018
7. Reducing water consumption from ground operations by 3.6% compared with 2018
8. Embargoing illegal wildlife species and prohibiting use of illegal species as food ingredients

2025

1. Improving annual aviation fuel efficiency by 1.5% and achieving CORSIA CNG2020
2. Reducing carbon emissions from ground operations by 44% compared with 2009
3. Implementing and optimizing internal carbon pricing operations
4. Reducing general waste production from ground operations by 7% compared with 2018
5. Achieving a recycling rate of industrial waste of 45%
6. Reducing paper consumption by 20% compared with 2018
7. Reducing water consumption from ground operations by 5% compared with 2018
8. Embargoing illegal wildlife species and prohibiting use of illegal species as food ingredients

2030

1. Improving annual aviation fuel efficiency by 1.5% and achieving CORSIA CNG2020
2. Reducing carbon emissions from ground operations by 50% compared with 2009
3. Facilitating Taiwan's sustainable aviation fuel strategy
4. Reducing general waste production from ground operations by 12% compared with 2018
5. Achieving a recycling rate of industrial waste of 50%
6. Reducing paper consumption by 30% compared with 2018
7. Reducing water consumption from ground operations by 7% compared with 2018
8. Embargoing illegal wildlife species and prohibiting use of illegal species as food ingredients

➤ Unit in Charge

Corporate Sustainability Committee —
Environmental Task Force (Corporate Environmental Committee)

➤ Management Mechanism

• The Board of Directors and its Risk Management Committee convene a meeting every quarter
• The Corporate Sustainability Committee convenes a meeting at least twice every year
• The Corporate Environmental Committee convenes a meeting every quarter on a regular basis
• CAL conducts ISO 14001, ISO 50001, and ISO 14064-1 3rd party audit and verification every year
• CAL responds to DJSI, FTSE and CDP on a regular basis

➤ Grievance Mechanism

CSR — E-Mail: csr@china-airlines.com

Stakeholder Contact

➤─ Objectives and Plans

Task	2020			2021 Objectives
	Objectives	Performance	Achievement	
Optimizing Corporate Environment and Energy Management	Updated the energy management system and obtained ISO 50001:2018 certificate	Implemented transition to ISO 50001:2018 and updated relevant SOP	100%	• Optimizing energy and resource information management for outstations • Continuing to getting involved external evaluation and policy engagement • Implementing 69 action plans for environment and energy management
	• Optimizing energy and resource information management for outstations • Continuing to getting involved external evaluation and policy engagement	• Completed the environmental risk and opportunity assessment, data compilation, and amendment of questionnaires for outstations • Responded to DJSI, CDP, and customers on environmental issues • Completed six external evaluations	100%	
	Implementing corporate environmental management and launching 69 environmental protection and energy conservation action plans	Completed 73 environmental protection and energy conservation action plans	106%	
Consolidating Climate Risk Management and Carbon Reduction	Improving fuel efficiency to 0.2349 ton / 1,000 RTK	Achieved fuel efficiency of 0.2586 ton / 1,000 RTK	90%	• Improving fuel efficiency to 0.2547 ton / 1,000 RTK • Target for ground operations Scope 1 GHG emissions 4,334 tons of CO_2e • Target for ground operations Scope 2 GHG emissions 17,545 tons of CO_2e • Improving the Company's TCFD disclosure capacity and operation skills • Promoting CORSIA, EU ETS, and UK ETS compliance • Completing ISO 14064-1:2018 transition • Expanding the ECO Travel Carbon Offsetting Program
	Target for ground operations Scope 1 GHG emissions 4,745 tons of CO_2e	Actual ground operations scope 1 GHG emissions 3,051 tons CO_2e	135%	
	Target for ground operations Scope 2 GHG emissions 17,308 tons CO_2e	Actual ground operations scope 2 GHG emissions 17,572 tons CO_2e	98%	
	Building capacity for TCFD Promoting CORSIA and EU ETS compliance Implementing ISO 14064-1 transition	• Completed the climate opportunity and impact assessment and published climate-related financial disclosures • Completed the EU ETS and CORSIA MRV works • Formulated the MRV mechanism under CORSIA • Completing ISO 14064-1 transition training and amendment of procedures	100%	
Building Capacity for Value Chain Environmental Management	• Constructing the first stage of environmental management mechanism for value chain • Setting goals for value chain environmental management • Organizing value chain environmental management training programs and meetings • Promoting carbon reduction label for domestic flights	• Helped important affiliates establish environmental protection policies • All core subsidiary companies have set two goals for environmental management • Organized two value chain environmental management training programs and meetings • MDA Received the carbon label and carbon reduction label from the EPA	100%	• Improving the environmental management mechanism for value chain • Promoting core subsidiary companies to disclose and communicate the environmental management policy and performance • Organizing value chain environmental management training programs and meetings
Strengthening Awareness and Brand Image of Corporate Environmental Protection	• Organizing corporate environmental and energy- management training • Organizing annual environmental training and satisfaction survey for all employees in 2020 • Continuing to encourage employee for environmental proposal • Promoting diversified channels of customer communication of environmental protection • Joining and implementing environmental protection initiatives	• Organized three sessions of environmental and energy management training • Organized environmental seminars, environmental education quizzes, and satisfaction surveys for all employees • Supported three environmental experience-sharing meetings organized by external associations / foundations • Published environmental news and articles in the inflight magazine • Broadcasted eco-friendly videos on board • Shared three push notifications on Facebook • Implemented cross-industry exchange	100%	• Organizing corporate environmental and energy- management training • Organizing the 2021 annual environmental training and satisfaction survey for all employees • Continuing to encourage employee for environmental proposal • Promoting diversified channels of customer communication of environmental protection • Joining and implementing environmental protection initiatives

2020 Environmental Performance

Item		Unit	Emissions / Consumption / Generated	Amount Saved / Recycled	Percentage of Savings / Recycling
Category 1 GHG Emissions (ORIG Scope 1)		Tons CO$_2$e	5,790,802	-	-
Category 2 GHG Emissions (ORIG Scope 2)		Tons CO$_2$e	17,572	-	-
Category 3-6 GHG Emissions (ORIG Scope 3)		Tons CO$_2$e	3,109,822	-	-
Air Pollutants (SOx)	Passenger Aircraft	Ton	30.41	-	-
	Cargo Aircraft	Ton	14.58	-	-
Air Pollutants (NOx)	Passenger Aircraft	Ton	317.03	-	-
	Cargo Aircraft	Ton	152.04	-	-
Aviation Fuel (Non-Renewable Energy)		Ton	1,829,328	-	-
Electricity		MWh	34,523	-	-
Renewable Power (Solar Photovoltaic)		MWh	117	-	-
Elevator Power Regeneration		KWh	-	1,177	-
Water Resources		Thousand tons	126.77	8.64	6.8%
Wastewater (Organic & Heavy Metals)		Thousand tons	19.34	2.32	12%
Cabin Waste		Kg	1,285,318	341,366	26.56%
Ground Waste (Excluding Hazardous Industrial Waste)		Kg	647,317	229,971	35.53%
Ground Waste (Including Hazardous Industrial Waste)		Kg	659,974	229,971	34.85%

2-4-1 Governance of Environmental Sustainability

Improving the Policy and Structure of Environmental Governance

CAL has established the environmental and energy management principles (compliance with environmental laws and regulations, resource conservation, improvement in eco-efficiency, and fulfillment of corporate social responsibility) and the Environmental and Energy Policy Statement according to the China Airlines Corporate Social Responsibility and Sustainable Development Best Practice Principles promulgated by the Board of Directors; in addition, CAL has integrated UN SDGs into its instructional strategies to align future business operations with the sustainable development concepts of environmental friendliness, low-carbon emissions, and energy conservation for a better future.

CAL was the first Taiwanese airlines to establish the Corporate Environmental Committee in 2011. The President represents the top management, and the Corporate Safety Office acts as the executive secretary. Five environmental management committees were established under the Corporate Environmental Committee to take charge of environmental, energy, and climate risk and opportunity management pertaining to inflight service, maintenance, and cargo operations as well as the administration and operation of the headquarters and branches based on the risk management system established in line with the international standards. The Corporate Environmental Committee coordinates and integrates countermeasures and resources for environmental, energy, and climate risks and opportunities in the management meetings held every quarter and reports key resolutions to the Board of Directors in routine meetings of the Board and its committees. For specific issues, functional task forces, including the Carbon Management Task Force, the Sustainable Aviation / Alternative Fuels Task Force, and the TCFD Task Force (Note), have also been set up for cross- departmental cooperation and flexible deployment of resources.

The Company continues to uphold the six major strategies for sustainability including "Fleet and Network" and "Brand Awareness". CAL is committed to the creation of an efficient fleet network and resilient operations to combat extreme weather and changes in the business environment. We seek to create a sustainable brand that protects the environment and improves internal and external brand awareness. Overall, CAL has built a sound corporate environment and energy management model in the aspects of policy, organization and management system based on international trends and risk management practices. From a life cycle perspective, CAL takes into account the context of the organization operations (including day-to-day operations of the Company and existing or new products and services), internal / external issues, and needs and expectations of stakeholders and manages environmental, energy, and climate risks and opportunities appropriately. CAL aims to lead affiliate companies of the Group, suppliers, contractors, and other value chain partners to work together in promoting environmental protection operations and ensure that the environmental sustainability policy is implemented. In the future, CAL will introduce TCFD step by step to strengthen the connotation of environmental management. For more information, please refer to Environmental Governance - China Airlines Corporate Sustainability Site.

Note: TCFD refers to Task Force on Climate-related Financial Disclosures.

CAL Environmental Management Operation Logics
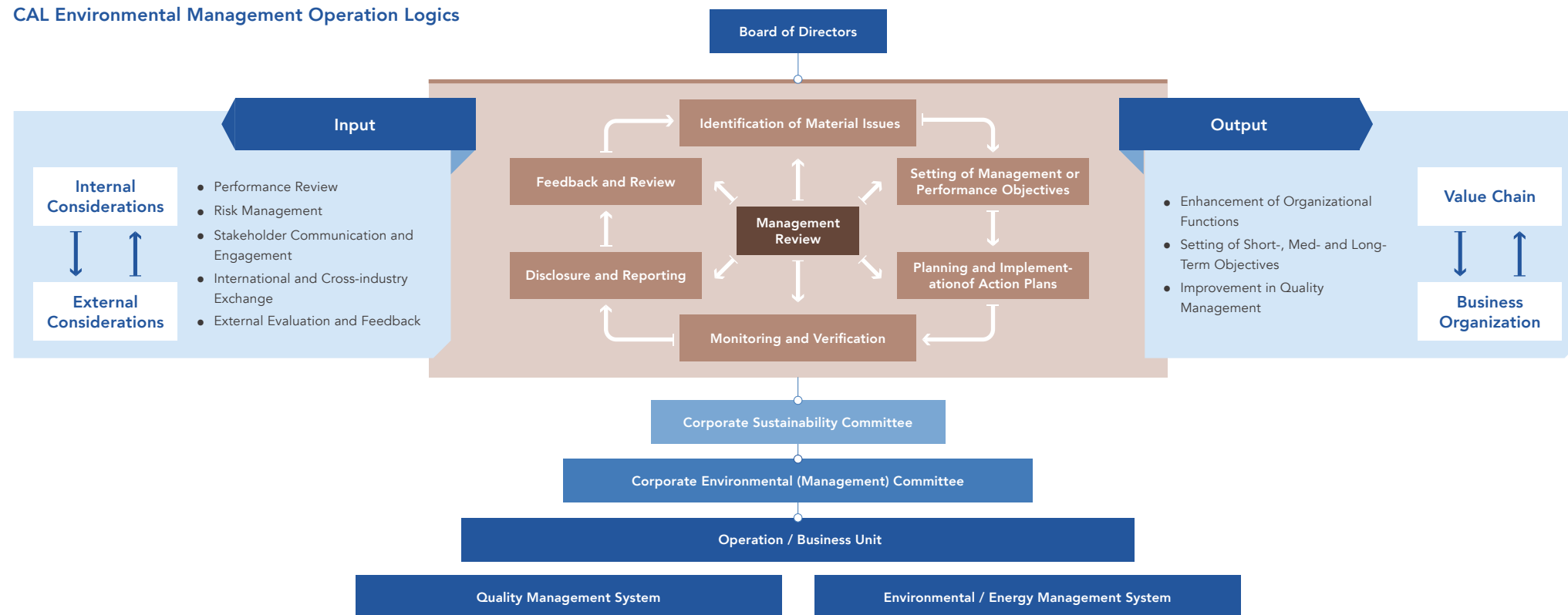
Corporate Environmental Committee Organization

Implementing Environmental and Energy Management Systems

CAL has introduced many international standard management systems since 2009 to establish a sound corporate environmental management mechanism covering GHG, environmental management, and energy management. In addition, to fully integrate the benchmarking conceptualization for sustainable development of international enterprises, CAL has continued to introduce the life cycle perspective since 2017 to fully understand the context of corporate, take stakeholders' concern into account and strengthen the identification and operational control of various environmental impacts and energy use.

Standards for CAL's Environmental Management Systems

Standard	ISO 14064-1 Greenhouse Gas Inventory Requirements	ISO 14001 Environmental Management System		ISO 50001 Energy Management System
Time of Introduction	Introduced ISO 14064-1:2006 in 2009 Completed ISO 14064-1:2018 transition in 2021	Introduced ISO 14001:2004 in 2012 Completed ISO 14001:2015 transition in 2017		Introduced ISO 50001:2011 in 2013 Completed ISO 50001:2018 transition in 2019
Scope	• Global Aviation Fuel • Ground Operations in Taiwan, including CAL Park, EMO, Taipei Branch, Songshan Office, and Kaohsiung Branch	• Aircraft / Engine Maintenance • Flight Operations Management	• Cargo Service • Passenger Service	• Aircraft / Engine Maintenance • Flight Operations Management

Implementing Environmental and Energy Management Principles and Policies

	China Airlines Corporate Social Responsibility and Sustainable Development Best Practice Principles					
Environmental and Energy Principle	Compliance with Environmental Laws and Regulations	Conserving the Earth's Resource	Improving Eco-Efficiency		Fulfilling Corporate Social Responsibility	
Environmental and Energy Policy	Enforcing compliance obligations to fulfill the company's responsibilities in environmental protection and energy conservation	Establishing environmental and energy management systems, including performance indicators to verify compliance with established policies	Promoting environmental and energy conservation education to foster employees' eco-awareness	Implementing green supply chain management to raise overall eco-efficiency	Creating a low-carbon operating environment to establish continual improvement of environmental protection and energy efficiency	Supporting green design and procurement to promote sustainable development
Strategy	1. Keep abreast of the domestic and international trends and promote the channels and platforms of stakeholders' engagement 2. Participate in international cooperation and keep up with major issues 3. Improve management / monitoring mechanisms	1. Improve the quality of the environmental and energy management system 2. Plan and implement environmental performance and carbon reduction objectives	1. Create diverse channels of communication 2. Establish incentive plans to encourage employees to achieve and promote environmental protection	1. Establish a supply chain risk assessment and management system 2. Build corporate capacity for environmental and energy management	1. Optimize equipment efficiency 2. Introduced low-carbon and renewable energy-based facilities	1. Improve the awareness of environmental protection and energy conservation 2. Promote green procurement and consumption
Action Plan	1. Regularly check statutory requirements and commitments 2. Participate in domestic and international meetings at industry and government levels to keep up with regulatory trends 3. Implement management system compliance audits 4. Respond to the international benchmark ratings such as DJSI, CDP and other public and private sector recognitions and competitions	1. Keep abreast of ISO standards and improve the environmental management system 2. Improve the risk assessment and management mechanisms for environmental protection, energy, and carbon emissions 3. Establish and implement energy conservation and carbon reduction and environmental protection 4. Implement internal audit and management review mechanisms and implement third-party certification 5. Establish climate-related financial disclosures (TCFD) mechanisms 6. Establish an environmental management information system to keep track of environmental performance	1. Implement company-wide environmental protection and energy conservation training 2. Provide necessary training to ensure the competence of person(s) who may affect the environmental and energy performance 3. Organize an annual seminar and contest on environmental protection 4. Establish a knowledge-based platform to promote environmental protection and energy conservation from time to time 5. Establish a proposal incentive mechanism	1. Train seeds of environmental protection among CAL and its key suppliers 2. Organize energy conservation and environmental protection training for the value chain 3. Conduct supply chain risk assessments 4. Conduct the contractor/supplier conference and regular meetings to communicate the sustainable and environmental requirements of CAL	1. Check and optimize energy equipment and management measures 2. Keep abreast of technology and regulatory trends and introduce renewable energy equipment in a timely manner	1. Incorporate Environmental Management System (EMS) to service processes and enhance personnel training 2. Consider environmental protection and energy conservation in the purchase of supplies 3. Establish and promote ECO TRAVEL Carbon Offsetting service 4. Provide environmentally-friendly in-flight supplies. 5. Sell environmentally-friendly duty-free products 6. Promote green consumption through diverse channels

Identification of Environmental Risks and Opportunities GRI 201-2

CAL has completed the following environmental and risk opportunity matrix at the present stage through the aforesaid enterprise risk management framework and platform. CAL has included these nine issues in the scope of its key corporate environmental risk management for active control and response. Other issues will also receive attention through the operation of corporate environmental management system.

1. Aviation carbon emission management
2. Climate change adaptation
3. Aircraft energy efficiency improvement
4. Ground operations energy (carbon) management
5. Aircraft takeoff and landing noise control
6. Cabin waste control
7. Ground water resources management
8. Toxic and chemical substance control
9. Waste water and sewage control
10. Inflight drinking water management
11. New technology and energy development
12. Ground operation waste control
13. Ground operation air pollution control
14. Green supply chain management requirements
15. Illegal wildlife transport control
16. Circular economy and innovation model
17. Aircraft air pollution control
18. Passenger environmental protection awareness improvement

Material Environmental Risk Topic	Risk	Opportunity	Management Method
1. Aviation carbon emission management	Increasingly strict international carbon emissions regulations will increase the Company's operational costs	Grasp the development trend of carbon rights and manage properly to increase revenue	Actively participate in international conferences to keep abreast of latest developments; strengthen the management system and the carbon management team's response capabilities
2. Climate change adaptation	Increasing frequency of extreme weather events will impact the Company's daily operations	Proper response will strengthen corporate resilience and reputation	Continue to improve the Company's ability to predict and respond to climate change, as detailed in 2-4-2 Climate Change Mitigation and Adaptation
3. Aircraft energy efficiency improvement	Accelerate the introduction of new generation energy-efficient aircraft and fuel-saving technologies which will increase operational costs	Improve aircraft fuel efficiency while reducing fuel consumption and carbon emissions, which will reduce operational costs	Replace aircraft, introduce fuel-saving technologies / sustainable fuels, improve the passenger load factor, as well as optimize routes and air traffic management operations, as detailed in the CSR website
4. Ground operations energy management	Strict regulations on the use of renewable energy will increase costs	Improve energy efficiency in office and ground operations, which will reduce operational costs	Formulate an annual improvement plan, and its effectiveness should be evaluated by the Environmental Committee quarterly
5. Aircraft takeoff and landing noise control	Stricter regulations will increase the cost of fees	Proper response will strengthen corporate resilience and reputation	Introduce new models of aircraft to reduce noise pollution and optimize aircraft approaches
6. Cabin waste control	The use of disposable plastic products and food waste management have gained prominence in many countries while the complexity of operations has increased compliance cost and the response to the COVID-19 pandemic has created public sanitation and waste management issues	Systematic inventory and planning for alternative products and improvement of operating procedures to reduce the risks of violations of regulations and compliance cost, and improve company reputation	Establish a (in-flight) Waste Task Force to monitor management trends and market development of alternatives and engage suppliers for the optimal response solutions; enhance source quality and quantity management and improve terminal processing standards
7. Ground water resources control	The shortage of water resources affects the Company's operations and increases the cost of the purchase of water and alternatives as well as business interruption risks	Properly manage water resources to reduce operational costs and improve the resilience for continuous operation	Improve water resources management mechanisms, continuously optimize equipment and improve operating procedures/production processes, and increase the use of recycled rainwater and sewage and efficiency of water usage
8. Toxic and chemical substance control	Strict regulations increase compliance costs Leakage of toxic and chemical substances will cause harm to operating personnel and the environment	Proper response and management will strengthen corporate resilience and reputation	Establish an operational control mechanism, which should be reported to the Environmental Management Committee quarterly
9. Waste water and sewage control	Strict regulations will increase compliance costs	Proper response and management will strengthen corporate resilience and reputation; zero pollution increases brand trustworthiness	Strengthen operational control and equipment inspection, strengthen the knowledge and ability of dedicated personnel, as well as implement management system risk identification and performance review

CAL Environmental Risk and Opportunity Matrix

- ⬤ The size of the circle represents the adaptation of CAL to the issue (a larger circle means better action and adaptation).
- ◯ Light circles represent data from the previous year and darker circles represent data from this year.
- ◯—▶ The arrow indicates the difference in displacement from last year.

Note 1: X-axis represents the possibility of the issue in the global trend of development and control.

Note 2: Y-axis represents the degree of impact and opportunity of the issue on CAL.

2–4–2 Climate Change Mitigation and Adaptation

Recognizing the direct impact and importance of climate issues on the aviation industry, CAL has actively implemented various climate change mitigation and adaptation measures and has set three phase goals in flight operations and ground operations in response to the voluntary carbon reduction initiatives of the International Civil Aviation Organization (ICAO), the International Air Transport Association (IATA), and "the Civil Aeronautics Administration (CAA)" of the Republic of China (Taiwan). We also established a carbon reduction strategy on this basis and adopted appropriate climate adaptation actions to reduce the negative impact of climate change on the Company and grasp derived opportunities. We conducted a comprehensive review of the Company's climate risks and opportunities, and optimized related software and hardware facilities, control and management measures, and response procedures. CAL supported international initiatives and became Taiwan's first airline to publicly sign and adopt the Task Force on Climate-Related Financial Disclosures (TCFD) in 2018. CAL works actively to make TCFD a part of the company's management system. The Company helped complete the translation of TCFD guidelines into traditional Chinese and participated in multiple advocacy campaigns with the industry, government, and academia in 2019. We compiled an independent "Climate-Related Financial Disclosure Report" in 2020 and published it in January 2021 to demonstrate the results of internal management.

Concern for
Climate Change

Climate Governance Framework

CAL established a TCFD Task Force composed of multiple units in 2019 and used the Corporate Sustainability Committee and Environmental Committee to monitor climate-related risks and opportunities. We report key results to the Board of Directors each year for supervision and management. CAL's climate governance framework is shown in the figure below.

Analysis of the Impact of Climate on Company Operations

CAL has referenced the IPCC Fifth Assessment Report (AR5) and analyzed and identified related risks and opportunities that may affect the cost of operations or revenue under 2°C and 4°C scenarios based on global operations and destinations, company assets (including aircrafts, offices, and plants), upstream supply chain, and downstream customers. The analysis results are as follows:

Compilation of Qualitative Evaluation Results

2°C Impact

Governments and ICAO

Low-carbon Transfer Policies, Regulations and Agreements

- Promote sustainable alternative jet fuels: ICAO proposed 2% SAF targets and EU 2019 Green Deal on mandatory use of SAF
- Incorporate carbon tax and carbon offsetting requirements to attain net zero emissions
- Introduction of mandatory renewable energy usage
- Collection of energy expenses and fossil fuel fees

Newcomers in the market

Launch of Low-carbon Travel Flights

Supply Chain (Raw Materials)

Rising Cost of Materials

- Large electricity users use renewable energy for 10% of their consumption
- Extreme weather may cause supply chain interruptions and companies must increase inventory in response

Suppliers (Aircraft Companies)

Increase Fuel Efficiency

- Increase in the demand for next-generation aircrafts with better fuel efficiency
- Development of next-generation aircrafts

CAL

Increased Cost or Reduced Revenue

- Regulatory requirements increase demand for carbon rights / offsetting credits and increase carbon prices
- Increased cost for the development and use of sustainable aviation fuel
- Cost of fleet renewal
- Cost of flood prevention for headquarters and offices
- Disappearance of routes to small islands
- Increased cost for the supply chain

Potential Opportunities

- Improving the Company's operation strategy may create opportunities for increasing revenue by increasing passenger load factor
- Using more fuel-efficient aircrafts effectively reduces operating costs
- Using sustainable aviation fuel to satisfy ICAO's carbon reduction requirements and respond to carbon reduction policies of foreign countries
- Opportunities for investments in renewable energy to produce carbon assets
- Promotion of the ECO Travel Carbon Offsetting Program to cater to customer groups that favor low-carbon consumption
- The customer suggestion system (CSS) helps CAL continue to improve in sustainability, environment, and climate change issues

Stakeholders

Issues of Concern to Stakeholders

- Stakeholders increase their environmental awareness and promote replacement of air transportation with land transportation (including rail transportation)
- Increased demand in developing countries
- Population increase and economic growth expand the demand for logistics
- Increased frequency and intensity of extreme weather affect the normal operations of flights (torrential rain, buoyancy, and sea level rise)
- Development of ESG investment
- Consumers pay close attention to the development of low-carbon tourism

Alternatives

Replacement by Land and Sea Transport

4°C Impact

Governments and ICAO

Carbon Transfer Policies and Regulations

- Support the development and promotion of alternative fuel to realize carbon removal / low-carbon operations
- Incorporate carbon tax and carbon offsetting requirements to attain carbon removal / low-carbon operations
- Introduction of mandatory renewable energy usage
- Collection of energy expenses and fossil fuel fees

Newcomers in the market

Development of Electric Aircrafts
(lithium-ion batteries / hydrogen fuel cells)

Supply Chain (Raw Materials)

Rising Cost of Materials

- Large electricity users use renewable energy for 10% of their consumption
- Extreme weather may cause supply chain interruptions and companies must increase inventory in response

Suppliers (Aircraft Companies)

Increase Fuel Efficiency

- Increase in the demand for next-generation aircrafts with better fuel efficiency
- Development of next-generation aircrafts

CAL

Increased Cost or Reduced Revenue

- Regulatory requirements increase demand for carbon rights / offsetting credits and increase carbon prices
- Development and use of sustainable aviation fuel
- Extreme weather increases the cost of the suspension of flights, redirected flights, or delayed takeoffs
- Extreme weather increases the cost of flight safety, hull damages, and repairs
- Cost of fleet renewal
- Cost of flood prevention for headquarters and offices
- Disappearance of routes to small islands.
- Depletion of water resources and spread of diseases

Potential Opportunities

- Improving the Company's operation strategy may create opportunities for increasing revenue by increasing passenger load factor
- Using more fuel-efficient aircrafts effectively reduces operating costs
- Using sustainable aviation fuel to satisfy ICAO's carbon reduction requirements and respond to carbon reduction policies of foreign countries
- Opportunities for investments in renewable energy to produce carbon assets
- Promotion of the ECO Travel Carbon Offsetting Program to cater to customer groups that favor low-carbon consumption
- The customer suggestion system (CSS) helps CAL continue to improve in sustainability, environment, and climate change issues

Stakeholders

Issues of Concern to Stakeholders

- Stakeholders increase their environmental awareness and promote replacement of air transportation with land transportation (including rail transportation)
- Increased demand in developing countries
- Population increase and economic growth expand the demand for logistics
- Increased frequency and intensity of extreme weather affect flight safety and the normal operations of flights (typhoons, blizzards, visibility, torrential rain, buoyancy, and sea level rise)
- Development of ESG investment
- Consumers pay close attention to the development of low-carbon tourism
- Changes in the water environment
- Public health

Alternatives

Replacement by Land and Sea Transport

Financial Impact Analysis of Short, Medium, and long-term Climate-related Risks and Opportunities

CAL uses the identification, assessment, response, and review operating procedures in the internal risk management mechanisms for critical climate risk matrix analysis under 2°C and 4°C scenarios in the first phase (as shown in the figure below). The financial impact (as shown in the table below) is measured in the second phase. Please refer to the "China Airlines Climate-Related Financial Disclosure Report".

Long-term Risks and Risk Distribution under the 2°C Scenario

Long-term Risks and Risk Distribution under the 4°C Scenario
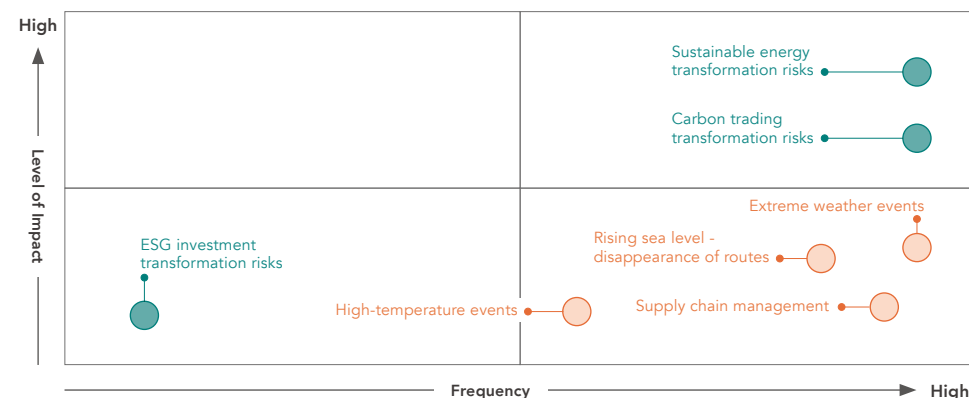
Note: Green bubbles correspond to transformational risks; orange bubbles correspond to physical risks.
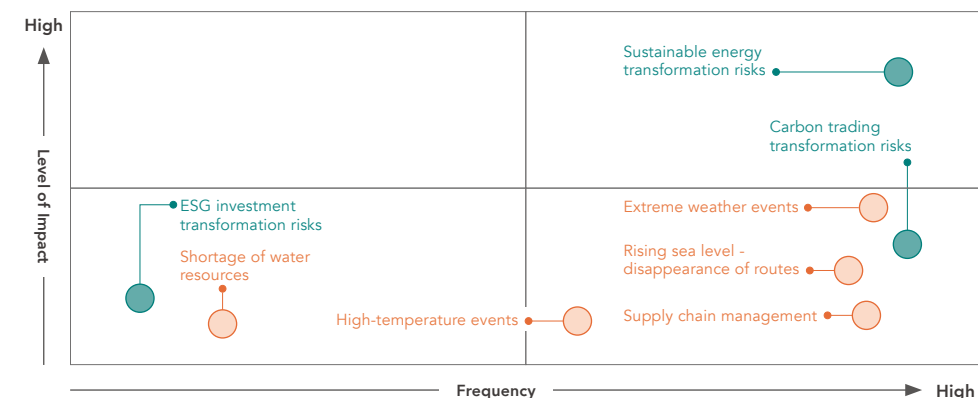
Climate Risk Management

CAL has incorporated TCFD operating procedures into the Company's management mechanisms and established internal TCFD operating procedures. We also proposed multiple implementation measures for governance, strategy, risk management, and indicators and targets to continuously improve and overall climate-related risk and opportunity management.
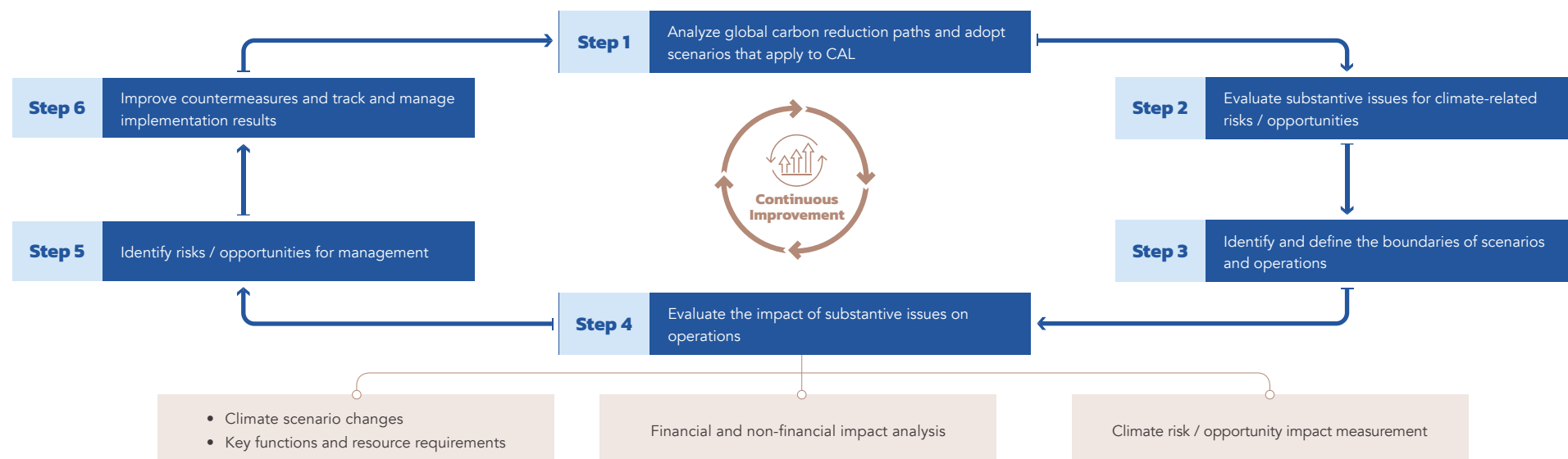
Step 1 Analyze global carbon reduction paths and adopt scenarios that apply to CAL

Step 2 Evaluate substantive issues for climate-related risks / opportunities

Step 3 Identify and define the boundaries of scenarios and operations

Step 4 Evaluate the impact of substantive issues on operations

Step 5 Identify risks / opportunities for management

Step 6 Improve countermeasures and track and manage implementation results

Continuous Improvement

- Climate scenario changes
- Key functions and resource requirements

Financial and non-financial impact analysis

Climate risk / opportunity impact measurement

Climate Change Targets and Mitigation and Adaptation Strategy

Response Item		Target and Specific Actions
Governance	Strengthen Climate Governance	Continue to submit climate governance reports to the Board of Directors
	Enhance Management Supervision and Cross Departmental Operations	1. Implement corporate governance and green finance and introduce TCFD and SASB standards and requirements 2. Implement rolling management to improve the short, medium, and long-term ESG performance
Strategy	Enhance TCFD Capabilities	1. Increase the comprehensiveness and depth of quantified financial information 2. Establish a cross-unit operation information platform
	Climate Response Strategies and Management	1. Incorporate climate risks and opportunities into the Company's overall strategies and plans and implement related response actions 2. Incorporate discussions of the impact of climate change in the Company's flight plans, business performance management, and other operations and formulate response strategies and business operation adjustments when necessary
	Participate in Important Engagements	1. Participate in the international and Taiwan's important climate policy engagement platforms, monitor policy development trends, and gain influence 2. Lobby the industry, government, and academia to create a development strategy for sustainable aviation fuel in Taiwan
Risk Management	Strengthen the Risk Management Mechanisms for the Corporate Value Chain	Combine the CAL value chain and the environmental risk management mechanism, continue to implement and expand greenhouse gas inventory and climate and energy risk assessments of key suppliers, strengthen the detection of climate risks and opportunities as well as management, and enhance the capability of continued operations in response to extreme weather
	Strengthen the Existing Enterprise Risk Management Mechanism	Incorporate climate factors into the existing enterprise risk management mechanism to strengthen climate risk / opportunity detection, response, and control capabilities in all units
	Respond to International Carbon Transformation Risks	1. Participate in the carbon offsetting and reduction plans of the international aviation industry 2. Continue to enhance MRV capacity for EU ETS and CORSIA mechanisms 3. Study and perform carbon rights / credit transaction
	Implement Carbon Reduction and Energy Transformation	1. Install dedicated electricity meters on equipment / processes with high energy consumption risks to monitor electricity consumption 2. Continue to perform replacement and renewal of high-energy-consuming facilities 3. Evaluate the installation of renewable energy facilities 4. Enhance energy management systems and improvement of their effectiveness
Indicators and Targets	Continuously Optimize Green-house Gas Inventory	Conduct an inventory of greenhouse gas emissions ISO 14064:2018 categories greenhouse gas emissions inventory every year to grasp the greenhouse gas emissions information
	Implement Carbon Emission Reduction Targets and KPIs	Implement short-, mid-, and long-term carbon reduction targets and establish around 60 KPIs in environmental protection and carbon emission reduction each year; review the performance at the meeting of the Corporate Environmental Committee convened by the President quarterly
	Attain Flight Carbon Reduction Objectives	1. Continue to promote plans for fleet update, aircraft weight reduction, flight optimization, and O&M improvement 2. Implement fleet plans in accordance with medium and long-term business growth and carbon reduction trends 3. Continue to improve aviation fuel efficiency, increase loading rate, and focus on the development of new technologies and new low-carbon aircrafts for purchase at an appropriate time
	Increase Fuel Efficiency	1. Continue to promote aviation fuel-saving operations to increase 1.5% fuel efficiency each year 2. Optimize route planning and develop the most suitable passenger / cargo fleet in response to the epidemic and market development trends

2-4-3 Achievements in Environmental Sustainability `GRI 301-1, 303-2, 303-3, 303-4, 303-5`

CAL continued to focus on the following tasks: improving environmental and energy management, strengthening carbon management, building capacity for supply chain environmental management, and promoting environmental awareness. The Corporate Environmental Committee, its five environmental management committees, and functional task forces convened meetings regularly or from time to time to improve environmental performance and ecological efficiency. For more information on environmental performance, refer to Appendix Environmental Performance.

Task 1 — Optimizing Corporate Environment and Energy Management

In 2017 and 2019, CAL completed the transition to the ISO 14001:2015 standard and ISO 50001:2018, incorporating the "life cycle thinking", "stakeholder engagement," and "risk and opportunity management" into day-to-day operations to continue to enhance environmental and energy performance tracking and management in order to attain the short-term goals for carbon reduction in ground operations and SDGs in 2020. However, the COVID-19 epidemic in 2020 has affected environment and energy performance. We implemented measures to support disease prevention requirements such as adding air-conditioning ventilation, organizing work in separate regions / periods, removing certain water conservation faucets, using disposable utensils, and canceling carpool measures, which exacerbated the burden of the environment in operations.

Nevertheless, CAL remains committed to the spirit of "no resource wasting and precision management" while prioritizing disease prevention. We implemented resource conservation operations across the Company including continuous replacement of lighting equipment, increasing the sources of intermediate water recycling, setting up regional for rotation demands and reduce the burden of the environment. In addition to continuous collection of data on outstation business activities, we also use the opportunity to strengthen resource management and performance evaluation of the system. We implemented measures included the decommissioning of B747-400 passenger aircrafts, installation of electricity meters for major energy usage, installation of water meters at water consumption points, tracking solar energy power generation efficiency, and full inventory and deployment of resource recycling facilities as we prepare for the recovery of demand in the future.

As a benchmark air transportation service provider in Taiwan, CAL is tasked with the critical mission of with supporting border security and strengthening disease prevention tasks for passengers and crew members. CAL complies with related regulations of the Central Epidemic Command Center (CECC) and provides passengers and crew members with suitable protective equipment and takes part in discussions and cooperation on IATA waste operations for disease prevention. We process cabin waste in accordance with high standards in domestic and international regulations. CAL also works with suppliers to actively develop cabin service products that meet disease prevention and environmental protection requirements to protect passengers' health and the environment.

Key Achievement

Development of Products for Self Protection by Using Environmental Friendly Materials

Products developed: CAL and BenQ Materials worked together to create the first co-branded "Xpore travel fashion shield hoody" for self protection and eco friendly.

CAL worked with BenQ Materials in launching the "Xpore travel fashion shield hoody" which can be wear for in-cabin protection and make passengers with safety and comfort during their journeys. Alternative waterproof technology without the use of perfluorocarbons (PFCs) is used and an environmental friendly zero-solvent process to ensure that it does not generate hazardous chemical substances that damage the environment and human body. It can keep off the raindrop or hazardous factors in the environment from penetrating, thus, perspiration can easily evaporate through for long lasting waterproof, windproof and dry comfort in wearing.

Resource Management

Use of Energy

CAL carried out 60 environmentally friendly energy conservation measures and the fuel management team implemented 13 fuel-saving programs in 2020. The planed carbon reduction target was 58,057 tons. However, the reduced number of flights due to the epidemic resulted in a lower achievement rate for fuel conservation. The park air-conditioning / lighting equipment replacement project was also postponed. The actual carbon reduction in 2020 was 48,888 tons and the achievement rate was 84%. . CAL consumed 34,523 kWh of electricity in 2020, which was a 1.28% increase from 2019 (34,088 kWh). The main cause is the epidemic. We implemented separate regions or separate periods for certain office areas to reduce clustering. We also increased external air exchange volume for the air-conditioning system to ensure the circulation of air. Therefore, the electricity consumption increased significantly starting from the third quarter. However, CAL continued to replace existing equipment and lighting equipment and enhanced the energy conservation awareness campaigns in the office, maintained the operation efficiency of the electricity recovery system of the elevators, and increased the efficiency of solar renewable energy equipment during the epidemic. We also obtained 117 renewable energy certificates issued by the Ministry of Economic Affairs in 2020 to maintain a certain level of building energy efficiency while satisfying disease prevention requirements.

Energy Consumption

Non-renewable Fuels
(Unit:MWh)
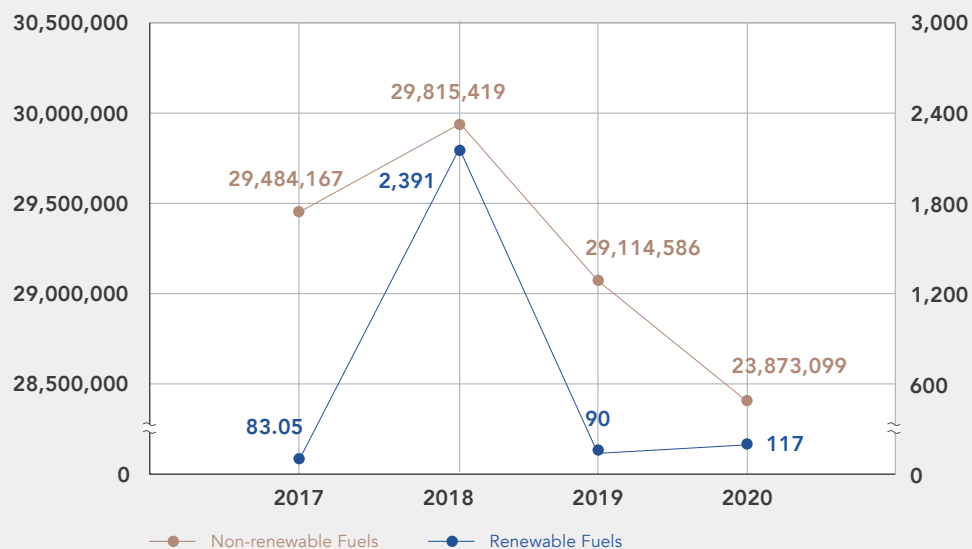
Renewable Fuels
(Unit:MWh)
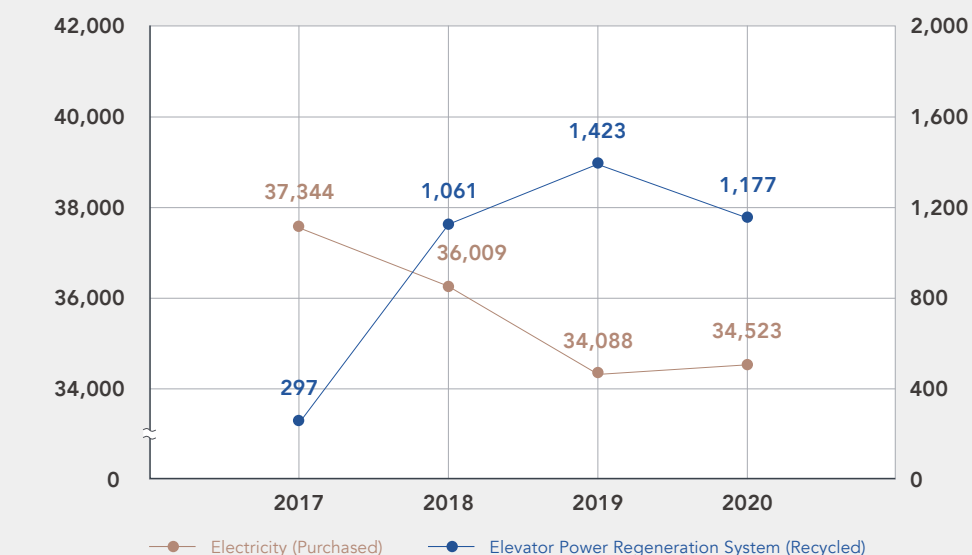
Note 1: Non-renewable fuels include gasoline, diesel, liquefied petroleum gas (LPG), liquefied natural gas (LNG), and aviation fuel. All CAL aircraft are counted as part of the calculation of aircraft fuel consumption.

Note 2: Renewable fuels include sustainable aviation fuels and solar photovoltaic.

Note 3: The scope of purchased power covers park areas (China Airlines Park, Taipei Branch Office, Songshan Office), maintenance plants (Hangars 2 and 3, Engine Maintenance Plant), and Kaohsiung Branch Office.

Note 4: Since the fourth quarter of 2017, 2 sets of the elevator power regeneration system have been installed at the Crew Training Building with high utility of elevators. Electricity is recycled and reused through the anti-motoring effect and the internal grid.

Noise Management

CAL takes the following measures to reduce the impact of noise on local communities and front-line employees during takeoff and landing without compromising flight safety:

1. All CAL aircrafts (777-300ER, 747-400, 737-800, A350-900, A330-300) have conformed to international noise standards for low-noise aircraft (noise level for Chapters 3 and 4 of ICAO Annex 16); in particular, noise of A350-900 is 16 dB lower than the current standards and 20% less than that of the same model of competitors.

2. Implement flight operations following the Noise Abatement Procedures posted by each airport.

3. Encourage the flight crew to employ the continuous descent approach (CDA) to lower noise level and reduce fuel consumption.

4. Pay noise charges according to regulations of each country's airports on noise prevention.

5. Collect international information through international exchange platforms, such as IATA to continue to carry out noise reduction.

Use of Water Resources `GRI 303-1`

CAL's water resources are supplied by Taiwan Water Corporation or Taipei Water Department based on the region. China Airlines Park and Engineering & Maintenance Organization (EMO) Park are located in areas with medium to high water resource risks. We fully incorporated with water conservation label products and rainwater recycling systems into the initial design and construction of China Airlines Park. The system provides water for watering plants and toilet flushing in the Park and we also added multiple intermediary water recycling pipelines after the completion of construction, including condensed water from the air-conditioning system and drainage from training swimming pools as we seek to minimize the consumption of water resources. The water consumption in the in the EMO Park mainly occurs in the maintenance process, wastewater processing, and aircraft cleaning operations. The wastewater includes domestic sewage and industrial wastewater. The former is processed by the Taoyuan Airport Sewage Treatment Plant while the latter is processed by the two wastewater treatment plants in the EMO Park due to the nature of the wastewater. The treatment plants process organic and galvanization wastewater (including heavy metals such as chromium and cadmium). They are also regularly inspected to ensure that the effluent meets related regulations of the Environmental Protection Administration. We recycle and reuse the processed organic wastewater for washing cars and watering garden plants. The remaining effluent is discharged into Nankan River. Songshan Office and Taipei Branch Office are located in areas with low water resource risks.

Electricity (Purchased)
(Unit:MWh)

Elevator Power Regeneration System (Recycled)
(Unit:KWh)

Water Usage Area	Water Shortage Level 1	Water Supply Unit	Wastewater Processing Unit (Level)	Effluent Site	Effluent Standard
CAL Park	Located in Taoyuan City with high water resource risks	Taiwan Water Corporation	Domestic sewage: Taoyuan Airport Sewage Treatment Plant (secondary treatment)	Nankan River (River with Category C terrestrial surface water)	pH: 6 ~ 9 COD: < 100 mg / L BOD: < 30 mg / L SS: < 30 mg / L
EMO Park			Domestic sewage: Taoyuan Airport Sewage Treatment Plant (secondary treatment)		pH: 6 ~ 9 COD: < 100 mg / L SS: < 30 mg / L Cadmium: < 0.03 mg / L Total chromium: < 2 mg / L
			Industrial wastewater: CAL's first and second wastewater treatment plants (tertiary treatment)		
Taipei Branch	Located in Taipei City with low water resource risks	Taipei Water Department	Dihua Sewage Treatment Plant (secondary treatment)	Tamshui River (River with Category D terrestrial surface water)	pH: 6 ~ 9 COD: < 100 mg / L SS: < 30 mg / L NH3: < 10 mg / L
Songshan Office					

Note 1: Source: A study on the adaptation indicators for the high water resource risk area in Taiwan, Water Resources Agency, Ministry of Economic Affairs, 2016.

Note 2: There were no violations of regulations regarding wastewater or sewage in 2021.

With regard to water resources, the Company's water withdrawal volume in 2020 was 126,774 tons which was a 13.46% reduction from 2019. In response to disease prevention requirements in 2020, we removed water conservation measures for faucets in certain areas to ensure cleaning effectiveness. However, the Company still actively installs internal water meters and intermediary water recycling pipelines and promotes conservation of water used for watering plant. We implement the ECO-SHINE environmentally friendly aircraft cleaning technology that saves water and other measures. We sought to minimize the consumption of water resources in the system while ensuring disease prevention.

(Unit: thousand tons)

Water Usage Area	Water Withdrawal 1				Water Consumption	Water Discharge	Water Recycling	Recycling Ratio
	2017	2018	2019	2020	2020	2020	2020	2020
CAL Park	54.95	54.47	57.49	49.10	21.56	27.55	6.32	12.8%
EMO Park	69.22	75.88	70.25	59.78	30.12	Domestic: 10.32	NA	-
						Industrial: 19.343	Industrial: 2.32	3.89%
Taipei Branch	6.50	5.80	5.83	5.41	2.37	3.03	NA	-
Songshan Office	10.59	12.07	12.93	12.48	5.48	7.00	NA	-
Total	141.26	148.22	146.50	126.77	59.53	67.24	8.64	-

Note 1: Scope covered by water meters: CAL Park, maintenance plants, Songshan Office, and Taipei Branch.

Note 2: The water consumption volume is calculated based on the actual water consumption ratio in the air-conditioning system.

Note 3: Only 19.34 thousand tons of industrial wastewater from the Engineering & Maintenance Organization is discharged into the terrestrial surface water in accordance with regulations. The remaining 47.9 thousand tons of wastewater is discharged into urban sewage treatment plants in accordance with regulations.

Pollution Prevention

Air Pollution GRI 305-7

Among the gases emitted by aircraft engines, nitrogen oxides (NOx) and sulfur oxides (SOx) have a significant impact on the local air quality. Despite the impact of the epidemic in 2020 on the Company's operations and emissions performance, CAL continues to reduce the impact on ground air quality during aircraft takeoff / landing mainly through introducing low-pollution new aircraft, encouraging the shutdown of one to two auxiliary power units (APUs) during taxiing, and improving the efficiency of ground power units. CAL's 14 A350-900 aircrafts have been delivered and have replaced the A340-300 and 747-400 aircrafts in flights. We plan to purchase six 777F cargo aircrafts from 2020 to 2023 and two aircrafts have been delivered as of the end of 2020. CAL provides passenger and cargo transportation services with a brand-new fleet of aircrafts. Mandarin Airlines has fully updated its fleet and has purchased nine ATR72-600 aircrafts from 2017 to the end of 2020. Tigerair Taiwan already has eleven A320neo aircrafts and will lease-purchase fifteen additional A320neo aircrafts which are expected to commence operations in 2021. By introducing these next-generation new fleets, CAL continuously improves fuel efficiency and reduces NOx emissions at takeoff and landings.

SOx and NOx Emissions of CAL Group

Item			Unit	CAL			
				2017	2018	2019	2020
Passenger Aircraft	SOx	Emissions	Ton	57.67	58.28	58.95	30.41
		Emission Efficiency	g / RTK	0.0125	0.0122	0.0122	0.0133
	NOx	Emissions	Ton	601.20	607.47	614.49	317.03
		Emission Efficiency	g / RPK	0.0152	0.0150	0.0149	0.0400
Cargo Aircraft	SOx	Emissions	Ton	13.23	13.72	13.09	14.58
		Emission Efficiency	g / RTK	0.0028	0.0029	0.0031	0.0030
	NOx	Emissions	Ton	137.88	143.02	136.48	152.04
		Emission Efficiency	g / RTK	0.0294	0.0301	0.0321	0.0317

Item			Unit	Mandarin Airlines			Tigerair Taiwan		
				2018	2019	2020	2018	2019	2020
Passenger Aircraft	SOx	Emissions	Ton	27.27	31.23	25.24	15.52	16.19	2.89
		Emission Efficiency	g / RTK	0.1875	0.2107	0.5066	0.0416	0.0399	0.0486
	NOx	Emissions	Ton	284.30	325.53	263.10	161.77	168.72	30.09
		Emission Efficiency	g / RPK	0.1901	0.2129	0.5128	0.0384	0.0368	0.0454

Note 1: SOx: SOx is calculated based on the methodology of the American Environmental Protection Agency: Total annual emissions = Number of flights x 0.000891, where 0.000891 is the emission factor (Tons / LTO).

Note 2: NOx: NOx is calculated based on the methodology of the American Environmental Protection Agency: Total annual emissions = Number of flights x 0.009288, where 0.009288 is the emission factor (Tons / LTO).

Note 3: LTO: LTO refers to the number of landing and take-off.

Note 4: Mandarin Airlines and TigerAir Taiwan have no cargo aircraft.

Note 5: Mandarin Airlines revised the 2018-2019 emission data in accordance with the adjustment of flight information system and adoption of RPK to calculate NOx efficiency.

Note 6: Tigerair Taiwan revised the 2018-2019 emission data in accordance with the adoption of RPK to calculate NOx efficiency.

Waste Management GRI 306-2

Despite the challenge of the global pandemic in 2020, international attention and control on issues of single-use plastic (SUP) products and leftover food reduction are still ongoing. CAL implements waste management based on the characteristics and output of the waste produced in the operation process, including general domestic waste from office operations, hazardous / general industrial waste in maintenance operations, and recyclable resources and kitchen waste from transportation services, in accordance with five major principles: refuse, reduce, reuse, recycle, and repair. CAL's objective is to recycle 100% of waste, reduce waste volume, and increase the waste recycling rate year after year.

Waste Management Principle	Strategic Objective	Action
Refuse	Reducing the use of resources and disposing off waste through green design and procurement	Work with suppliers to develop and purchase non-disposable plastic products (e.g. wooden stirrers); increase green purchases
Reduce		Plan business and service supplies precisely to reduce consumption; improved maintenance processes to reduce end-of-life waste, and implemented electronic teaching materials and operations to save paper consumption for training and communication
Reuse	Increasing the reuse of waste and reducing it through workflow improvement	Increase the reuse of usable industrial waste (e.g. waste plastic buckets)
Recycle		Support the Environmental Protection Administration's plastic wrap recycling platform to enhance the reuse of plastic wraps
Repair		Repaire passenger / freight transport equipment (e.g. containers, pallet nets etc.) for reuse

Our business revenue was affected by the epidemic in 2020 and the overall waste output decreased significantly by 62% compared to 2019. The services in employee cafeterias and inflight services were adjusted to meet disease prevention requirements, such as Inflight catering services: We provide single-use packaging materials for inflight catering to prevent contamination of crew members and also provide them with suitable protective equipment such as masks and protective suits. These measures have increased the waste volume of single-use items and reduced the recycling ratio from 30.27% in 2019 to 29.37%. Nevertheless, the Company still strengthened the collection of related data, compliance audits, and supply chain management during the epidemic to ensure adequate waste disposal. We also developed strategies to reduce plastic and surplus food through the (in-flight) Waste Task Force established in 2019 and prepare for the future recovery of the aviation industry.

Waste Information

(Unit: kg)

Item	Service Segment			
	Waste Produced			Disposal Method 2
	2018	2019	2020	
General Domestic Waste	134,594	120,771	113,196	Incineration (power generation)
	64,672	260,855	219,381	Incineration (without power generation)
Recycling	817,180	779,467	189,060	Recycling
Kitchen Waste / Waste Materials	526,125	658,270	282,627	Compost / Hog Raising
	2,674,334	3,052,460	943,952	Incineration (power generation) requested by quarantine regulation
Hazardous Industrial Waste	16,434	18,814.5	12,657	Curing Burial / Chemical Treatment
Non-hazardous Industrial Waste	108,867	113,308	99,650	Recycling and Reuse
	142,450	119,710	84,770	Recycling
Total	4,684,656	5,123,655	1,945,293	-

Note 1: All methods of disposal consist of appointing a qualified third-party company to remove the waste for offsite disposal.

Note 2: Scope of statistics from service segments: EMO, CAL Park, Kaohsiung Branch, VIP lounges of four stations (Taoyuan, Songshan, Kaohsiung and Tainan), and Taoyuan Airport inflight services.

Key Achievement — Waste Task Force Operations and Performance

CAL has formed a Waste Task Force in the third quarter in 2019, inviting services, supplies, planning, and quality assurance units, as well as supplier partners in catering and cabin cleaning, to establish a regular communication platform. We adopted green design, waste reduction, and passenger communication as our three main operation guidelines and actively reduces the external environmental cost from inflight services and medium to long-term compliance risks.

To gain a more comprehensive understanding of the composition and volume of inflight waste, CAL invited suppliers to collect information and inventory the waste production on certain short and long-haul flights in December 2019. We also established a baseline for waste production based on the number of passengers and number of meals provided as the basis for improving onboard waste management. According to statistics, the average waste produced per person on flights that provide 1, 2, and 2.5 meals was approximately 0.43kg, 0.74kg, and 0.86 kg, which was lower than the international average of 0.52kg for short flights and 0.63 - 1.81kg for medium to long-haul flights. (Note) In addition, we also actively promote the reduction of plastics used in inflight services through the Waste Task Force operation platform while meeting food safety, convenience, comfort, and cost requirements. We use products that can be repeatedly used, seek alternatives or products/materials that passed environmental protection certification, establish appropriate recycling mechanisms, and strengthen passengers' environmental protection awareness to respond to international initiatives and management trends.

Note: References: IATA, wrap (2017) IATA Zero cabin waste handbook.

Implementation Strategy and Results

Waste Management Principles	Major Aspects of Promotion	Promotional Measures	Operation Achievements
Refuse	Green Design	1. Promote weighing of actual waste on return flights to Taiwan 2. Set per-capita waste generation targets for VIP lounge waste	1. We completed the first weighing operations and we plan to implement the operation twice in 2021 2. We have set the average kitchen waste reduction target for Taoyuan Airport VIP lounge (< 0.13 kg / person)
Reduce	Waste Reduction	1. Increase the proportion of green / environment-friendly products 2. Work with suppliers to reduce plastic packaging and use of single-use plastic (SUP)	1. Use of pillow case and headrest covers made from recycle PET yarn and café yarn polyester 2. Full replacement of plastic stirring sticks with birch sticks 3. Replace ice cream in plastic containers with ice pops (wooden sticks)
Reuse	Communication with Passengers	1. Reuse inflight products under high safety and food safety standards 2. Share environmental information on-board (magazines and videos)	1. We developed the Foldable Platinum Silicone Cups with Zen Zhou 2. We published 8 environmental protection articles and 14 environmental protection videos via push notifications in 2020.

Follow-up Operation Plans

The Waste Task Force shall continue to promote onsite waste quantity and composition inventory. It shall also use products that can be repeatedly used, seek alternatives or products / materials that passed environmental protection certification, establish appropriate recycling mechanisms, and strengthen passengers' environmental protection awareness while meeting food safety, convenience, comfort, and cost requirements.

Environmental Expenditure

CAL actively implements green procurement, invests resources every year, purchases environment-friendly equipment, promotes green maintenance and operation projects, and pays for waste cleaning and noise prevention expenses. The epidemic reduced revenue in 2020 and we purchased 44 environment-friendly products in Category 1, 2, and 3 with a decrease of TWD 9,059,000 in this regard compared to 2019.

CAL Investment in Green Facilities and Green Procurement

(Unit: TWD thousand)

Item	2017	2018	2019	2020
Environmental Protection Equipment and Maintenance Projects (Note 1)	22,769	23,106	22,805	21,774
Green procurements (Note 2)	11,730	15,760	19,258	10,199
Waste Disposal	3,315	4,536	4,062	3,854
Noise Prevention	188,485	190,357	189,351	136,812
Air Pollution Control	1,587,723	1,007,276	752,948	818,968
Total Investment Amount	1,814,022	1,241,035	988,423	991,607

Note 1: Green facilities include the depreciation of pollution prevention equipment, operational maintenance, hardware investments, environmental testing, and related projects.

Note 2: Green procurement includes Category 1, Category 2 and Category 3 eco-products specified in the "Regulations for Priority Procurement of Eco-Products (January 15, 2001)."

Task 2 — Consolidating Climate Risk Management and Carbon Reduction   GRI 302-1, 302-2, 302-4, 302-5, 305-1, 305-2, 305-3, 305-5

CAL has introduced a complete ISO 14064-1 greenhouse gas management mechanism, and established a Carbon Management Task Force under the framework of the Environmental Committee to comprehensively manage the carbon risk issues of corporate operations and manage compliance with international carbon control schemes based on the structure of carbon rights management.

In order to achieve the carbon reduction target in the first phase in the aviation industry — improving fuel efficiency by 1.5% per year by 2020 — CAL has continued to strengthen its fuel efficiency measures and formulated four major fuel-saving strategies, namely, "promoting green-energy flights," "improving ground service control," "enhancing regular repair and maintenance," and "strengthening weight reduction of fuselages," and other specific implementation measures. However, due to the severe impact of the epidemic on flight plans and dispatches in 2020, although total aviation fuel consumption decreased by 2.4% from 2019, the total number of flights was reduced by 38% in 2020 and the performance of revenue ton kilometer (RTK) decreased by 22%. The overall fuel efficiency was 0.2586 tons / 1,000 RTK, which failed to meet the 2020 target (0.2349 tons / 1,000 RTK). However, CAL has achieved the carbon reduction target for ground operations in 2020 by 38% compared to the 2009 baseline.

GHG Emissions of CAL, Mandarin Airlines, and Tigerair Taiwan

(Unit: Tons CO_2e)

Company	GHG Scope	Item	2017	2018	2019	2020
	Category 1	Flight Operations	7,149,309	7,229,903	7,059,083	5,787,751
		Ground Operations in Taiwan	5,004	3,511	4,981	3,051
		Ground Operations in Outstations (Note)	-	1,379	1,395	1,012.21
	Category 2	Ground Operations	20,677	19,949	18,169	17,572
	Categories 3-6 (Note)	Ground Operations	1,627,649	1,644,656	1,607,690	3,109,822
	Category 1	Flight Operations	259,695	255,241	237,699	107,505
	Category 1	Flight Operations	284,791	336,684	362,794	53,514

Note 1: The statistics contain 100% of the aviation fuels used by China Airlines, Mandarin Airlines, and Tigerair Taiwan.

Note 2: GHG emissions assessment agencies: BSI (2011-2013, 2015- 2016) and DNV GL (2014, 2017-2019).

Note 3: CAL calculated the emissions from the products purchased, capital goods, fuel- and energy-related activities not included in Scope 1 or 2, upstream and downstream transportation and distribution, waste treatment, employee commuting, upstream and downstream leased assets, and investments based on 15 classification requirements of the GHG Protocol Scope 3 Guidance; The emissions totaled 3,109,822 tons of CO_2e was base on ISO 14064-1:2018 in 2020. CAL's emissions data has passed the 3rd-party verification. (Exceptd the emission of ground operations in outstations)

Aviation Fuel Efficiency   GRI 302-3, 305-4

Item	2009	2017	2018	2019	2020	2020 vs. 2019	2020 vs. 2009	2017	2018	2019	2020	2017	2018	2019	2020
Fuel Consumption (Ton / GJ)	1,927,803 / 830.17	2,259,923 / 973.19	2,284,957 / 983.97	2,230,971 / 960.72	1,829,328 / 787.76	-401,643 / -172.96	-98,475 / -42.41	82,075 / 35.34	80,667 / 34.74	98,910 / 42.59	35,395 / 15.24	90,006 / 38.76	106,406 / 45.82	114,658 / 49.37	21,178 / 9.12
CO2 Emissions (Ton CO_2e)	6,099,820	7,150,674	7,229,839	7,059,083	5,787,751	-1,271,332	-312,069	259,694	255,241	237,699	111,849	284,790	336,700	289,227	53,422
Transport Volume (Thousand RTK)	7,721,089	9,289,789	9,544,260	9,072,762	7,075,331	-1,997,430	1,351,672	152,281	145,251	147,209	46,177	319,554	373,185	405,262	59,347
Fuel Efficiency (Fuel / Thousand RTK)	0.2497	0.2433	0.2394	0.2459	0.2586	0.0126	0.0089	0.5390	0.5554	0.6719	0.7665	0.2817	0.2851	0.2829	0.3569
Carbon Emission Intensity (Ton CO_2e / Thousand RTK)	0.7900	0.7697	0.7575	0.7781	0.8180	0.0399	0.0280	1.7054	1.7572	1.6147	2.4222	0.8912	0.9022	0.7137	0.9002

Note 1: The lower the fuel efficiency and the carbon emission intensity, the better is the performance.

Note 2: Carbon emission intensity (ton CO_2e / 1,000 RTK) = GHG emissions / Total RTK.

Note 3: No alternative fuel or sustainable aviation fuel were used in 2020.

Contents

Task 3 — Building Capacity for Value Chain Environmental Management

In addition to strengthening its sustainable environmental management momentum, CAL has actively enhanced the sustainable value of the overall industrial value chain. CAL launched environmental management of the value chain in 2018, inviting the Group's partners to initiate the Eco Seed Development Plan, and using environmental / energy / carbon management workshops and environmental risk surveys to promote an understanding of the concepts and benefits that will accrue from environmental / energy / carbon management. In 2020, CAL has asked value chain partners to formulate appropriate environmental and energy policies and to implement management measures and supervise the measurement operations for key environmental impacts. Operational information (such as power / oil consumption) of surveyed and interviewed organizations will be added to support the core values of the revision of ISO 14064:2018 and to strengthen the investigation and understanding of indirect emissions from the value chain. In addition, points of contact from the value chain partners and their first-level supervisors were invited to participate in the "Environmental Risk Analysis and Results Presentation Meeting," at which the results of risk survey and analysis were summarized and industry's excellent case studies were also shared.

Key Achievement — **Leading Partners in the Value Chain to Continue to Improve Environmental and Energy Management Performance**

- **Object:** 11 key value chain companies

- **Operation Highlights:** Questionnaire survey
  1. Identify value chain partners and complete the implementation status of phase 1 environment and energy management progress
  2. Focus on key environmental impact compliance status
  3. Conduct communication meetings to consolidate the awareness of energy conservation and environmental protection in the value chain

- **Six Major Question Categories in the 2020 Questionnaire:**
  Category 1: Environment and energy resource management implementation status
  Category 2-4: Key environmental impact compliance status
  Category 5: Survey of energy laws and regulations
  Category 6: Environmental protection requirements or partnership initiatives of stakeholders

- **Implementation Results:**
  All the value chain companies have used employee email, intranet, and bulletin boards to increase employees' awareness of the "Environment and Energy Policy". Certain partners have also used meetings with contractors, suppliers, and third-party service providers to communicate the "Environment and Energy Policy" or set up environmental sustainability webpages to publish the policy on external networks. Most partners have established action plans for the annual energy resource management targets. They also proposed improvement measures if they failed to meet their target. They considered environmental protection and energy conservation for new investment or equipment procurement. They assigned dedicated units to take charge of evaluating compliance obligations for the key environmental issues with direct impact on the company. There were no violations of environmental regulations in 2020.The total GHG direct and energy indirect emissions from 11 companies were 208,914 ton CO_2e in 2020.

- **Follow-ups:**
  We shall continue to expand CAL's environment and energy management experience and formulate and promote environment and energy management mechanisms that meet requirements for the Group's operation resources and sustainability targets while ensuring cost-effectiveness. We shall also strengthen environment and energy information disclosures.

Task 4 — Strengthening Awareness and Brand Image of Corporate Environmental Protection

CAL organizes the environmental training campaign every year to develop employees' awareness of environmental protection. Training programs are organized online or offline in Taiwan to cultivate the attitude and actions of protecting the planet. To implement external communication, CAL communicates the corporate concept and performance of environmental protection with stakeholders through social media and inflight magazines in hopes of creating and spreading the awareness of green consumption. CAL created the "CAL ECO Path" for corporate headquarters environmental actions map with a virtual environmental education site for special environmental protection measures implemented in the headquarters park in 2020. We provided five environmental protection education videos for internal and external visits to help the visitors understand and support the Company's environmental friendly operations, and increase the environmental protection awareness of internal and external stakeholders.

Environmental Protection Videos

▷ Air-Fuel Efficiency

▷ LOHAS Park

▷ ECO Footprint

▷ Renewable Energy

▷ Green building

Item	Operation Description	2020 Achievements
Shape a Culture of Environmental Protection	Environmental Training for All Employees	Improve employees' identification and awareness of environmental sustainability and help develop good conduct and business habits.	• **Environmental education** CAL communicated with new employees regarding the corporate policies and approaches to environmental protection and energy conservation in the course "CAL and I". The achievement rate reached 100%. • **Knowledge-based education** 1. Environmental knowledge: CAL published 24 articles and reports on environmental sustainability through internal communication platforms, such as employees' email, China Airlines newsletter, and the startup screen, in 2020. 2. Environmental protection contests and environmental protection satisfaction survey for all employees:The "Employee Environmental Protection Knowledge Challenge" quiz and annual satisfaction surveys were attended by 2,250 employees and the overall satisfaction rate was 97.6%. They provided 291 environmental protection recommendations which were all included in the design of 2021 operation plans. 3. Environmental protection lecture: two environmental lectures were held, focusing on environmental issues related to climate change and ecological conservation, to raise the employees' awareness of environmental protection; 207 participants attended.

Note: The "Operation Description" column spans correctly above. The achievements cell also contains the following two images with captions:

TCFD advanced lectures: Chairman Dr. Eugene Chien of the Taiwan Institute for Sustainable Energy gave a speech on "Sustainable Development of Industries under Climate Change"

Employee environmental protection lecture: The researcher Hui-Shan Lin of the Institute of Wildlife Conservation, National Pingtung University of Science and Technology gave a lecture on "Environmental Protection - From Eagle Red Bean and Black-shouldered Kite Rice to Guantian Pheasant-tailed Jacana Water Chestnuts"

Item		Operation Description	2020 Achievements
			4. Cross-industry exchange and engagement: The Company organized 2 cross-industry exchange programs in 2020 to collect implementation experience of other corporates and promote CAL ECO ideals. Cross-industry exchange with Delta / Visiting benchmark company First Bank's "Green Finance Education Hall"
	Professional Environmental Training	• Organize training on environmental and energy management for the related personnel of the Company and affiliates • Appoint trainees to participate in external training and seminars as needed	• Organized three enterprise training sessions on "environmental energy management systems" • Organized one enterprise training session on "greenhouse gases" • Organized four enterprise training sessions on "TCFD Training" • Organized one session on "Value Chain Environment Management Communication Meeting" in the Group
Build an Image of Environmental Protection	Promote Awareness of Green Aviation	• Promote environmentally friendly awareness and consumer behavior	• Worked with Zen Zhou company to develop "CAL Foldable Platinum Silicone Cups", which was awarded the "Environmental Sustainability Category - Special Prize" in the Buying Power Awards by the MOEA, creating value for environmental protection and sustainable development of the natural environment • Continued the practice of closing windows during summer to lower the temperature of the cabin and thus reduce the cost of APU, and airport energy use • Selected 14 environment and ecology-themed videos to play during flights • Published 3 environmental protection articles and reports via social media • Printed menus with recycled paper and soy ink and added an environmental protection slogan on the last page of the menu • Added the warning of an embargo on transport of endangered species on the Company website • Published CAL's environmental practices and electronic and mobile approaches to carbon reduction in inflight magazines • Marked the Taipei-Kinmen carbon label on the website of Mandarin Airlines, supplies, check-in counter, boarding pass, inflight magazines
		• Promote green consumption	• Added environmentalism products in the catalogue of home-delivery duty-free goods, and include China Airlines' sustainability logo. • Updated and shared the carbon footprint of routes • Enhanced the promotion of the ECO Travel Carbon Offsetting Program • Mandarin Airlines set up the Environmental Sustainability Section on the official website to publish the "Environment and Energy Policy Statement" and the results of "Carbon Labeling", and "Carbon Reduction Labeling"
		• Optimized service processes and reduce waste and waste processing costs	• Use 100% FSC paper for printing boarding passes • Adopted local ingredients for in-flight meals and Group catering and put a ban on food ingredients from endangered species • Implemented waste management • Incorporated the concept of environmental protection into design of in-flight meals and supplies • Promoted and implemented electronic and information service • Pursued the reduction of the weight of in-flight magazines and inflight service supplies and enhanced weight-reducing and fuel-saving benefits

Key Achievement — Promotion of Green Consumption — Mandarin Airlines was the first airline awarded "Carbon Footprint Reduction Label."

CAL Group fulfills corporate social responsibility and cherishes the Earth's limited resources to create sustainable value. In 2020, we helped the subsidiary company Mandarin Airlines reorganize the "Songshan-Kinmen" route carbon footprint inventory and calculated the carbon footprint of Mandarin Airlines' Songshan-Kinmen passenger transportation service route in accordance with the "Product and Service Carbon Footprint Calculation Guidelines" of the EPA and "the Aviation Passenger Transportation Services: Carbon Footprint Product Category Rule (PCR) 2.0" Based on SGS certification, the carbon footprint label was reduced from 280g CO_2e / per person-kilometer to 200g CO_2e / per person-kilometer. In addition to the updated Carbon Label certificate, the EPA also awarded Mandarin Airlines with the "Carbon Footprint Reduction Label Certificate" for reducing its carbon footprint by 30%, which far exceeded the target of 3%. Mandarin Airlines thus became the first airline company in the world to receive the carbon emissions reduction label. Detailed on the environmental protection page of Mandarin Airlines' official website.

Key Achievement — Invited Airline Companies of the Group to Take Part in the ECO Travel Carbon Offsetting Program

Since 2019, CAL has integrated the official website, the ticketing system, travel reminders, and a diversified electronic-friendly service platform to strongly encourage passengers to participate in the voluntary ECO Travel carbon offsetting program. In 2019, CAL added carbon offsetting links to the employee preferential ticket system and the business trip dispatching system to invite employees to jointly support carbon-offsetting actions. As of the end of December 2020, the amount of offset reached 293.93 metric tons, the best in the industry in Taiwan.

To continue to help domestic consumers Learn about low-carbon travel and take action, CAL invited Mandarin Airlines and Tigerair Taiwan to join the "ECO Travel Carbon Offsetting Program". We included the carbon emissions of domestic destinations into the platform database and provided domestic consumers with links for participation and the opportunity to participate in supporting international sustainable development initiatives and contribute to sustainability of the Earth's environment.

Future Plans

Operational Focus	Future Development Plan
1. Advance operational effectiveness of management systems	1. Advance the operation of ISO 14001 and ISO 50001 management systems 2. Enhance the transition of ISO 14064-1: 2018 3. Promote informatization of management systems 4. Participate in discussion on environmental management system planning in the industry
2. Expand the scope of environmental, energy and greenhouse gas management	1. Gradually expand the environmental management level to the value and supply chains 2. Implement environmental risk assessment of outstations and suppliers 3. Assist the Group's enterprises to improve their momentum in carbon management

Operational Focus | **Future Development Plan**

3. Comply with the Carbon Offset and Reduction Scheme for International Aviation (CORSIA)

1. Continue to participate in the IATA and Taiwanese government's engagement for strategic planning of CORSIA operations
2. Follow CORSIA monitoring plan, manage emissions inventory, data verification and report to competent authorities
3. Optimize carbon emission management and conduct carbon offset management in accordance with ICAO regulations

4. Consolidating the financial quantification mechanism for corporate climate and environmental risks

1. Continue to strengthen capabilities of the management, such as the Board of Directors, in climate and environmental governance
2. Build the momentum of financial disclosures relating to climate and environmental risks
3. Enhance the implementation knowledge of all units on climate issue management

5. Continue to refine carbon reduction targets

1. Continue to manage and improve air and ground carbon reduction targets
2. Strengthen energy-saving and carbon reduction measures, continue to reduce the carbon footprint of operations, and improve ecological benefits
3. Assess the introduction of SBT aviation sector methodologies in the international aviation industry and participate in the negotiation and cooperation industry

6. Continue to improve the utilization efficiency of environmental resources

1. Improve water resources and waste management operations
2. Implement environmental protection and energy-saving measures and increase resource uti-lization efficiency

7. Investigate sustainable aviation fuel (SAF) application strategy

1. Continue to keep abreast of developing trends in sustainable fuels
2. Push the industry and the government to develop Taiwan SAF strategies

8. Create an environmental protection culture inside and outside the company

1. Continue to support environmental sustainability initiatives at home and abroad
2. Create diversified promotion channels and inspire innovative momentum of cooperation inside and outside the Company

2-5
Society

HIGHLIGHTS

Over 2,200 cases of medical supplies
Over 1,200 passengers

Participated in international relief efforts in 2020, and organized charter transport for medical supplies. A total of 10 flights carried 2,278 cases of supplies weighing a total of 73,343kg. Helped transporting expats in regions more affected by the coronavirus back to Taiwan. A total of 9 charter flights benefited 1,224 people.

Over 3,400 students

From 2014 to now, CAL's Love All Around team has visited more than 15 cities and counties, 27 villages and towns, and 56 elementary schools as well as social welfare organizations in Taiwan to help 3,447 students.

Over 7.16 million in charity contributions

7.16 Million

Invested TWD 7,162,191 in charity activities throughout 2020.

550 senior citizens

Provided care for 550 disadvantaged senior citizens at four events throughout 2020.

45,000 students

Sponsored book programs for 102 schools throughout Taiwan to help approximately 45,000 students.

4th Time in TCSA Social Inclusion Award

Awarded in TCSA Social Inclusion Award for four consecutive years.

5th Time Reader's Digest Trusted Brand

Tigerair Taiwan, China Airlines Group's subsidiary, won a Platinum Award in the low-cost carrier category from the Reader's Digest Trusted Brand for five consecutive years. Tigerair Taiwan received recognition as one of the iconic happy enterprises for office workers in the online vote organized by 1111 Job Bank.

Management Approach

GRI 103-1, 103-2, 103-3

➤─ Importance of Material Issues

No support from the society, no CAL. What makes CAL successful is the support of the society. Upholding the core philosophy of "taking from society and giving back to society," CAL continues to contribute to society in the hope of creating love while fulfilling its corporate responsibility in Taiwan.

➤─ Commitment and Long-term Goals

• Commitment

CAL continues to fulfill our responsibility as a corporate citizen by investing resources in social welfare to mitigate social issues and improve society.

• Long-term Goals

2023

1. Planning long-term charity projects
2. Regularly participate in charity activity that improves the international visibility of Taiwan

2025

1. Developing opportunities for students to receive international education
2. Promoting economic growth and employment assistance in underdeveloped areas / developing countries and improving social well-being

2030

1. Improving the quality of education in underdeveloped areas / developing countries
2. Enhancing the benefits of sponsorships regarding improving society

➤─ Unit in Charge

Corporate Sustainability Committee — Society Task Force

➤─ Management Mechanisms

- The meeting of Corporate Sustainability Committee, at least twice a year
- The Society Task Force reports to Corporate Sustainability Committee, every quarter

➤─ Grievance Mechanism

- **Investor Relations and Media Contacts —** Investors Service Website
- **Charitable Activities: Corporate Communications Office —** E-mail: tpepp@china-airlines.com

Stakeholder Contact

Investors Service Website

➤─ Objectives and Plans

Direction	KPI	2020			2021 Objectives
		Objectives	Performance	Achievement (Note 4)	
Enhance the overall quality of national education	Organizing long-term education charity projects	Organizing at least one long-term education charity project	Not implemented (Note 1)	No	Organizing at least one education project related to the aviation industry
	Number of discounted tickets bought by domestic and international students	Continuing to publicize student flight ticket and increasing opportunities for international education	34 domestic and international students (Note 2)	No	
Raise the Taiwan's visibility in the world	Increase the number of sponsoring international activities	Using CAL resources to promote local brands, and increasing international visibility of both local brands and CAL	Sponsored 9 international Activities (including 81 flight tickets)	100%	Participating in at least one charity activity that improves the international visibility of Taiwan
Empower the disadvantaged to gain equal social opportunities	Increased level of sponsorship in charity events	Increasing the proportion of charity event sponsorships to 20% to empower the disadvantaged to gain equal social opportunities	38% (Note 3)	100%	Organizing at least one long-term public welfare charity project

Note 1: The COVID-19 pandemic this year affected the overall aviation market. Due to operational and epidemic prevention considerations, this project could not be implemented. In response to international support initiatives for the global pandemic, CAL supported the central government and used its core resources to provide multiple flights for the transportation medical supplies and charter flights for the repatriation of citizens living in regions more affected by the coronavirus.

Note 2: According to statistics on the Company website, the sales of student tickets in 2020 decreased significantly from the previous year due to the impact of the epidemic on the global market and adjustments in operation strategies.

Note 3: In 2020, CAL sponsored 16 projects, of which 6 projects were charity events, accounting for 38% of overall sponsorships.

Note 4: Achievement refers to the performance fulfillment percentage.

2-5-1 Social Sustainability Strategy

The global aviation industry was devastated by the COVID-19 pandemic in 2020. To support the central government's guidelines for rigorous disease prevention measures and reducing activities that involve clustering of people, CAL upheld its commitment for sustainable development of the company and implements SDG 3, SDG 4, and SDG 8 of the United Nations Sustainable Development Goals with its three major sustainability strategies including "enhancing the internationalization of local education", "increasing the international visibility of local brands", and "empowering the disadvantaged to gain equal social opportunities" to give back to the society and support sustainability together.

CAL Social Sustainability Strategy

One of CAL Sustainability Strategy / Action Plan

Social Sustainability Strategy

Brand Awareness / Localized Global Operations

Enhancing the internationalization of local education	Enhance the overall quality of national education	• Education • Environmental education
Elevating the visibility of local brands	Raise the Taiwan's visibility in the world	• Humanitarian relief • Sports activity
Promoting social equality for the disadvantaged	Help the disadvantaged improve on a difficult situation	• Caring for the disadvantaged • Welfare activities

2-5-2 Enhancing the Internationalization of Local Education

Theme	Item	2020 Performance	
		Number of Participants / Beneficiaries	Amount Invested (TWD)
Education	Educational exchange activity, company visits, volunteer teaching program, knowledge-sharing platform at elementary schools, junior cabin crew camp, flight camp	46,017	851,139
Environmental Sustainability	Coastal cleanup	350	133,100
	Corporate animal adoption plan	-	13,800

Note: The above items and results are not limited to Mandarin Airlines and Tigerair Taiwan.

Education

CAL Group is committed to long-term improvement of domestic education and development in Taiwan. We use real actions to ensure substantial improvements in children's education. We uphold the spirit of supporting education for all and use the unique resources of the aviation industry to welcome company visits by colleges and universities each year. We have organized volunteer lectures to support diverse learning for students since 2010. We have provided opportunities for learning professional knowledge and real-life skills in long-term partnerships with domestic universities to enhance industry-academic cooperation since 2013. In addition, we also actively promoted environmental protection awareness with the aim of achieving positive sustainable development for the society.

Company Visits

CAL welcomes company visits of related departments in colleges and universities each year and assigns dedicated personnel to introduce the corporate culture, cabin crew training facilities, emergency escape training facilities, and flight training facilities. We use real exchange to broaden students' perspectives of the aviation industry. CAL organized 9 company visits by colleges and universities in 2020 which benefited 320 students.

College and university students attended an introductory course to cabin crew emergency escape training

Group photograph of college and university students after a company visit

Volunteer Teaching

Since its establishment in 2011, the "China Airlines Volunteers Club" provides lectures at regular intervals at schools near the Company each year. It uses real actions and demonstrations to communicate core aviation knowledge of the Company and encourages students to cultivate an international vision and a habit for acquiring knowledge, thereby increasing their opportunities for diverse growth. In 2020, 8 lectures in schools such as Xihai Elementary School, Zhuwei Elementary School, Shanfeng Elementary School, and Kuolin Elementary School in Dayuan District were held. In total, there were 50 participating volunteers and 24 hours of service, benefiting 604 students.

Enthusiastic interactions between CAL volunteers and students during a lecture

Group photo of happy CAL volunteers and students after a lecture

Knowledge-Sharing Platform at Elementary Schools

Since 2014, CAL has been working with the Global Views Educational Foundation to collaborate on the "Common Knowledge Platform Public Welfare Project" sponsorship plan and to donate subscriptions to the "Global Kids Junior Monthly" and "Global Kids Monthly" to students in various elementary schools in Taoyuan City, Taitung County, Nantou County, and Hualien County for the purpose of providing students with additional access to knowledge and help improve the overall quality of education in Taiwan. In 2020, 102 schools and about 44,472 students benefited.

Note: Calculation of beneficiary students = Average students per elementary school from Statistic of Ministry of Education (Taiwan) x Schools donated by CAL.

Junior Cabin Crew Dream Take Flight

In the post-pandemic era, CAL uses the unique resources of the aviation industry to host the "Junior Cabin Crew Dream Take Flight" event and provide people with a unique travel experience. The event was attended by more than one hundred adults and children and allowed children to experience working as cabin crew and learn basic aviation knowledge from professional cabin crew training instructors. CAL also organized the "Micro Going Abroad" flight experience for people to observe real-life cabin crew operations up close. All attendees learned a lot from the experience. A total of 2 sessions were organized in 2020 which benefited 239 parents and children.

Junior Cabin Crew learn how to greet guests at the gate

Attendees try their hands at in-flight broadcast

Flight Camp

Mandarin Airlines continued to organize the Mandarin Airlines Flight Camp with Apex Flight Academy to help young students in Taiwan pursue and fulfill their dreams of flight.

The Mandarin Airlines Flight Camp promotes cabin crew knowledge in Taiwan

The Mandarin Airlines Flight Camp promotes cabin crew knowledge in Taiwan

Encourage People to Support the Government in Disease Prevention Tasks

Mandarin Airlines and Taipei Airport jointly invited renowned cellist Cheng-Chieh Chang to Songshan Airport to play Bach's Suite No. 1 in G Major on a Rugeri cello in an empty waiting room. Bach brought warmth back to the airport and music brought people together. The travelers will return after the epidemic draws to a close.

Renowned cellist Cheng-Chieh Chang played at Songshan Airport

Mandarin Airlines encourages people to adhere to disease prevention requirements, travel safe, and live normal lives

Environmental Education

CAL Group is committed to both corporate social responsibility and sustainability. We actively pursue the improvement and protection of the Earth's environment and bear the responsibility for promoting environmental awareness to achieve sustainable environmental protection goals.

Coastal Cleanup

"Coastal cleanup" is one of CAL's key social responsibility projects each year. We supported the "Taoyuan Love Coastal Cleanup" event organized by Taoyuan City Government and assembled 350 employees and relatives from all units to clean up Guanyin Beach. The purpose of the activity was to reduce the possibility of harming marine life. We cleared approximately 2,082kg of waste in this activity including 318kg of waste fishing nets. The recovered waste fishing nets can be recycled for use which extends the life cycle of the fishing nets and supports the creation of a circular economy. Each participant used real actions to protect the Earth, contribute to environmental protection, and clean up the beach in Taoyuan.

CAL supports the International Coastal Cleanup day

Animal Conservation

Mandarin Airlines has worked with Taipei Zoo on the "Kinmen Blue-Tailed Bee-Eater Abandoned Eggs Incubation and Research Project" for six consecutive years and supported the transportation of abandoned eggs found in Kinmen to the Zoo for incubation. The "Summer Fairies," i.e., the blue-tailed bee-eaters, have been successfully hatched each year. Among the 62 abandoned eggs collected in 2020, 24 hatchlings were born through artificial means. The project has made contributions to wildlife conservation and greatly strengthened the confidence of the team. Since 2015, Tigerair Taiwan and Taipei Zoo have worked together to promote the corporate animal adoption program. Under this program, in addition to tigers, Tigerair Taiwan has adopted leopard cats and Formosan clouded leopards from 2017 to 2021 to support animal conservation through concrete action.

Blue-tailed bee-eater hatchling
Source: Taipei Zoo

Corporate animal adoption plan

2-5-3 Increasing the International Visibility of Local Brands

Theme	Item	2020 Performance	
		Number of Participants / Beneficiaries	Amount Invested / Flights
Humanitarian Relief	Charter flights for transporting medical supplies to Europe / Northeast Asia / Southeast Asia, charter flights for the repatriation of citizens in Wuhan / Diamond Princess in Japan / Shanghai, etc.	2,278 Cases 1,224 People	19 Flights
Athletic Sponsorships	2020 Formosa Dreamers, 2020 Standard Chartered Taipei Charity Marathon, baseball players Wei-Yin Chen / Wei-Chung Wang, Rising Star RG, etc.	29,589 People	TWD 2,293,000

Note: The above items and results are not limited to Mandarin Airlines and Tigerair Taiwan.

COVID-19 Special Column

Humanitarian Relief

The "National Team of the Sky" flying on for you — Bringing expats home on charters and transporting medical relief

The impact of the COVID-19 pandemic in 2020 was felt across the globe. To support international relief measures, CAL organized its aviation resources and supported the central government's policies by transporting numerous medical supplies to countries across the world in Europe, Northeast Asia, and Southeast Asia on charter flights with a total of 10 flights carried 2,278 cases of supplies weighing a total of 73,343kg. In addition, CAL also took on missions of the state and helped arrange charter flights for transporting expats in regions more affected by the coronavirus back to Taiwan. They included charter flights for Wuhan and Diamond Princess in Japan, and semi-charter flights for Shanghai with a total of 9 flights which benefited 1,224 people. CAL actively contributed to global disease prevention and disease control and greatly improved Taiwan's international visibility.

Wuhan charter flight carried expats home for quarantine
Source: MNA

Charter flight carried citizens onboard the Diamond Princess home from Japan
Source: MNA

Sports Activity

CAL has always supported the national team and has always supported local sports development with the aim of cultivating rising stars for the glory of the nation. We organized charity basketball camps and charity baseball camps this year and invited the Formosa Dreamers, top professional baseball player in Japan Wei-Yin Chen, and Chinese Professional Baseball League star Wei-Chung Wang to teach young players together and share their experience. We also encourage them to pursue their dreams with courage and prepare themselves for their rise in the future.

Sponsorship	Item / Player
Sporting Events	2020 Standard Chartered Taipei Charity Marathon
Athletes / Team	2020 Formosa Dreamers, baseball players Wei-Chung Wang / Wei-Yin Chen, Rising Star RG, etc.

Note: The above items and results are not limited to Mandarin Airlines and Tigerair Taiwan.

Players of Formosa Dreamers provide instructions for practice

Group photo of star baseball players Wei-Yin Chen, Wei-Chung Wang, and children of the Little League team

2-5-4 Empowering the Disadvantaged to Gain Equal Social Opportunities

Theme	Item	2020 Performance	
		Number of Beneficiaries	Amount Invested (TWD)
Caring for the Disadvantaged	Disadvantaged students, senior and members of the general public	241,679	476,594
	Pingtung Startup Happiness Bus 2.0	7,500	2,000,000

Note: The above items and results are not limited to Mandarin Airlines and Tigerair Taiwan.

Caring for the Disadvantaged

The epidemic this year has exerted more significant impact on disadvantaged groups. To reduce inequality in society, CAL continued to participate in social welfare initiatives for disadvantaged groups despite unprecedented difficulties in business operations. We seek to fulfill our responsibilities as corporate citizens, use real actions to help disadvantaged groups in society improve their quality of life, and focus on fulfilling our commitment to achieve equality and social welfare.

Disadvantaged Students and Communities

"Love All Around Team" is a spontaneous CAL volunteers group. On their days off, volunteers visit remote rural schools across Taiwan to teach students about aviation and balance the urban-rural education gap. Since 2014, they have visited 56 elementary and junior high schools and social welfare organizations in 15 cities / counties and 27 townships across Taiwan, providing care for 3,447 students. In addition, another volunteer team ventures to remote rural schools for close interactions

with children. They were invited to the "Meet the Future" event organized by Shan-Shuei Primary and Junior High School, the first alternative education experimental school in Taichung. They designed delightful activities to teach children professional knowledge of aviation and increase their interest for learning. The activity benefited 382 children. In 2020, the cabin crew held a total of 4 fundraising activities to provide in-flight amenities to disadvantaged groups that needed assistance, benefiting a total of 240,158 people.

The Love All Around team has happy interactions with children in the Down Syndrome Foundation

The remote rural area team was invited to the "Meet the Future" event organized by Shan-Shuei Primary and Junior High School

Support Tribal Culture on the International Stage

On the occasion of the completion of the Matalim Tribal Art Wall in Hualien, Mandarin Airlines placed the art wall on the cover of the in-flight magazine and wrote an article to commemorate the event to support charity and indigenous tribal culture on the international stage. The new Matalim Tribal Art Wall was created by renowned painter Yosifu Kacaw and a group of indigenous artists with mosaic tiles and broken glass. It has become a new highlight in the Huadong Valley and is expected to attract international tourists and create a new industry for the tribe.

The Matalim Tribal Art Wall has become a new highlight in the Huadong Valley and is expected to attract tourists

Puzangalan Children's Choir is composed of a group of Paiwan children from elementary school to senior high school. They have been invited to perform in numerous large-scale domestic and foreign music festivals and are known as the "Most Beautiful Voice in Taiwan". Tigerair Taiwan organized a single-trip charity flight from Kaohsiung to Songshan on July 29, 2020 to help children of the choir attend a music festival event. It organized a flash mob performance at the waiting room in Taipei Songshan Airport on the same day. Tigerair Taiwan also invited Puzangalan Children to select suitable songs from their original music and asked them to complete recordings. When new airplanes are introduced in the future, the media system equipped on the new airplanes can play the music when passengers aboard the airplane. The music will be a pleasant surprise for wishing passengers well on their journey and can help more domestic and foreign visitors learn more about the beautiful voices from Taiwan.

Tigerair Taiwan has spared no effort in the participation and support of group activities of indigenous peoples for years. In 2020, it sponsored the "Change Starts with Me" anti-bullying campus promotion activities organized by the Taiwan Indigenous Culture Promotion Association in Nanhsing Elementary School and Hsinyi Elementary School in Changhua County as well as Chung-Cheng Elementary School and Chung Kong Primary School in Taichung City. Tigerair Taiwan used short plays to help students understand different types of campus bullying so that they can use the most appropriate method to respond to bullying, help themselves or others, and reduce the occurrence of bullying on campus.

Flash mob performance given by Puzangalan Children's Choir and Tigerair mascot in the waiting room of Taipei Songshan Airport

The short play allows students to view bullying from the perspective of a bystander and help them understand the hardships of different roles and the need for help in bullying incidents

Taking care of persons in a vegetative state is a long and arduous journey. The Genesis Social Welfare Foundation has supported the operations of more than 10 homes that house persons in a vegetative state from poor families. The impact of the epidemic in 2020 has created deficits for many homes and affected their in-residence services. To help the Genesis Social Welfare Foundation sell Fire-fighting and Safety Charity Fair passes, Tigerair Taiwan sponsored tickets to increase participation in the event.

Tigerair Taiwan works with the Genesis Social Welfare Foundation to promote the Love for Persons in Vegetative State Charity Fair

Tigerair Taiwan invited the cellist Cheng-Chieh Chang to perform for its 6th anniversary charity activity "Around the World with Music" and invited disadvantaged groups to attend. We created a magnificent feast for the ears of the audience with the music. Tigerair Taiwan and Cheng-Chieh Chang jointly donated TWD 100,000 to Taoyuan City Government and Tigerair Taiwan Chairman Han-Ming Chen also donated TWD 100,000 in his own name with the aim of encouraging others to support the initiative and helping more disadvantaged associations receive care and happiness.

Tigerair Taiwan and Cheng-Chieh Chang jointly donated TWD 100,000 to Taoyuan City Government

Senior Citizens

CAL has established long-standing relations with the Huashan Social Welfare Foundation and regularly provides care to disadvantaged elderly people living in Taoyuan on the three Chinese festivals. The Foundation organized three charity activities this year including the "Love the Elderly by Exercising on Dragon Boat Festival", "Love the Elderly by Lighting up Mid-Autumn Festival", and "Joy with Grandparents and Grandchildren". It consolidates the resources of the society to jointly help the elderly who suffer from disability, dementia, or loss of support. It also organized the "2020 Warm Dinner Together" with Taoyuan Fishermen's Association and invited children from Muhsiang Home and White Home as well as elderly fishermen to gather for a traditional meal before Chinese New Year. A total of 550 elderly were provided with care.

CAL volunteers visit elderly living alone and presented care packages

CAL volunteers present elderly fishermen with souvenirs after the traditional meal

Pingtung Startup Happiness Bus 2.0

The Ministry of Transportation and Communications (MOTC) activated relief measures for aviation industry in response to the global COVID-19 pandemic. To meet the requirements in the Guidelines for Relief Loans of the Small & Medium Enterprise Credit Guarantee Fund, CAL provided corporate sponsorship for the "Pingtung Startup Happiness Bus 2.0 Integrated Service Pilot Program". The program was created to provide

CAL representatives attended the Happiness Bus 2.0 inauguration press conference
Source: News media

resources to remote rural areas and disadvantages people and jointly support the improvement of transportation quality in Pingtung while improving social welfare for local residents. Approximately 7,500 people benefited from the program.

2-5-5 Creating a Sustainable Society `GRI 201-1`

2020 has been a very difficult year for the aviation industry as many countries intensified disease prevention measures. Numerous flights were suspended and revenues drastically declined. CAL remains committed to social welfare and provides support by transporting relief materials and arranging charter flights for transporting expats in regions more affected by the coronavirus back to Taiwan. We work hard to achieve positive circular goals for social and corporate development.

Social Investment Evaluation

Since 2015, CAL has adopted the London Benchmarking Group (LBG) model to analyze the effectiveness of social investment and quantify the influences of various resources invested in society and the business itself. CAL adopted the Social Return on Investment (SROI) model in 2019 to analyze the benefits of individual charity programs. CAL took the 2020 CAL volunteer teaching activity as the target for calculation. According to the SROI evaluation method, the calculation result of this activity is 7.6, which means that for every TWD 1 invested, TWD 7.6 of social benefit can be generated.

Calculation Result	Input	Output
TWD 1 → TWD 7.6	TWD 166,437.00	TWD 506,229.98

CAL	CAL Volunteers	School Teachers	Students

Main Benefits
1. Improve the corporate image of the organization
2. Enhance spiritual satisfaction
3. Improve interpersonal relationships

Main Benefits
1. Increase the happiness of learning
2. Arouse interest in aviation services
3. Increase aviation safety expertise
4. Increase teaching resources

For the contribution to social investments, CAL donated TWD 7,162,191 in 2020. Commercial initiatives, charitable events and community investments represented 46%, 30%, and 24% of our total social investment, respectively. Social investments could be categorized into materials, money, volunteers, and management overhead, which represented 41%, 39%, 5% and 15%, respectively. For more information, refer to the table below.

Types of Social Investment

Item	Amount (TWD)			2020	
	2018	2019	2020	Content	Percentage
Commercial Initiatives	29,560,138	15,384,554	3,272,694	• Supported public forums and cultural events • Sponsored Taiwanese athletes in international events	46%
Charitable Events	4,964,813	728,867	2,134,300	• Provided domestic and international disaster relief • Sponsored educational events	30%
Community Investments	1,379,995	5,955,017	1,755,197	• Organized supportive events for the disadvantaged • Taught English at elementary schools • Coastal cleanup	24%

Input of Social Investment

Item	Amount (TWD)			2020	
	2018	2019	2020	Content	Percentage
Material Donations	18,684,751	10,328,290	2,949,694	Donation of flight tickets and in-flight products	41%
Monetary Donations	16,265,200	7,746,631	2,757,300	Cash input for each event	39%
Employee Volunteers	478,800	960,132	384,476	Volunteers for park tours, teaching, and coastal cleanup	5%
Management Overhead	476,195	3,033,385	1,070,721	Overhead for various activities	15%

Effectiveness of Social Investmen

Item	2018	2019	2020
Amount of Social Investments (TWD)	114,870,682	60,502,597	22,188,592
Number of Beneficiaries	45,598	162,933	355,459
Volume of Media Exposure / Number of Facebook Fans	192 / 927,693	196 / 1,019,990	118 / 1,054,515
Number of Flight Tickets Sponsored	381	333	81

Environmental / Social Effectiveness		
Item	**Content / Reach**	**Amount** (TWD)
Other Donations for Art and Charitable Events	2020 Taiwan Lantern Festival, 2020 World Down Syndrome Day Festival, Fulong International Sand Sculpture Art Festival, Huashan Social Welfare Foundation, Make-A-Wish Foundation, etc.	1,113,994
Pingtung Startup Happiness Bus 2.0 Integrated Serviced Pilot Program	Approximately 7,500 beneficiaries	2,000,000
Reunion Event	Approximately 300 beneficiaries	178,612 (Note 1)
Guanyin Beach Coastal Clean Activity	Approximately 350 participants	133,100 (Note 2)
Aviation Knowledge Teaching	1,226 elementary school students	1,287,300 (Note 3)
Knowledge-Sharing Platform Project, Global Kids Junior Monthly, with Global Views	Approximately 44,472 elementary school students	662,400 (Note 4)
CAL Headquarters Visits	320 participants	135,000 (Note 5)
Benefits to Business Operations		
Indicator	**Content / Reach**	**Amount** (TWD)
Media Exposure	Media reports: 118 Number of Facebook fans: 1,054,515	11,800,000 (Note 6)
Number of Flight Tickets Sponsored	81	2,126,194
Revenue from Flight Tickets Sponsored	Flight tickets sponsored at a discount	2,373,333 (Note 7)
Revenue from Students Flight Tickets	34	376,639

The effectiveness of social involvement is calculated as follows:

Note 1: Meals, and transportation, and miscellaneous fees (TWD 169,000) + personnel cost (18 volunteers x TWD 178 (average hourly wage) x 3 hours) = TWD 9,612.

Note 2: Meals, events, transportation, and miscellaneous fees (TWD 40,000) + personnel cost (350 volunteers × TWD 178 (average hourly wage) × 2 hours) = TWD 93,100.

Note 3: Tuition: TWD 350 / lesson (3 hours) per student × 1,226 students = TWD 1,287,300.

Note 4: 184 magazines / month subscribed to x TWD 300 × 12 months = TWD 662,400.

Note 5: 9 visiting fee × TWD 15,000 (basic fee per regular visit) = TWD 135,000.

Note 6: The benefits from media exposure cannot be estimated and are thus calculated by ad placement: TWD 100,000 / ad × 118 ads = TWD 11,800,000.

Note 7: Total amount of flight tickets (TWD 3,188,333) - discount (TWD 815,000) = TWD 2,373,333 (revenue).

Note 8: As the aforementioned effectiveness of social involvement is hard to quantify, the environmental / social effectiveness is presented by cost.

Future Plans

1. Enhancing the Overall Quality of National Education

To support the disease prevention policies for countering COVID-19, CAL has suspended the charitable education training projects this year and directed resources to international relief services. CAL will continue to make good use of its resources in the aviation industry to promote the China Airlines brand in order to expand participation and increase sponsorship. We encourage colleges and universities to apply for company visits and we use hands-on practical experience to increase young students' interest in future careers and cultivate talents in the aviation industry. We plan to expand the scale of volunteer education programs, adjust course contents with flexibility, and provide support in the form of companionship to skills training with the aim of improving the quality of education for children in remote rural areas and giving birth to more seeds of hope.

2. Increasing Taiwan's International Visibility

In 2020, CAL remained committed to promoting the national image and supported 9 international exchange activities in response to international relief initiatives. CAL shall continue to participate in regular charity activities that bolster Taiwan's international visibility and use resources of the Company and advantages of the aviation industry to work with related organizations / companies in Taiwan. We shall jointly promote regional economic development, actively support tourism in Taiwan, and help increase the international visibility of local brands. We shall also support the government's transportation projects in response to international developments to promote a positive image of the country across the globe.

3. Helping the Disadvantaged Overcome Difficulties

In 2020, CAL sponsored 16 projects, of which 6 projects were charity events, for an achievement rate of 100%. We support the equality of opportunities provided for disadvantaged groups. CAL will plan long-term charity projects and use the unique advantages of the industry to provide groups in remote rural areas and disadvantaged groups in Taiwan with flight experience or charity company visit activities. We shall assign dedicated personnel to share their experience in professional aviation training and basic knowledge to improve social welfare for disadvantaged groups. We shall also regularly review the implementation results and adjust project contents with flexibility to create a more equal society.

CHAPTER

3

Sustainability Governance

3-1 Ethical Corporate Management
3-2 Risk Management

3-1

Ethical Corporate Management

Photo Courtesy of Po-yen Liu / Wei-zhi Wang (Flight Operations Division)

HIGHLIGHTS

5th Time selected for DJSI Emerging Markets Index
The only Taiwanese airline selected for DJSI Emerging Markets for five consecutive years and ranked in 3rd place among the world's airlines.

5th Time selected for FTSE4Good Emerging Index
Selected in the FTSE4Good Emerging Index for five consecutive years.

4th Time selected for Taiwan EMP 99 Index and Taiwan HC100 Index
Selected in the Taiwan Employment Creation 99 Index and the Taiwan High Compensation 100 Index for four consecutive years.

Top 6% - 20% of TWSE / TPEx listed companies
Selected as the top 6%-20% of the excellent corporation award in the sixth Corporate Governance Review.

2nd Time in GCSA Award
Awarded in the Global Corporate Sustainability Award for the second year.

7th Time in TCSA Award
Awarded in the Taiwan Corporate Sustainability Award for seven consecutive years along with four TCSA awards.

3–1–1 Regulatory Compliance

GRI 102-16, 103-1, 103-2 103-3, 205-2, 412-2

Internal Regulations and Code of Conduct

As regulatory compliance and integrity are the basis of business management, CAL shapes its corporate culture and value through the formulation of internal regulations and codes of conduct that attach great importance to business integrity. To establish sound corporate governance as its business foundation, CAL has set the Code of Corporate Governance, the Board Directors Code of Ethical Conduct, the Executive Code of Ethical Conduct, the Procedure for Handling Material Inside Information, the Ethical Corporate Management Best Practice Principles, and the Procedures for Ethical Management and Guidelines for Conduct. CAL adheres strictly to the laws and regulations, and makes an explicit commitment to uphold six principles, which are to protect shareholder rights and interests, to strengthen the board's roles and powers, the board meeting procedure and the decision making process (including recusal), to respect stakeholder rights and interest, and to increase information transparency. In addition, according to Article 9 of the Procedures for Ethical Management and Guidelines for Conduct, CAL is to be politically impartial and does not provide political contributions, and therefore has not provided political contributions. Furthermore, to ensure that CAL directors and all CAL employees adhere to ethical conduct including anticorruption rules, CAL has implemented the Board Directors Code of Ethical Conduct (10 directors of the CAL Board have completed the course of Developing Trends and Prevention of Corporate Corruption with a 91% completion rate) and the Employee Code of Conduct. A three-year awareness campaign was launched in 2017 to make sustainability an integral part of CAL's corporate culture. Therefore, the CAL Code of Conduct was established, followed by relevant education and training (training details for 2017-2019 as shown under 3-1-2 Compliance in the). Training was provided in

2020 to 211 employees who had not completed the requirement and 115 (Note 1) new employees. The total completion rate was 100% (Note 2). In addition, CAL sent a letter to affiliated enterprises to require that the affiliated enterprises provide such code of conduct training as well as corporate sustainability training to raise CSR awareness. A total of 5,140 trainees completed the training. Given suppliers are also important to CAL's success, CAL requires that its suppliers enter into and comply with the Supplier Code of Conduct (including compliance and anticorruption principles).

In 2007, some U.S. travelers claimed that AAPA member airlines started colluding with each other on passenger fare and fuel charges in 2000, and these travelers, therefore, filed an antitrust class action to demand three times the collusion-inflated charges in punitive compensation. Given the litigation costs and the loss minimization rule, CAL paid a total of US$ 19.5 million (TWD 622 million) in settlement of the U.S. passenger transportation antitrust class action. The amount was to be paid in four installments over three years starting in 2018. The first three installments were US$5 million each to be paid in 2018 and 2019, and the last was US$ 4.5 million, which has been paid this year (2020). The lessons learned from this case has prompted CAL to strengthen compliance with the Fair Trade Act and antitrust regulations by an increasing degree in recent years. In addition to using important international antitrust cases to remind the management team and all employees to stay alert, CAL organized an offline training course, "compliance with the Fair Trade Act", in 2020. As an effort to reduce future risks, CAL invited the Fair Trade Commission to speak to CAL employees at the head office and branch offices and the employees of affiliated enterprises on compliance under the Fair Trade Act. In addition, starting in 2013, first line employees are required to complete the Antitrust Audit Checklist, which is on the list of key items for the audit departments.

Note 1: Trainees include terminated employees.

Note 2: It's only applicable to CAL.

List of Internal Regulations

Name	Regulating Object(s)	Objective
Code of Corporate Governance	CAL and its subsidiaries	To establish a sound corporate governance system
Ethical Corporate Management Best Practice Principles	Directors, managers, employees, and appointees of CAL and those having substantial control	To strengthen CAL's corporate culture that values business integrity and to improve the business environment for sustainable development
Procedures for Ethical Management and Guidelines for Conduct	Directors, managers, employees, and appointees of CAL and its subsidiaries and those having substantial control	To implement the policy of business integrity, to actively prevent fraudulent conduct, and to regulate matters that should be taken care of by employees when performing business
Procedure for Handling Material Inside Information	Directors, managers, and employees of CAL and those knowing CAL's material inside information due to their identity, occupation or control	To avoid improper disclosure of information and to ensure the consistency and correctness of information published by CAL
Board Directors Code of Ethical Conduct	All directors	To regulate the ethics and conduct of directors when performing their duties in pursuit of CAL's maximum benefits and sustainable development
Executive Code of Ethical Conduct	CAL's representative (Chairman) and managers (including President, Senior Vice President and equivalents, head of Finance Department, head of Accounting Department, and officers managing affairs and having the right to sign on behalf of the Company)	To guide executives to follow the ethics and conduct and to help stakeholders better understand the Company's code of ethics
Employee Code of Conduct	All employees	To guide employees to follow the codes of conduct covering anti-corruption in the workplace
CAL Code of Conduct	Employees and suppliers of the Company and its subsidiaries, any foundation to which the Company's direct or indirect contribution of funds exceeds 50 percent of the total funds received, and other institutions or juridical persons which are substantially controlled by the Company	To guide the CAL Group to follow related laws and regulations and shape a corporate culture that creates sustainable value for stakeholders
Supplier Code of Conduct	All suppliers and contractors	To achieve the goal of sustainable supply chain management, so as to increase the sustainability of a large number of suppliers

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3-2
Risk Management GRI 102-15

3-2-1 Risk Management Mechanisms GRI 102-11

Risk Governance and Structure

Risk management is at the core of a company's sustainable development. Facing increasingly new types of risks, the Board of Directors has set up the Risk Committee to help review the formulation, implementation, and countermeasures of risk management strategies; units in charge are also required to manage and control the major types of risks. In addition, risks involving safety and business operations are at the management level and cross-departmental. The Corporate Safety Committee and the Corporate Sustainability Committee have been established under the President; units in charge are responsible to identify and evaluate potential risks faced by CAL, propose countermeasures, and report results to related committees and meetings on a regular basis. Senior Vice President (Finance) is our highest level in charge of risk management and Senior Vice President (Flight Operation) is our highest level for auditing risk management.
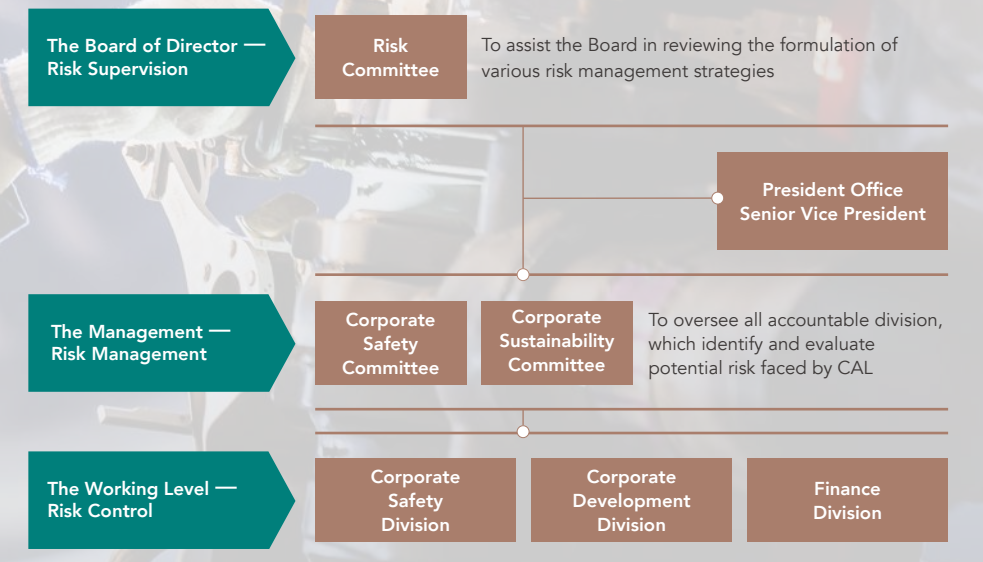
The Board of Director — Risk Supervision	Risk Committee	To assist the Board in reviewing the formulation of various risk management strategies
		President Office Senior Vice President
The Management — Risk Management	Corporate Safety Committee / Corporate Sustainability Committee	To oversee all accountable division, which identify and evaluate potential risk faced by CAL
The Working Level — Risk Control	Corporate Safety Division / Corporate Development Division / Finance Division	

Enterprise Risk Management Framework and Procedures

CAL's risk management framework complies with the framework of Enterprise Risk Management (ERM), where a multi-level organizational approach is adopted to manage and control the overall risks of CAL. The framework emphasizes the inter-correlations between different risks to reduce the overall impact. Following the materiality principle, the CAL ERM framework identifies traditional risks and risks of medium / long-term strategies. All risk impacts and countermeasures are analyzed and proposed through event identification, risk analysis, risk assessment, and risk control, and then followed up and reviewed by the Risk Management Committee and the Corporate Sustainability Committee. CAL has implemented effective accounting and internal audit systems. The internal control system consists of five elements, which are the control environment, risk assessment, control process, information and communication, and supervision procedure. To evaluate the internal control system and the effectiveness of its execution, CAL devises risk-based annual audit plans every year. The General Audit Office conducts regular and ad hoc audits in order to enforce ethical corporate management, reduce related risks to an acceptable level, and prevent corruption and fraud.

CAL ERM Model and Procedure
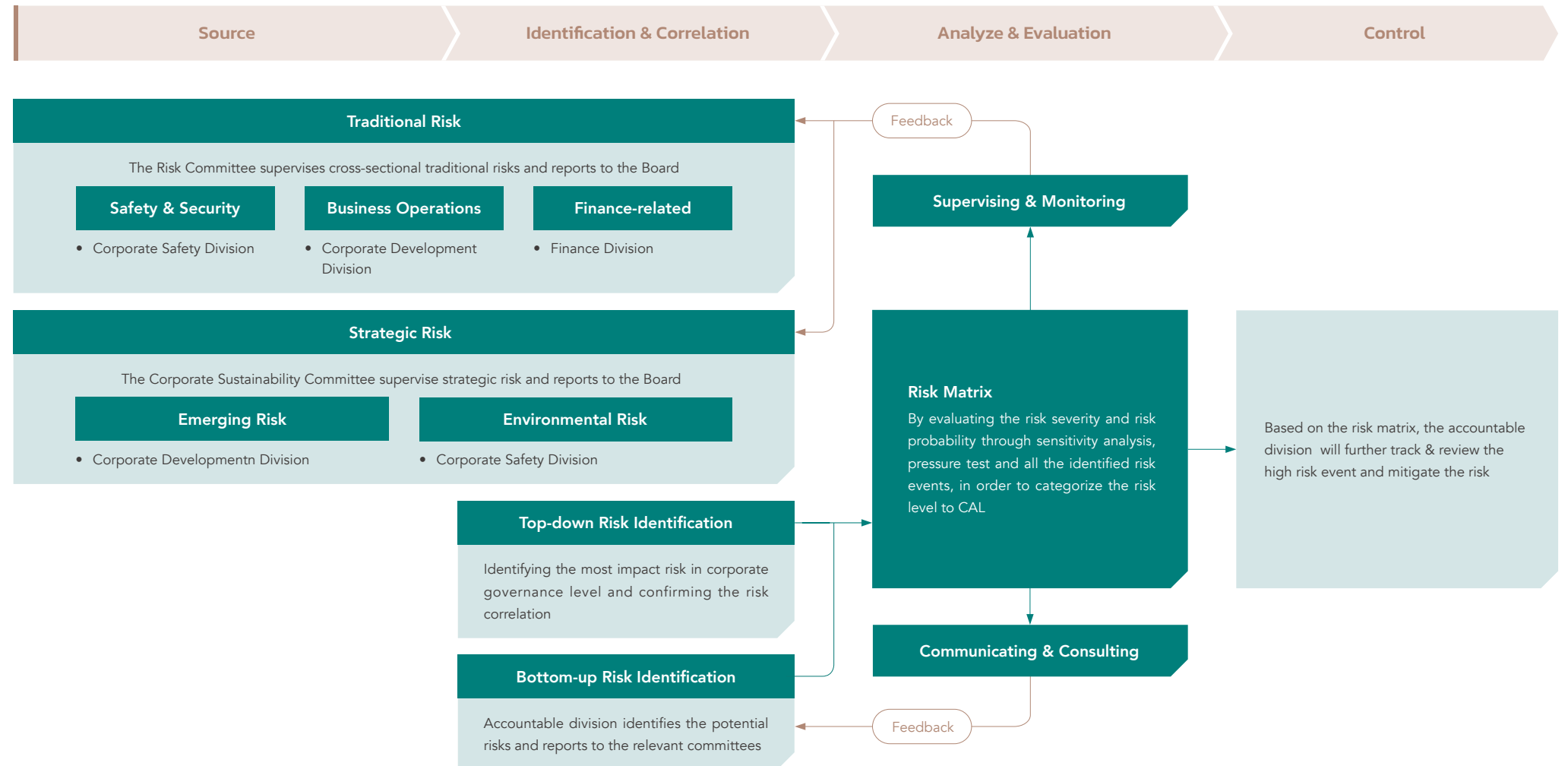
3-2-2 Risk Identification and Countermeasures

CAL manages risks with consideration of the business environment and daily operations in the aviation industry. Risk incidents have different impacts on business operations, in terms of their regions, degrees, and timeliness; risk incidents fall into certain categories and periods of time. If risks are monitored by a single mechanism, doing so may compromise the risk control results. In view of this, CAL divides risk sources by medium-term / long-term strategic risks and traditional risks, and then monitors the risks through the existing Business Strategy Management and Annual Business Plan / Operational Risk Management.

Risk Management Analysis

Level of Risk: Traditional Risks
Short-term Business or Operational Impact
Less than One Year

Annual Business Plan / Operational Risk Management (reported by the Risk Management Committee)

Monitoring Mechanisms

Risk Identification	Review internal and external environments; identify regular risk incidents that may have short-term impacts on business operations
Risk Analysis	Analyze the impact of risk incidents on business operations in terms of two aspects: Importance to Stakeholders (impact on society and economy / aviation industry; correlation with CAL or relevant departments); and Impact on CAL (impact on finances, operations, or sales; possibility of violations or fines; impact on corporate brand or reputation)
Risk Assessment	Create an operational risk matrix based on two risk analysis aspects, to assess degree of risk for each incident
Risk Control	Develop countermeasures to mitigate impact of high-risk incidents on business operations

Change to Strategic Risks

Ongoing Impact a Year Later

Release from Control

Zero Impact a Year Later

Level of Risk: Medium-term / Long-term Strategic Risks
Medium-term / Long-term Strategic or Structural Impact
More than One Year

Business Strategy Management

Monitoring Mechanisms

1. Collect industry information, such as internal and external forecasts on market trends and competitor dynamics, every three to five years; conduct SWOT analysis
2. Develop the company vision, mission, and medium-term/long-term strategies, based on the results of SWOT analysis

CAL has established an emerging risk identification process, completed a risk matrix for emerging risks, regularly conducted risk assessment and develop countermeasures to mitigate the impact of emerging risks in the aviation industry.

Emerging Risk Matrix

High

Importance to Stakeholders

Low

COVID-19 Pandemic

US-China Trade War

Airline Data Breaches

Small ◄────── Impact on CAL ──────► Large

■ **Strategic Risk** Immediate Correction
■ **Medium Risk** Follow-up
■ **Low Risk** Acceptable
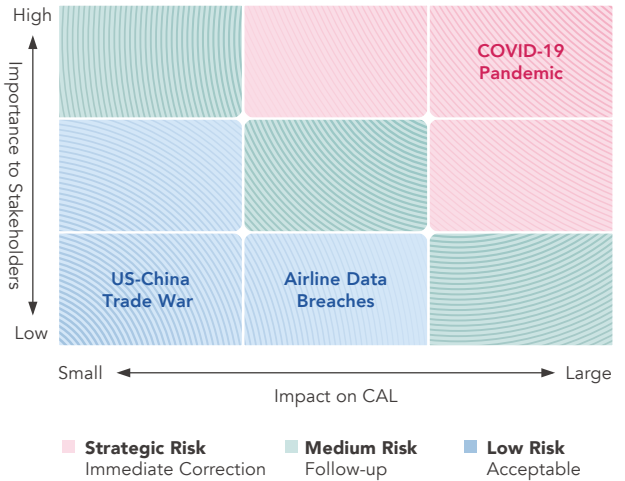
Traditional Risks

Traditional risks refer to short-term risk incidents that have an impact on business operations for less than one year and can be solved in a short period of time. CAL manages traditional risks — divided into safety, operational, and financial — with the goals of mitigating risks, strengthening resilience to crises, protecting stakeholders' interests, and enhancing corporate sustainability.

1. Safety Risk Management

Safety is the foundation of the aviation industry. Customer trust can only be earned by having an outstanding record of flight safety. Based on the Safety Management System (SMS) and the procedures for safety risk management, the Corporate Safety Office reviews and evaluates internal and external operational risks with respect to flight operations, maintenance, cabin services, and ground operations, then proposes corrective measures. (Refer to 2-1 Trust)

2. Business Operational Risk Management

The aviation industry faces an ever-changing business environment. Apart from major political and economic turmoil, internal and external contingencies may also have considerable impact on CAL. The Corporate Development Office analyzes potential risk incidents that may have an impact on business operations, and develops concrete countermeasures based on the analysis results in order to reduce risks' impact on the Business Strategies and on the Annual Business Plan. (Refer to 1-1-2 Analysis of Business Environment in the Aviation Industry)

3. Financial Risk Management

Economic and financial situations at home and abroad can also affect CAL's business results. Interest rates, exchange rates, inflation, and fuel represent the major costs to airlines; such costs are very sensitive to external factors and can become quite volatile. Therefore, the Finance Division confines these major costs within a certain range using financial hedging instruments, monitors financial risks on a regular basis, and develops relevant strategies and measures to achieve the goals of financial risk management. (Refer to 1-1-2 Analysis of Business Environment in the Aviation Industry)

Medium-term / Long-term Strategic Risks

Medium-term / Long-term strategic risks refer to risk incidents that have a strategic or structural impact on business operations for more than one year, and which cannot be solved in a short period of time. CAL reviews and analyzes its market position and collects industry information, such as internal and external forecasts on market trends and competitor dynamics, every three to five years, then conducts SWOT analysis, and develops the company vision, mission, and medium-term / long-term strategies based on the analysis results.

1. Environmental Risk Management

As we are aware of the direct impact and materiality of climate issues in the aviation industry, and in response to the voluntary carbon reduction initiatives of the International Civil Aviation Organization (ICAO), the International Air Transport Association (IATA), and the MOTC Civil Aeronautics Administration, CAL has set three major phased objectives for flight and ground operations. Since 2018, CAL has further established the Task Force on Climate-Related Financial Disclosures (TCFD). The TCFD is in charge of identifying risks and opportunities, as well as strengthening company-wide carbon management and adaptation to climate change. (Refer to 2-4-2 Climate Change Mitigation and Adaptation)

2. Emerging Risk Management

The Global Risks Report published by the World Economic Forum (WEF) every January divides risks into five categories: Economic, environmental, geopolitical, social, and technological. New risk categories arising from the rapid development of emerging technologies, climate, demographic changes, information security, and cyber attacks have increased, along with gradually increasing likelihood of such risk incidents. In view of this, CAL has incorporated these identified emerging risks within the scope of risk management, and reviews emerging risks on a regular basis, as well as developing relevant countermeasures.

Global Airline Industry Severely Affected by COVID-19 Pandemic

Since it broke out in Wuhan, China in December 2019, the COVID-19 virus has claimed nearly 1.9 million lives worldwide with more than 88 million confirmed cases by December 31, 2020. As the COVID-19 virus spread across the globe, countries implemented lockdown to keep the virus at bay. These measures have had a huge impact on political, economic, trade, finance, and employment conditions. The pandemic is sending shock waves through the airline industry. Passenger air transport has dropped in free fall. The top priority for the airline industry is "fighting for survival against COVID-19" and "fighting the coronavirus first". Airlines create complete antivirus networks and introduce "safe flying plans" that take enhanced measures to safeguard passenger health and aviation health and safety. CAL tries to grab market share in the air freight transport market through flexible capacity management. The company also takes measures to control costs and gain access to cash flows and relief programs in order to maintain financial stability and build up the momentum for reopening. (Detailed countermeasures as shown in COVID-19 Special Column)

> Countermeasures: The Risk Committee under the board of directors will conduct quarterly emerging risk review, and implements countermeasures.

Airline Data Breaches

The growing global demand for privacy protection and personal data security in recent years is making personal data protection one of the key tasks in business management. Since the General Data Protection Regulation (GDPR) came into effect in 2018, there has been a string of extremely large fines, which exceed €100 million in total. As IT systems become more commonplace, CAL keeps refining its information security governance system and raising its protective strength in order to meet the information security regulations in different countries. In addition to releasing regular personal data protection announcements, CAL provides employee training courses through the e-Learning system to raise data protection awareness in the workplace and ensure effective protection of personal data and customer privacy. Information security loopholes on the British Airways website and mobile app were exploited by hackers, and led to a data breach with more than 500,000 customer records stolen. The Information Commissioner's Office (ICO) initially imposed a fine at 1.5% of British Airways' annual revenue in 2018. The amount was calculated as £183 million (TWD 6.4 billion). ICO made an announcement on October 16, 2020 that stated given British Airways' attitude in resolving the issue and COVID-19's impact on business, the fine would be reduced to £20 million (TWD 760 million).

> Countermeasures: CAL will organize training on "personal data management and case study" for middle managers, and conduct "annual personal data inventory and update". In addition, CAL will provide audit training, and launch the EU audit procedures and provide online personal data training.

US-China Trade War and Uncertainties in Global Economy

A slowing global economy and the US-China trade war led to a 3.3% annual decrease in global air cargo transport in 2019. The decrease was particularly significant in Asia at 5.7%. The trade war eased after China and the United States signed a phase one trade agreement in mid-January 2020. However, according to the International Monetary Fund (IMF) World Economic Outlook (October 2020), the global economic growth was projected at -4.4% for 2020, far below +2.8% for 2019 due to the COVID-19 pandemic. Looking forward to 2021, slow recovery leaves many uncertainties in the US-China trade war and in the development of the global economy and the pandemic.

> Countermeasures: The Risk Committee under the board of directors will conduct quarterly emerging risk review, and implements countermeasures.

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Financial Performance

Five-Year Financial Summary

Consolidated Condensed Balance Sheet — Base on IFRS (CAL Group) (Unit: TWD thousands)

Item		Financial Summary for the Last Five Years				
		2016	2017	2018	2019	2020
Current Assets		47,338,201	47,411,834	52,827,560	51,822,342	61,872,468
Property, Plant and Equipment		140,136,737	153,617,531	163,107,718	145,886,971	141,481,694
Intangible Assets		1,137,115	1,019,345	1,210,796	1,182,692	1,076,351
Other Assets		35,888,706	23,850,922	12,990,508	94,155,974	79,763,571
Total Assets		224,500,759	225,899,632	230,136,582	293,047,979	284,194,084
Current Liabilities	Before Distribution	68,605,724	60,289,113	60,949,892	76,351,527	62,649,715
	After Distribution	68,605,724	61,482,783	62,086,170	-	-
Non-cirrent Liabilities		98,027,837	106,453,000	109,139,606	156,564,335	160,832,796
Total Liabilities	Before Distribution	166,633,561	166,742,113	170,089,498	232,915,862	223,482,511
	After Distribution	166,633,561	167,935,783	171,225,776	-	-
Equity Attributable to Shareholders of the Parent		55,783,817	57,023,237	57,081,572	56,553,772	57,559,483
Capital Stock		54,708,901	54,709,846	54,209,846	54,209,846	54,209,846
Capital Surplus		799,932	799,999	1,241,214	2,488,907	1,187,327
Retained Earnings	Before Distribution	206,092	1,664,405	1,615,661	-1,297,842	-350,581
	After Distribution	206,092	470,735	479,383	-	-
Other Equity Interest		112,264	-107,641	58,223	1,196,233	2,543,766
Treasury Shares		-43,372	-43,372	-43,372	-43,372	-30,875
Non-controlling Interest		2,083,381	2,134,282	2,965,512	3,578,345	3,152,090
Total Equity	Before Distribution	57,867,198	59,157,519	60,047,084	60,132,117	60,711,573
	After Distribution	57,867,198	57,963,849	58,910,806	-	-

Consolidated Condensed Statement of Comprehensive Income — Based on IFRS (CAL Group) (Unit: TWD thousands; EPS (net) = TWD)

Item	Financial Summary for the Last Five Years				
	2016	2017	2018	2019	2020
Revenue	141,079,107	156,121,785	170,711,607	168,444,160	115,250,550
Gross Profit	18,005,906	21,972,411	17,207,531	16,686,928	10,219,201
Operating Profit (Loss)	4,564,687	8,826,160	4,022,383	2,665,821	2,184,416
Non-operating Income and Expenses	-2,684,836	-5,302,197	-941,134	-2,762,638	-2,838,213
Pretax Profit (Loss)	1,879,851	3,523,963	3,081,249	-96,817	-653,797
Income from Operations of Continued Segments - after Tax	710,940	2,490,792	2,272,684	-675,002	-279,814
Income from Discontinued Operations	-	-	-	-	-
Net Income (Loss)	710,940	2,490,792	2,272,684	-675,002	-279,814
Other Comprehensive Income (Income / Loss after Taxes)	-681,669	-1,113,176	-578,363	462,758	864,072
Total Comprehensive Gain (Loss) for the Year	29,271	1,377,616	1,694,321	-212,244	584,258
Net Income Attributable to Shareholders of the Parent	571,540	2,208,066	1,790,361	-1,199,798	140,000
Net Income Attributable to Non-controlling Interest	139,400	282,726	482,323	524,796	-419,814
Comprehensive Income Attributable to Shareholders of the Parent	26,103	1,240,677	1,258,035	-647,085	966,968
Comprehensive Income Attributable to Non-controlling Interest	3,168	136,939	436,286	434,841	-382,710
Earnings (Loss) Per Share	0.1	0.40	0.33	-0.22	0.03

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Condensed Balance Sheet — Based on IFRS (CAL Only)

(Unit: TWD thousands)

Item		Financial Summary for the Last Five Years				
		2016	2017	2018	2019	2020
Current Assets		39,908,492	37,933,696	42,932,859	40,989,612	51,858,785
Property, Plant and Equipment		129,121,632	142,265,548	149,029,054	131,029,886	126,414,462
Intangible Assets		1,115,101	989,327	979,708	971,298	867,453
Other Assets		41,394,218	30,729,421	21,972,600	95,885,709	81,769,065
Total Assets		211,539,443	211,917,992	214,914,221	268,876,505	260,909,765
Current Liabilities	Before Distribution	64,339,805	54,925,364	55,179,834	68,000,173	56,740,010
	After Distribution	64,339,805	56,119,034	56,316,112	-	-
Non-cirrent Liabilities		91,415,821	99,969,391	102,652,815	144,322,560	146,610,272
Total Liabilities	Before Distribution	155,755,626	154,894,755	157,832,649	212,322,733	203,350,282
	After Distribution	155,755,626	156,088,425	158,968,927	-	-
Equity Attributable to Shareholders of the Parent		55,783,817	57,023,237	57,081,572	56,553,772	57,559,483
Capital Stock		54,708,901	54,709,846	54,209,846	54,209,846	54,209,846
Capital Surplus		799,932	799,999	1,241,214	2,488,907	1,187,327
Retained Earnings	Before Distribution	206,0692	1,664,405	1,615,661	-1,297,842	-350,581
	After Distribution	206,0692	470,735	479,383	-	-
Other Equity Interest		112,264	-107,641	58,223	1,196,233	2,543,766
Treasury Shares		-43,372	-43,372	-43,372	-43,372	-30,875
Non-controlling Interest		-	-	-	-	-
Total Equity	Before Distribution	55,783,817	57,023,237	57,081,572	56,553,772	57,559,483
	After Distribution	55,783,817	55,829,567	55,945,294	-	-

Condensed Statement of Comprehensive Income — Based on IFRS (CAL Only)

(Unit: TWD thousands ; EPS (net) = TWD)

Item	Financial Summary for the Last Five Years				
	2016	2017	2018	2019	2020
Revenue	127,524,864	139,815,211	150,264,792	146,372,401	106,327,123
Gross Profit	15,275,980	17,966,397	12,649,836	11,364,235	11,136,944
Operating Profit	4,475,707	7,358,114	1,847,567	80,235	4,884,855
Non-operating Income and Expenses	-2,938,456	-4,269,911	468,064	-1,267,561	-4,713,760
Pretax Profit (Loss)	1,537,251	3,088,203	2,315,631	-1,187,326	171,095
Income from Operations of Continued Segments - after Tax	571,540	2,208,066	1,790,361	-1,199,798	140,000
Income from Discontinued Operations	-	-	-	-	-
Net Income (Loss)	571,540	2,208,066	1,790,361	-1,199,798	140,000
Other Comprehensive Income (Income/ Loss after Taxes)	-545,437	-967,389	-532,326	552,713	826,968
Total Comprehensive Gain (Loss) for the Year	26,103	1,240,677	1,258,035	-647,085	966,968
Net Income Attributable to Shareholders of the Parent	0.1	0.40	0.33	-0.22	0.03

Five-Year Financial Analysis

Consolidated Financial Analysis — Based on IFRS (CAL Group)

	Item	2016	2017	2018	2019	2020
Financial Structure (%)	Debt Ratio	74.22	73.81	73.91	79.48	78.64
	Ratio of Long-term Capital to Property, Plant and Equipment	111.24	107.81	103.73	148.54	156.59
Solvency (%)	Current Ratio	69.00	78.64	86.67	67.87	98.76
	Quick Ratio	53.16	59.46	67.50	54.57	84.18
	Interest Earned Ratio (Times)	265.40	369.02	338.05	103.79	74.92
Operating Performance	Accounts Receivable Turnover (Times)	17.67	18.40	18.30	18.13	12.64
	Average Collection Period	20.66	19.84	19.95	20.13	28.87
	Inventory Turnover (Times)	-	-	-	-	-
	Accounts Payable Turnover (Times)	-	-	-	-	-
	Average Days in Sales	-	-	-	-	-
	Property, Plant and Equipment Turnover (Times)	1.05	1.06	1.08	1.09	0.80
	Total Assets Turnover (Times)	0.63	0.69	0.75	0.64	0.40
Profitability	Return on Total Assets (%)	0.80	1.60	1.48	0.76	0.75
	Return on Stockholders' Equity (%)	1.20	4.26	3.81	-1.12	-0.46
	Pre-tax Income to Paid-in Capital (%)	3.44	6.44	5.68	-0.18	-1.21
	Profit Ratio (%)	0.50	1.60	1.33	-0.40	-0.24
	Earnings Per Share (TWD)	0.10	0.40	0.33	-0.22	0.03
Cash Flow	Cash Flow Ratio (%)	25.71	47.35	44.34	49.15	15.52
	Cash Flow Adequacy Ratio (%)	303.17	351.58	366.94	518.35	579.32
	Cash Reinvestment Ratio (%)	4.83	8.82	8.17	12.24	2.98
Leverage	Operating Leverage	4.99	3.16	6.00	14.20	16.28
	Financial Leverage	1.40	1.18	1.52	-3.95	-2.50

Financial Analysis — Based on IFRS (CAL Only)

	Item	2016	2017	2018	2019	2020
Financial Structure (%)	Debt Ratio	73.63	73.09	73.44	78.97	77.94
	Ratio of Long-term Capital to Property, Plant and Equipment	114.00	110.35	107.18	153.31	161.51
Solvency (%)	Current Ratio	62.03	69.06	77.81	60.28	91.40
	Quick Ratio	45.82	49.03	57.87	45.87	76.90
	Interest Earned Ratio (Times)	246.03	350.56	292.02	60.78	99.48
Operating Performance	Accounts Receivable Turnover (Times)	15.92	16.62	16.57	16.72	12.34
	Average Collection Period	22.92	21.96	22.46	21.83	29.57
	Inventory Turnover (Times)	-	-	-	-	-
	Accounts Payable Turnover (Times)	-	-	-	-	-
	Average Days in Sales	-	-	-	-	-
	Fix Assets Turover (Times)	1.03	1.03	1.03	1.05	0.83
	Total Assets Turnover (Times)	0.61	0.66	0.70	0.61	0.40
Profitability	Return on Total Assets (%)	0.75	1.54	1.33	0.51	0.89
	Return on Stockholders' Equity (%)	1.00	3.91	3.14	-2.11	0.25
	Pre-tax Income to Paid-in Capital (%)	2.81	5.64	4.27	-2.19	0.32
	Profit Ratio (%)	0.45	1.58	1.19	-0.82	0.13
	Earnings Per Share (TWD)	0.10	0.40	0.33	-0.22	0.03
Cash Flow	Cash Flow Ratio (%)	26.71	47.41	43.61	48.16	24.19
	Cash Flow Adequacy Ratio (%)	309.01	357.86	381.09	557.30	610.31
	Cash Reinvestment Ratio (%)	4.94	8.48	7.68	11.34	4.50
Leverage	Operating Leverage	4.85	3.46	11.25	372.72	7.15
	Financial Leverage	1.38	1.21	3.45	-0.03	2.32

Customer Satisfaction Table in 2020

Passenger Satisfaction

Item	2018	2019	2020
Yearly Goal (%) (Note)	85.1	87.2	87.8
Passenger Satisfaction (%)	87.2	87.7	88.6

Note: The expected target of passenger satisfaction is the average of the previous year's performance from January to November plus 0.1 to set the next year's target.

Historical Passenger Satisfaction on Service Items

Item	2018	2019	2020	2021 Objectives (Note 1)
Airport Service	89.0	89.6	90.5	89.4
Cabin Crew	88.9	89.7	90.2	89.5
Cabin Environment	88.7	89.3	89.8	89.0
Inflight Catering Service	82.6	83.1	82.8	82.9
Inflight Entertainment	84.8	85.1	85.5 (Note 2)	84.9

Note 1: In response to COVID-19, the Chairman agreed, after discussions in the meeting for setting quality targets, that the target of historical passenger satisfaction on service items for 2021 shall be the same as that of 2020.

Note 2: The "Reading materials" item in Inflight Entertainment will be excluded in 2020.

Freight Customer Satisfaction

Item	2018	2019	2020
Yearly Goal (%)	88.0	88.0	88.0
Freight Customer Satisfaction (%)	87.3	88.6	88.5

Maintenance Customer Satisfaction

Item	2018	2019 (Note 2)	2020
Yearly Goal (Note 1)	8.40	8.40	8.40
Freight Customer Satisfaction (%)	8.68	8.73	8.57

Note 1: The full score is 10.

Note 2: In accordance with the 2019H1 Aircraft Management Committee resolution, maintenance customer satisfaction statistics from 2019 excluding low-cost airline customers.

Management of Material Human Rights Issues in 2020 `GRI 412-1`

Node of Value Chain		Human Rights Issue	Mitigation Measure	Remedial Measure
Upstream	Supply Chain Partners	Right to Privacy	Formulated the "Personal Information Entrustment Management Procedure" to regulate the matters requiring attention and rights and responsibilities for product / service providers (suppliers) entrusted to handle personal information. The Privacy Protection Policy and Statement on CAL's official website also specify that when CAL provides the involved party's personal information for the third party to use, the third party is requested to comply with the relevant policies, rules, and regulations	CAL has established a sustainable supply chain management mechanism, and the high-risk sustainability issues of supply chain partners are audited, guided, and improved through review
		Right to Health	• For suppliers of general goods, a clause regarding quality assurance obligation in the purchase contract states that suppliers must ensure that their products contain no hazards to safety or health, if the nature of their products is hazardous, warning signs and handling methods should be clearly indicated • In response to COVID-19, CAL has requested suppliers to provide a safe and health workplace for employees' health and to ensure that employees can work in an environment without direct or indirect hazards, thus reducing the impact of the and boosting the overall employees' health. Moreover, CAL can know and control critical suppliers' heath management conditions with the SAQ during the pandemic	
		Protection of Labor Conditions	• Established the China Airlines Policy Statement on Sustainable Supply Chain Management and the China Airlines Supplier Code of Conduct, requiring all suppliers to implement management in accordance with the information security, labor human rights, and labor conditions, as well as the occupational safety spirit as stipulated • Kept abreast of the current status of critical suppliers management through the periodic supply chain sustainability risk survey	

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Node of Value Chain		Human Rights Issue	Mitigation Measure	Remedial Measure
Midstream	CAL's Operations	Right to Privacy	Formulated a standard operating procedure in accordance with CAL's "Personal Information Management System" for collecting, handling and, using personal information to ensure regulatory compliance	Formulated a standard operating procedure in accordance with CAL's "Personal Information Management System" for collecting, handling and, using personal information to ensure regulatory compliance

		Right to Health	• CAL has established the Occupational Safety and Health Committee, which convenes meetings every three months to review, coordinate, and give advice on safety and health related issues
			• CAL has established the ISO 45001: 2018 and TOSHMS occupational safety and health management systems to perform hazard identification and risk assessment regularly, and has introduced control measures, including operations / engineering, administration, and employee health management
			• Organized employee health checks regularly to achieve the goals of early detection, early prevention, and early treatment
			• Countermeasures against COVID-19:
			  – Established a tiered cross-unit mobilization mechanism, command system and operating procedures to coordinate relevant units to counteract the pandemic and to remind employees of raising awareness in response to the latest condition of the pandemic by activating different tiers of the response mechanism based on the conditions
			  – Established a health management reporting system and an abnormality tracking and handling mechanism for employees with a high risk of exposure
			  – Implemented a split operation mechanism and adjust the ways of business travel and activated diversified channels to provide real-time information related to the pandemic prevention
			  – Provided cabin crew on duty with full set personal protective equipment (PPE) and "Care Packages" at outstations when necessary. Provided CAL's hotel as a home quarantine site for the crew who are not convenient to undergo quarantine at home
				• CAL has conducted statistics and analysis on our occupational incident cases while submitting reports and tracking subsequent safety and health management plans through the operation of the Occupational Safety and Health Committee and the guidance of the ISO 45001: 2018 and TOSHMS occupational safety and health management systems
				• Formulated a standard report form for major health-check abnormal values to provide employees with health guidance or tracking
				• Countermeasures against COVID-19: When a passenger is found with abnormal signs and relevant symptoms, CAL will actively assist him / her to seek medical attention, and contact and report to related units to record the pandemic prevention process completely and implement health management

		Protection of Labor Condition	• Stated that forced labor is prohibited in the human rights policy and established the methods for employees to perform duties in the Human Resource Manual and the Working Rules • Held regular labor-management meetings at the headquarters and each unit to negotiate labor conditions and welfare with employee representatives • Formed various committees with employee representatives for parking lot management, catering, pension, and employee welfare to protect employees' labor rights and improve the work environment • To address COVID-19 and to balance business operation and taking good care of employee, the manpower-lean policies were implemented after labor-management discussions were conducted for a better result for both sides. CAL also helped employees apply for the relevant government subsidies during the period of implementation of reducing working hours	• Established diversified grievance channels for prompt and proper responses when employees' labor rights are damaged • Operated various committees with employees' participation to discuss labor conditions, work environment, and workplace safety and to ensure improvements as well as remedial and preventive measures against violations of rights and interests
Downstream	Customers	Right to Privacy	CAL has been committed to protecting customers' personal information and privacy in accordance with the Personal Data Protection Act of the R.O.C, the General Data Protection Regulation (GDPR), the California Consumer Privacy Act (CCPA). CAL collects, handles and uses personal information in a reason and safe manner based on the specific purposes authorized by customers, ensuring that the customer can exercise their rights to inquiries, amendment, removal, restriction of personal data use, and withdrawal of consent under the Personal Data Protection Act	CAL has formulated the online form of "Inquiry and Application for Personal Data Rights" and set the DPO mailbox for customers to consult about and apply for personal data rights, which is applicable to the Personal Data Protection Act stipulating replying to customers within the duration

		Right to Health	• On the front of flight safety, CAL implemented the Safety Management System (SMS) to prevent potential risks or the impact of hazard factors through continuous risk identification and management. Established a safety reporting system for all employees to encourage them to actively identify potential safety impact factors and to strengthen risk control
			• In terms of in-flight food safety, CAL has formulated the Caterer Selection Regulations; all local caterers should obtain relevant local food safety certifications so that they can be selected as an in-flight food supplier
			• Countermeasures against COVID-19 in 2020:
			  – Passengers are asked to have their temperature checked before boarding and to wear a mask throughout the flight or when they check in or when waiting for flights. Moreover, posters have been set up in the airport to remind passengers of maintaining social distancing
			  – Simplified the in-flight services, reinforced environmental cleaning and disinfection, and promoted the pandemic prevention measures on board that shall be followed (such as changing seats is not allowed) for customers to lower the risk of taking flights
			  – Adjusted in-flight food services in compliance with the current level of the pandemic announced by the MOWH and cooperated with different countries to provide different food services based on the local pandemic conditions and their principle of pandemic prevention
				• CAL has set up the Flight First-Aid Advisory System; when passengers feel unwell during check-in, boarding, or flight, they can obtain professional medical advice through this system
				• Countermeasures against COVID-19 in 2020:
				  – If a passenger's body temperature is higher than normal range or they show other signs or symptoms before boarding, they are asked to undergo a health exam-ination at local medical institutions and then report to relevant units
				  – If passengers on board are found with relevant symptoms or start feeling unwell, CAL will actively assist them to change seats and report to the relevant units to take further responses

		Protection of Labor Condition	Not applicable	Not applicable

Relevant Data Statistics of Human Resources

Workforce Structure of CAL Group in 2020

Category	Groups	Total	Male	Female	Total	Male	Female	Total	Male	Female
Full-time Employees		11,347	5,862	5,485	951	460	491	728	325	403
Contracted Employees		43	23	20	-	-	-	-	-	-
Age	Under 30	1,820	749	1,071	260	76	184	345	103	242
	31-50	6,737	3,228	3,509	516	249	267	311	159	152
	Above 51	2,833	1,908	925	175	135	40	72	63	9
The Job Category	Business	3,215	1,363	1,852	421	152	269	360	135	225
	Air Service	4,312	1,587	2,725	245	111	134	308	149	159
	Maintenance	2,278	2,183	95	144	133	11	27	26	1
	Others (Note 1)	1,585	752	833	141	64	77	33	15	18
Ranking	Senior Management (Note 2)	108	85	23	20	16	4	12	9	3
	Mid-level Management	348	247	101	40	28	12	26	15	11
	Junior Management	168	122	46	38	29	9	49	24	25
	Non-executive Employees	10,766	5,431	5,335	853	387	466	641	277	364
Region	Taiwan	9,867	5,232	4,635	883	432	451	725	324	401
	China	254	124	130	68	28	40	-	-	-
	Asia	842	332	510	-	-	-	3	1	2
	USA	265	121	144	-	-	-	-	-	-
	Europe	111	53	58	-	-	-	-	-	-
	Oceania	51	23	28	-	-	-	-	-	-
Education	Master / PhD	1,381	793	588	86	55	31	90	46	44
	Bachelor	9,366	4,621	4,745	787	353	434	613	261	352
	Senior High	550	413	137	53	36	17	21	17	4
	Others	93	58	35	25	16	9	4	1	3
Total		11,390	5,885	5,505	951	460	491	728	325	403
The Total Number Includes	Indigenous Employees	79	40	39	8	-	8	6	3	3
	Disabled Employees	108	77	31	4	3	1	4	2	2

Note 1: The job category – others includes executives higher than the rank of vice president, auditors, accountants, information technology personnel, and other employees that are not within the aforesaid categories.

Note 2: "Senior management" refers to Level 1 managers and deputy managers or above; "mid-level management" refers to Level 2 managers and deputy managers; "junior management" refers to Level 3 managers and deputy managers.

Employee Turnover Statistics of CAL Group in 2020

Category	Groups	2018 Amount	2018 %	2019 Amount	2019 %	2020 Amount	2020 %	2018 Amount	2018 %	2019 Amount	2019 %	2020 Amount	2020 %	2018 Amount	2018 %	2019 Amount	2019 %	2020 Amount	2020 %
Age	Under 30	298	40.82%	210	30.88%	317	40.75%	97	65.54%	70	64.22%	59	57.84%	24	42.86%	43	53.75%	43	63.24%
	31-50	204	27.95%	220	32.35%	189	24.29%	29	19.59%	27	24.77%	21	20.59%	30	53.57%	28	35.00%	20	29.41%
	Above 51	228	31.23%	250	36.76%	272	34.96%	22	14.86%	12	11.01%	22	21.57%	2	3.57%	9	11.25%	5	7.35%
Gender	Male	345	47.26%	356	52.35%	353	52.35%	91	61.49%	60	55.05%	59	57.84%	25	44.64%	37	46.25%	31	45.59%
	Female	385	52.74%	324	47.65%	425	45.37%	57	38.51%	49	44.95%	43	42.16%	31	55.36%	43	53.75%	37	54.41%
Region	Taiwan	442	60.55%	495	72.79%	501	64.40%	133	89.86%	101	92.66%	91	89.22%	56	100.00%	80	100.00%	68	100.00%
	China	44	6.03%	16	2.35%	22	2.83%	15	10.14%	8	7.34%	11	10.78%	0	0.00%	0	0.00%	0	0.00%
	Asia	163	22.33%	119	17.50%	220	28.28%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
	USA	40	5.48%	35	5.15%	21	2.70%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
	Europe	27	3.70%	11	1.62%	8	1.03%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
	Oceania	14	1.92%	4	0.59%	6	0.77%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Voluntary		469	3.78%	518	4.28%	416	3.65%	-	-	-	-	-	-	-	-	-	-	-	-
Involuntary		261	2.10%	162	1.34%	362	3.18%	-	-	-	-	-	-	-	-	-	-	-	-
Total		730	5.88%	680	5.62%	778	6.83%	148	14.70%	109	10.65%	102	10.73%	56	8.74%	80	11.25%	68	9.34%

Note: Voluntary separation includes resignations, early retirements, and requests to resignation. Involuntary separation includes mandatory retirements and layoffs.

Unpaid Parental Leave of CAL Group in 2020

Unpaid Parental Leave Statistics	Female	Male	Total	Female	Male	Total	Female	Male	Total
Numbers of Employees Eligible for Parental Leave in 2020 (A)	595	414	1009	33	32	65	35	27	62
Actual Numbers of Employees Applying for Parental Leave in 2020 (B)	413	15	428	18	0	18	15	0	15
Rate for Employees Applying for Parental Leave in 2020 (B*100 / A)	69.41%	3.62%	42.42%	54.55%	0.00%	27.69%	42.86%	0.00%	24.19%
Numbers of Employees Expecting to Return in 2019 after Parental Leave in 2020 (C)	197	7	204	5	0	5	11	0	11
Numbers of Employees Applying to Return in 2020 (D)	222	8	230	7	0	7	4	0	4
Return Rate in 2020 (D*100 / C)	112.69%	114.29%	112.75%	140.00%	0.00%	140.00%	36.36%	0.00%	36.36%
Total Number of Employees Returning after parental leave in 2019 (E)	214	7	221	15	1	16	3	0	3
Number of Employees Completing One Full Year of Service After Returning from Parental Leave in 2019 (F)	206	7	213	15	0	15	3	0	3
Rate on Return After Parental Leave in 2020 (F*100 / E)	96.26%	100.00%	96.38%	100.00%	0.00%	93.75%	100.00%	0.00%	100.00%

Note: (A): Date of birth from January 1, 2017 to December 31, 2020.

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Training Statistics of CAL Group from 2018 to 2020

Company	Category		2018			2019			2020					
			Training Hours	Amount	Average Hours	Training Hours	Amount	Average Hours	Training Hours	Amount	Average Hours	Total Expenses	Number of Classes Opened	Training Completion Rate
	The Job Category	Business	76,626	3,681	20.82	104,414	4,515	23.13	115,129	2,110	54.56	158,138,192	3,020	99.36%
		Air service	165,560	4,725	35.04	147,744	4,424	33.40	149,128	4,360	34.20			
		Maintenance	41,070	2,632	15.60	38,170	2,513	15.19	52,568	2,256	23.30			
		Others	46,956	2,095	22.41	10,269	677	15.17	31,669	1,381	22.93			
	Gender	Male	138,531	6,622	20.92	128,956	6,122	21.06	162,915	5,240	31.09			
		Female	191,681	6,511	29.44	171,642	6,037	28.43	185,578	4,867	38.13			
	The Job Category	Business	14,208	314	45.25	5,267	362	14.55	8,462	332	26.28	2,389,011	14,392	98.25%
		Air service	21,328	268	79.58	17,716	277	63.96	15,828	267	59.28			
		Maintenance	20,803	157	132.50	19,597	158	124.03	13,970	151	92.52			
		Others	3,936	84	46.86	5,537	121	45.76	1,548	70	22.11			
	Gender	Male	39,899	418	95.45	37,761	471	80.17	27,766	424	65.49			
		Female	20,375	405	50.31	10,356	447	23.17	12,044	386	31.20			
	The Job Category	Business	5,368	284	18.90	8,355	325	25.71	7,299	360	20.27	12,717,168	1,517	99.54%
		Air service	11,661	305	38.23	20,253	323	62.70	19,092	308	61.99			
		Maintenance	549	24	22.88	495	32	15.47	296	27	10.96			
		Others	33	28	1.18	533	31	17.18	365	33	11.06			
	Gender	Male	8,859	277	31.98	16,499	309	53.40	14,884	325	45.80			
		Female	8,752	364	24.04	13,136	402	32.68	12,168	403	30.19			

Note 1: Others include executives higher than the rank of vice president, auditors, accountants, information technology personnel, and other employees that are not within the aforesaid categories. For Tigerair Taiwan, others include the Chief Financial Officer, Chief Operating Officer, Chief Commercial Officer, Chief Executive Officer, and Chairman, as well as the Finance Department, Accounting Department, and Information Department.

Note 2: Training hours exclude those at outstations.

Note 3: Average training hours = Total training hours ÷ total number of employees in the category. For CAL, completion rate of training = average completion rate of training. For Mandarin Airlines and Tigerair Taiwan, completion rate of training = completion rate of training in each unit ÷ number of units.

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Comparing the Frequency-Severity Indicator and Occupational Injury Statistics Over the Past 3 Years

Year	Unit	Taoyuan	Engineering & Maintenance Organization	Taipei	Kaohsiung	Taichung	Total
2018	Number of Annual Disabling Injuries	36	9	0	3	0	48
	Absence Days of Annual Disabling Injuries	497	179	0	12	0	688
	FR	2.52	1.67	0	2.44	0	2.23
	SR	34	33	0	9	0	32
	FSI	0.29	0.23	0	0.14	0	0.26
2019	Number of Annual Disabling Injuries	43	12	0	7	0	62
	Absence Days of Annual Disabling Injuries	1,078	282	0	37	0	1,397
	FR	3.12	2.32	0	5.85	0	2.97
	SR	78	53	0	30	0	66
	FSI	0.49	0.35	0	0.41	0	0.44
2020	Number of Annual Disabling Injuries	26	6	1	4	0	37
	Absence Days of Annual Disabling Injuries	614	177	6	15	0	812
	FR	2.05	1.28	1.32	3.65	0	1.93
	SR	48	37	7	13	0	42
	FSI	0.31	0.21	0.09	0.21	0	0.28

Note 1: Calculated at 8 hours per day per person.
Note 2: Disabling injury frequency rate(FR)= (Number of annual disabling injuries ÷ Annual working hours) × 1,000,000
The number of annual disabling injuries includes the number of annual fatalities, permanent total disabilities, permanent partial disabilities, and temporary total disabilities.
The calculation is rounded to two decimal places.
Note 3: Disabling injury severity rate(SR)=(Absence days of annual disabling injuries ÷ Annual working hours) × 1,000,000
The absence days of different types of disabling injuries are calculated based on the online Occupational Hazard System.
The calculation is rounded to the nearest integer.
Note 4: Frequency-Severity Indicator (FSI)=√((FR×SR) / 1000)
The calculation is rounded to two decimal places.
Note 5: 2016-2018 averages in the air transport industry published by the Ministry of Labor: FR=4.14, SR=102, and FSI=0.65.
Note 6: Continue to review the FSI to understand the operational performance of each unit's occupational disaster prevention and improve it.
Note 7: TPE has established an occupational safety unit since 2013.
Note 8: This statistic does not include commuter traffic accidents.

Occupational Hazards Statistics of CAL Group in 2020

Item	Male	Female	Total	Taoyuan	Engineering & Maintenance Organization	Taipei	Taichung	Kaohsiung
The Number of Recordable Occupational Injuries	15	22	37	26	6	1	0	4
Disabling Injury Frequency Rate	1.44	2.51	1.93	2.05	1.28	1.32	0	3.65
Disabling Injury Severity Rate	41	43	42	48	37	7	0	13
Incidents Resulting in Work-related Fatalities	0	0	0	0	0	0	0	0
The Rate of Fatalities as a Result of Occupational Injury	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Occupational Disease Rate	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
The Number of High-consequence Occupational Injuries	0	0	0	0	0	0	0	0
The Rate of High-consequence Occupational Injuries	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Absence Rate	0.60%	1.28%	0.92%	0.89%	0.75%	2.14%	0.13%	1.37%
The Total Working Hours	10,392,676	8,763,652	19,158,240	12,633,062	4,672,450	755,240	-	1,095,576

Item	Male	Female	Total	Male	Female	Total
The Number of Recordable Occupational Injuries	0	2	2	0	1	1
Disabling Injury Frequency Rate	0.00	2.17	1.15	0.00	1.24	0.69
Disabling Injury Severity Rate	0	55	29	0	2	1
Incidents Resulting in Work-related Fatalities	0	0	0	0	0	0
The Rate of Fatalities as a Result of Occupational Injury	0.00	0.00	0.00	0.00	0.00	0.00
Occupational Disease Rate	0.00	0.00	0.00	0.00	0.00	0.00
The Number of High-consequence Occupational Injuries	0	0	0	0	0	0
The Rate of High-consequence Occupational Injuries	0.00	0.00	0.00	0.00	0.00	0.00
Absence Rate	0.36%	0.65%	0.51%	0.01%	0.02%	0.02%
The Total Working Hours	824,104	920,032	1,744,136	650,000	806,000	1,456,000

Note 1: Disabling injury frequency rate(FR)= (Number of annual disabling injuries ÷ Annual working hours) × 1,000,000
Note 2: Disabling injury severity rate(SR)=(Absence days of annual disabling injuries ÷ Annual working hours) × 1,000,000
Note 3: Absence rate=(Absence days ÷ Annual working days) × 100%
Note 4: Mandarin Airlines/Tigerair Taiwan only have one business location in Taiwan.

Note 5: Disabling Injury Frequency Rate is equivalent to the definition of Recordable Occupational Injuries Rate in the GRI Standards.
Note 6: High-consequence Occupational Injuries: Occupational injuries that lead to fatalities or that are barely possible difficult to completely recover within six months. Rate of high-consequence occupational injuries (excluding fatalities)=[Number of high-consequence occupational injuries (excluding fatalities) / Number of hours worked] x 1,000,000
Note 7: The most common type of occupational injuries is falling.

Environmental Performance

Item		Unit	2017	2018	2019	2020	2020 Compared to 2019	Performance	2020 Objective	Achievement Rate	2021 Objective
Category 1 GHG Emissions	Flight Operations	Tons of CO$_2$e	7,150,674	7,229,839	7,059,083	5,787,751	-18.02%	▲	7,161,311	120%	7,053,891
	Ground Operations	Tons of CO$_2$e	5,004	3,511	4,981	3,051					
Category 2 GHG Emissions	Ground Operations	Tons of CO$_2$e	20,677	19,949	18,169	17,572	-3.29%	▲	17,308	98%	17,545
Category 3 to 6 GHG Emissions (Note 1)	Ground Operations	Tons of CO$_2$e	1,627,649	1,644,656	1,607,690	3,109,822	+93.43%	▲	Extend the scope of investigation in accordance with the new version of ISO standards	NA	NA
Aviation Fuel Efficiency	All Aircraft	Ton	2,259,917	2,284,937	2,230,971	1,829,328	-18.00%	▲	Management by aviation fuel efficiency		
	Sustainable Aviation Fuel	Ton	6.37	20.4	0	0	0	—	NA	NA	NA
Aviation Fuel Efficiency	Passenger Aircraft	L / RPK*100	4.2802	4.2187	4.2859	15.2246	+255.23%	▼	4.2216	28%	15%
	Freight Aircraft	L / FRTK	0.2153	0.2142	0.2285	0.2252	-1.43%	▲	0.2551	100%	0.2218
	All Aircraft (Note 2)	Tons / thousand RTK	0.2433	0.2394	0.2459	0.2586	+5.16%	▼	0.2349	NA	0.2547
Energy Consumption	Fossil Fuels	MWh	29,484,167	29,815,419	29,114,586	23,873,099	-18.00%	▲	29,523,064	100%	NA
	Electricity Purchased	MWh	37,344	36,009	34,088	34,523	+1.28%	▼			
	Elevator Power Regeneration	kWh	297	1,061	1,423	1,177	-17.3%	▼	Full operation	100%	Full operation
	Renewable Energy	NA	NA	NA	NA	90	117	+23%	▲	120	97.5%	120
Water Resources	Water Consumption	Thousand tons	141.26	148.22	146.49	126.77	-13.46%	▲	145.993	100%	144.955
	Recycled Water (Note 3)	Thousand tons	1.89	31.94	17.41	8.64	-50.37%	▼	NA	NA	NA
	Recycling Ratio (Note 4)	%	1.34%	21.55%	11.88%	6.8%	-42.54%	▼	NA	NA	NA
	Heavy Metal Wastewater	Ton	8,579	10,014	9,620	6,750	-29.83%	▲	NA	NA	NA
	Organic Wastewater	Ton	14,647	10,443	11,638	12,593	+8.21%	▼	NA	NA	NA
Cabin Waste (Note 7)	Amount Produced (Note 5)	Kg	3,417,870	3,669,703	4,168,857	1,285,318	-69.17%	▲	NA	NA	NA
	Amount Recycled	Kg	1,068,483	995,369	1,116,396	341,366	-69.42%	▼			
	Recycling Ratio	%	31.26%	27.12%	26.78%	26.56%	-0.82%	▼			

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Item		Unit	2017	2018	2019	2020	2020 Compared to 2019	Performance	2020 Objective	Achievement Rate	2021 Objective
Ground Waste (Note 6 / Note 7)	General Industrial Waste / Domestic Waste	Kg	456,997	998,518	935,984	647,317	-30.84%	▲	Ground waste totaling: 994,653	100%	Ground waste totaling: 984,504
	Hazardous Industrial Waste	Kg	16,758	14,785	17,717	12,657	-28.56%	▲			
	Cadmium-containing Batteries	Kg	1,782	1,649	1,098	0	-100%	▲			
	Amount Recycled	Kg	NA	465,803	434,648	229,971	-47.09%	▼			
	Recycling Ratio	%	NA	45.01%	45.52%	34.85%	-10.67%	▼			
NOx	Passenger Aircraft	g / RPK	0.0152	0.0150	0.0149	0.0400	+168%	▼	0.01477	37%	0.0394
	Freight Aircraft	g / RTK	0.0294	0.0301	0.0321	0.0317	-1.2%	▲	0.0296	93%	0.0312
Plastic Packaging (Plastic Packaging Related to Passenger / Cargo Transport) (Note 8)	Weight of Plastic Packaging	Tons	356	432	479	353	-26%	▲	422	100%	416
	Percentage of Purchase of Plastic Packaging	%	0.21%	0.15%	0.15%	0.06%	-60%	▲	NA	NA	NA
	Percentage of Recyclable Plastic Packaging	%	47%	42.2%	32.5%	81.3%	150%	▲	40%	100%	57%
	Percentage of Biodegradable Plastic Packaging	%	2.24%	10.27%	21.62%	9.83%	-54.5%	▼	11%	89%	16%

Item	Total Weight of Package (ton)	Percentage of Purchase (Note 8)	Percentage of Recycled Materials and Certified Materials (Note 8)
Wood or Paper Packaging	130	0.04%	61.79%
Metal Packaging	85	0.05%	100%
Glass Packaging	7	0.01%	100%

Note 1: Scope 3 emissions from 2017 to 2019 include: energy-related activities, employee commuting, etc. In 2020, according to the ISO14064-1:2018 standard, expand the calculation category three to six related items. All data have passed external verification.

Note 2: The total aviation fuel consumption of all aircraft fuel efficiency includes training aircraft and maintenance. The fuel consumption of passenger and freight aircraft only includes passenger and freight aircraft fuel.

Note 3: In 2018, water meters were installed at CAL Park. EMO and CAL Park were included in the calculation of the amount of recycled water. In and before 2017, only EMO was included in the calculation of the amount of recycled water

Note 4: Recycling ratio = Total amount of recycled water / Total consumption of water resources.consumption of water resources.

Note 5: The scope of 2017 ground operations data includes EMO and CAL Park. Since 2018, Kaohsiung Branch and VIP rooms of four stations (Taoyuan, Songshan, Kaohsiung, and Tainan) have been included in the scope of ground operations data.

Note 6: As in-flight supplies (e.g., tableware) are required to comply with relevant food sanitation regulations to ensure that they are fireproof and legal, biodegradable plastic packaging has not been used.

Note 7: The percentage of purchase is calculated as follows: Purchase amount / Cost of goods sold.

Note 8: The percentage of recycled materials and certified materials is calculated as follows: Weight of recyclable packaging (including certified materials) / Total weight of packaging. The weight of recyclable packaging refers to the weight of packaging that has been recycled upon CAL's confirmation.

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GRI Content Index `GRI 102-55`

GRI Standard	Disclosure		Page Numbe & Response
GRI 101: Foundation			
General Disclosures			
	Organizational Profile		
GRI 102: General Disclosures	102-1	Name of the Organizational	5
	102-2	Activities, brands, products, and services	14
	102-3	Location of headquarters	14
	102-4	Location of operations	14
	102-5	Ownership and legal form	19
	102-6	Markets served	14
	102-7	Scale of the organization	14
	102-8	Information on employees and other workers	64
	102-9	Supply chain	78
	102-10	Significant changes to the organization and its supply chain	19
	102-11	Precautionary principle or approach	118
	102-12	External initiatives	30
	102-13	Membership of associations	30
	Strategy		
	102-14	Statement from senior decision-maker	6
	102-15	Key impacts, risks, and opportunities	118
	Ethics and Integrity		
	102-16	Values, principles, standards, and norms of behavior	117
	Governance		
	102-18	Governance structure	19
	Stakeholder Engagement		
	102-40	List of stakeholder groups	27
	102-41	Collective bargaining agreements	69, 72
	102-42	Identifying and selecting stakeholders	27

GRI Standard	Disclosure		Page Number & Response
GRI 102: General Disclosures	102-43	Approach to stakeholder engagement	27
	102-44	Key topics and concerns raised	27, 41, 47
	Reporting Practice		
	102-45	Entities included in the consolidated financial statements	5
	102-46	Defining report content and topic Boundaries	22
	102-47	List of material topics	22
	102-48	Restatements of information	No restatement
	102-49	Changes in reporting	No change
	102-50	Reporting period	5
	102-51	Date of most recent report	5
	102-52	Reporting cycle	5
	102-53	Contact point for questions regarding the report	5
	102-54	Claims of reporting in accordance with the GRI Standards	5
	102-55	GRI content index	136
	102-56	External assurance	5
Material Topics			
Economic			
GRI 103: Management Approach	103-1	Explanation of the material topic and its Boundary	22, 41, 60, 76, 83, 107, 117
	103-2	The management approach and its components	41, 60, 76, 83, 107, 117
	103-3	Evaluation of the management approach	41, 60, 76, 83, 107, 117
GRI 201: Economic Performance	201-1	Direct economic value generated and distributed	15, 113
	201-2	Financial implications and other risks and opportunities due to climate change	88
	201-3	Defined benefit plan obligations and other retirement plans	69
	201-4	Financial assistance received from government	No major financial assistance
GRI 202: Market Presence	202-2	Proportion of senior management hired from the local community	64

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GRI Standard		Disclosure	Page Number & Response
GRI 204: Procurement Practices	204-1	Proportion of spending on local suppliers	79
GRI 205: Anticorruption	205-2	Communication and training about anti-corruption policies and procedures	117
	205-3	Confirmed incidents of corruption and actions taken	No such as things happened
GRI 206: Anti-competitive Behavior	206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	54, 56
Environmental			
GRI 103: Management Approach	103-1	Explanation of the material topic and its Boundary	22, 76, 83
	103-2	The management approach and its components	76, 83
	103-3	Evaluation of the management approach	76, 83
GRI 301: Materials	301-1	Materials used by weight or volume	94
GRI 302: Energy	302-1	Energy consumption within the organization	99
	302-2	Energy consumption outside of the organization	99
	302-3	Energy intensity	100
	302-4	Reduction of energy consumption	99
	302-5	Reductions in energy requirements of products and services	99
GRI 303: Water and Effluents (2018)	303-1	Water withdrawal by source	95
	303-2	Management of water discharge-related impacts	94
	303-3	Water withdrawal	94
	303-4	Water discharge	96
	303-5	Water consumption	94
GRI 305: Emissions	305-1	Direct (Scope 1) GHG emissions	94
	305-2	Energy indirect (Scope 2) GHG emissions	99
	305-3	Other indirect (Scope 3) GHG emissions	99
	305-4	GHG emissions intensity	100
	305-5	Reduction of GHG emissions	99

GRI Standard		Disclosure	Page Number & Response
GRI 305: Emissions	305-7	Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	97
GRI 306: Waste	306-2	Waste by type and disposal method	97
	306-3	Significant spills	No significant spills
GRI 307: Environmental Compliance	307-1	Non-compliance with environmental laws and regulations	No such as things happened
GRI 308: Supplier Environmental Assessment	308-2	Negative environmental impacts in the supply chain and actions taken	79
Social			
GRI 103: Management Approach	103-1	Explanation of the material topic and its Boundary	22, 41, 60, 76, 107
	103-2	The management approach and its components	41, 60, 76, 107
	103-3	Evaluation of the management approach	41, 60, 76, 107
GRI 401: Employment	401-1	New employee hires and employee turnover	64
	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	69
	401-3	Parental leave	69
GRI 402: Labor/ Management Relations	402-1	Minimum notice periods regarding operational changes	69
GRI 403: Occupational Health and Safety (2018)	403-1	Occupational health and safety management system	74
	403-2	Hazard identification, risk assessment, and incident investigation	74
	403-9	Work-related injuries	74
	403-10	Work-related ill health	74
GRI 404: Training and Education	404-1	Average hours of training per year per employee	67
	404-2	Programs for upgrading employee skills and transition assistance programs	45, 67
GRI 405: Diversity and Equal Opportunity	405-1	Diversity of governance bodies and employees	64
	405-2	Ratio of basic salary and remuneration of women to men	69
GRI 406: Non-discrimination	406-1	Incidents of discrimination and corrective actions taken	60

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GRI Standard		Disclosure	Page Number & Response
GRI 407: Freedom of Association and Collective Bargaining	407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	79
GRI 408: Child Labor	408-1	Operations and suppliers at significant risk for incidents of child labor	No such as things happened
GRI 409: Forced or Compulsory Labor	409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	No such as things happened
GRI 412: Human Rights Assessment	412-1	Operations that have been subject to human rights reviews or impact assessments	60, 127
	412-2	Employee training on human rights policies or procedures	117
	412-3	Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	No such as things happened
GRI 414: Supplier Social Assessment	414-2	Negative social impacts in the supply chain and actions taken	79
GRI 415: Public Policy	415-1	Political contributions	No such as things happened
GRI 418: Customer Privacy	418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	54, 56

The United Nations Global Compact Comparison Table

Topic	The Ten Principles of the UN Global Compact	Corresponding Section	Page Number & Response
Human Rights	Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights	2-2-1 Human Rights Management Framework	60-64
	Principle 2: Make sure that they are not complicit in human rights abuses	3-1-1 Regulatory Compliance 2-3-2 Sustainable Supply Chain Management	117 79
Labor	Principle 3: Businesses should support and respect the protection of internationally proclaimed human rights	2-2-1 Human Rights Management Framework	60-64
	Principle 4: The elimination of all forms of forced and compulsory labor	2-2-1 Human Rights Management Framework	60-64
	Principle 5: The effective abolition of child labor	2-2-1 Human Rights Management Framework	60-64
	Principle 6: The elimination of discrimination in respect of employment and occupation.	2-2-1 Human Rights Management Framework	60-64
Environment	Principle 7: Businesses should support a precautionary approach to environmental challenges	2-4-2 Climate Change Mitigation and Adaptation	89-93
	Principle 8: Undertake initiatives to promote greater environmental responsibility	2-4-1 Governance of Environmental Sustainability	85-89
	Principle 9: Encourage the development and diffusion of environmentally friendly technologies	2-4-3 Achievements in Environmental Sustainability	94-104
Anti-Corruption	Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery	3-1-1 Regulatory Compliance	117

The Sustainability Accounting Standards Board (SASB) Table

Airlines Sustainability Accounting Standard

Topic	Accounting Metric	Unit of Measure	Category	Code	Data	Corresponding Section	Page Number
Greenhouse Gas Emissions	Gross global Scope 1 emissions	Metric tons (t) CO_2e	Quantitative	TR-AL-110a.1	5,790,802	2-4 Environment	85
	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	NA	Discussion and Analysis	TR-AL-110a.2	NA	2-4 Environment	84-87
	(1) Total fuel consumed (2) Percentage alternative (3) Percentage sustainable	Gigajoules (GJ) Percentage (%)	Quantitative	TR-AL-110a.3	(1) 787.76 (GJ) (2) 0% (3) 0%	2-4 Environment	100
Labor Practices	Percentage of active workforce covered under collective bargaining agreements	Percentage (%)	Quantitative	TR-AL-310a.1	99.43%	2-2-4 Employee Rights	73
	(1) Number of work stoppages (2) Total days idle	Number Days idle	Quantitative	TR-AL-310a.2	(1) 0 (2) 0	2-2-4 Employee Rights	72
Competitive Behavior	Total amount of monetary losses as a result of legal proceedings associated with anticompetitive behavior regulations	Reporting currency	Quantitative	TR-AL-520a.1	US$19.5 million	3-1-1 Regulatory Compliance	117
Accident & Safety Management	Description of implementation and outcomes of a Safety Management System	NA	Discussion and Analysis	TR-AL-540a.1	NA	2-1-1 Flight Safety	42-45
	Number of aviation accidents	Number	Quantitative	TR-AL-540a.2	0	2-1 Trust	41
	Number of governmental enforcement actions of aviation safety regulations	Number	Quantitative	TR-AL-540a.3	3 (2 sanctions imposed and 1 sanction pending the result)	Appendix	139
Activity Metrics	Available seat kilometers (ASK)	ASK	Quantitative	TR-AL-000.A	16,657,942,857	1-1-1 Business Overview	15-16
	Passenger load factor	Rate	Quantitative	TR-AL-000.B	56.2%	1-1-1 Business Overview	15-16
	Revenue passenger kilometers (RPK)	RPK	Quantitative	TR-AL-000.C	9,366,100,198	1-1-1 Business Overview	15-16
	Revenue ton kilometers (RTK)	RTK	Quantitative	TR-AL-000.D	6,398,824,588	1-1-1 Business Overview	15-16
	Number of departures	Number	Quantitative	TR-AL-000.E	76,509	1-1-1 Business Overview	15-16
	Average age of fleet	Years	Quantitative	TR-AL-000.F	9.9	1-1-1 Business Overview	14

Independent Limited Assurance Report

KPMG

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Independent Limited Assurance Report

To China Airlines Ltd.:

We were engaged by China Airlines Ltd. ("CAL") to provide limited assurance over the selected information attached in Appendix I on the Corporate Social Responsibility Report of CAL ('the Report' or "the Underlying Subject Matter") f for the year ended December 31, 2020.

Reporting Criteria of the Underlying Subject Matter

CAL shall prepare the selected information in accordance with the Core Option of Global Reporting Initiative Standards ("GRI Standards") issued by Global Sustainability Standards Board as set forth in Appendix I.

Management's Responsibility for the Report

CAL is responsible for determining its objectives with respect to sustainable development performance and reporting, including the identification of stakeholders and material aspects, and using the reporting criteria to fairly prepare and present the information included in the Report. CAL is also responsible for establishing and maintaining internal controls relevant to the preparation and presentation of the selected information that is free from material misstatement, whether due to fraud or error.

Our Responsibilities

We performed our work in accordance with International Standard on Assurance Engagements (ISAE) 3000: "Assurance Engagement other than Audits or Reviews of Historical Financial Information" issued by the International Auditing and Assurance Standards Board and to issue an independence limited assurance conclusion on whether the selected information is free from material misstatement. The work performed in a limited assurance engagement varies in nature and timing from, and is less in extent than for, a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.

Independence, Professional Standards and Quality Control

We have complied with the independence and other ethical requirements of the Code of Professional Ethics for Certified Public Accountant in the Republic of China, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior. In addition, we applied Statements of Auditing Standard No. 46 – "Quality Control for Public Accounting Firms" in the Republic of China. Accordingly, we maintained a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements and professional standards as well as applicable legal and regulatory requirements.

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Summary of Work Performed

Our main work on the selected information included:

● Obtaining and reviewing the report of CAL;

● Inquiring with responsible management level and non-management level personnel to understand the operational processes and information systems used to collect and process the information reported.

● On the basis of the understanding obtained from the above matters, perform analytical procedures on the report and if necessary, select samples to verify the report with supporting documents for acquiring sufficient and appropriate evidence.

The work described above are based on our professional judgment and consideration of the level of assurance and our assessment of the risk of material misstatement of the selected information, whether due to fraud or error. We believe that the work performed and evidence we have obtained are sufficient and appropriate to provide a basis of our conclusion.

Inherent limitations

The Report for the year ended 2020 includes the disclosures of non-financial information that involved significant judgments, assumptions and interpretations by the management of CAL. Therefore, the different stakeholders may have different interpretations of such information.

Conclusion

Based on the work we have performed and the evidence we have obtained, nothing has come to our attention that causes us to believe that the selected information has not been properly prepared, in all material respects, in accordance with the Reporting Criteria.

Other Matters

The management of CAL is responsible for the maintenance of its website, which according to its report, we shall not be responsible for any further changes on the information or its applicable benchmarks, nor be responsible for reconducting any assurance work after the issuance date of the Report.

KPMG

Taipei, Taiwan (Republic of China)
June 9, 2021

Notes to reader

The limited assurance report and the accompanying selected information are the English translation of the Chinese version prepared and used in the Republic of China. If there is any conflict between, or any difference in the interpretation of, the English and Chinese language limited assurance report and the selected information, the Chinese version shall prevail.

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Appendix I：Summary of the Selected Information：

No.	Corresponding Section	Selected Information	GRI Standards
1	2-1-1 Flight Safety _Flight Crew Management (P.45); 2-2-3 Employee Development (P.68); 2-2-4 Employee Rights (P.71)	CAL differentiates risk factors and implements risk management mechanisms based on the three perspectives of "Prediction", "Proactive", and "Passive" through complete internal and external environmental change response trainings, such as training for new airports, routes, aircrafts, systems, protocol procedures, systematic flight training / qualification, flight operation quality assurance (FOQA), and periodic appraisal of trainers / examiners, pilots who graduate from our training programs are highly professional, reliable, and fully capable of safeguarding passenger safety. …	GRI Standards 404-2 Programs for upgrading employee skills and transition assistance programs

No.	Corresponding Section	Selected Information	GRI Standards
2	Appendix_Customer Satisfaction Table in 2020 (P.127)	• Passenger Satisfaction（%）：88.6 • Freight Customer Satisfaction（%）：88.5 • Maintenance Customer Satisfaction（%）：8.57 (Note：The full score is 10)	GRI Standards 102-44 Key topics and concerns raised _customer satisfaction
3	2-2-4 Employee Rights_Labor Unions (P.73)	• Union Participation Rate of CAL: Number of participants：9,811; Participation rate：99.43% • Union Participation Rate of Mandarin Airlines: Number of participants：852; Participation rate：96.49% • The collective bargaining coverage rate of CAL / Mandarin Airlines is equal to the labor union participation rate.	GRI Standards 102-41 Collective bargaining agreements
4	2-2-5 Healthy and Safe Workplace (P.74~P.75)	To implement safety and health management more efficiently, systematically, and in accordance with both international trends and domestic and foreign standards, CAL has established an independent safety and health management system …	GRI Standards 403-9 Work-related injuries

No.	Corresponding Section	Selected Information	GRI Standards
	Appendix_Occupational Hazards Statistics of CAL Group in 2020 (P.133)	• Occupational Hazards Statistics of CAL Group in 2020：1.CAL：A. All Employees：- The Number of Recordable Occupational Injuries：37（Male：15：Female：22）…	

No.	Corresponding Section	Selected Information	GRI Standards
		- Occupational disease rate：0.00 …	

No.	Corresponding Section	Selected Information	GRI Standards
5	2-3-2 Sustainable Supply Chain Management (P.80~P.81)	- The Rate of Fatalities as a result of Occupational Injury：0.00（Male：0.00：Female：0.00）…	GRI Standards 308-2 Negative environmental impacts in the supply chain and actions taken; 414-2 Negative social impacts in the supply chain and actions taken

No.	Corresponding Section	Selected Information	GRI Standards
6	2-3-2 Sustainable Supply Chain Management (P.79~P.80)	the China Airlines follow-up audit. …	GRI Standards 204-1 Proportion of spending on local suppliers
7	2-4-3 Achievements in Environmental Sustainability_Use of Water Resources (P.96)	• CAL Park：(1) Water Shortage Level：Located in Taoyuan City with high water resource risks …	GRI Standards 303-3 Water withdrawal
8	2-4-3 Achievements in Environmental Sustainability…	• The wastewater includes domestic sewage and industrial wastewater. …	GRI Standards 303-4 Water discharge

No.	Corresponding Section	Selected Information	GRI Standards
	Use of Water Resources (P.95~P.96)	chromium and cadmium). They are also regularly inspected to ensure that the effluent meets related regulations of the Environmental Protection Administration. …	
9	2-4-3 Achievements in Environmental Sustainability_Air Pollution (P.97)	• SOx and NOx Emissions of CAL Group in 2020：1. CAL：(1) Passenger Aircraft：- SOx Emissions：30.41 Ton …	GRI Standards 305-7 Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions

No.	Corresponding Section	Selected Information	GRI Standards
		- NOx Emission Efficiency：0.0317 g /RTK; 2. Mandarin Airlines …	
10	2-4-3 Achievements in Environmental Sustainability_Waste Management (P.98)	• Waste Information in 2020：(1) General Domestic Waste：- Incineration (power generation)：113,196 kg …	GRI Standards 306-2 Waste by type and disposal method
11	3-1-1 Regulatory Compliance (P.117)	• CAL shapes its corporate culture and value through the formulation of internal regulations and codes of conduct that attach great importance to business integrity. …	GRI Standards 205-2 Communication and training about anti-corruption policies and procedures

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No.	Corresponding Section	Selected Information	GRI Standards
		completed the training. Given suppliers are also important to CAL's success, CAL requires that its suppliers enter into and comply with the Supplier Code of Conduct (including compliance and anticorruption principles).	

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ISAE 3000

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