

2024 SUSTAINABILITY
CHINA AIRLINES REPORT

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Focus Story/Highlight Project Illustration
A description of the execution highlights and outcomes related to the explanatory section



ESG Icon
Used to indicate environmental/ social/governance issues



Performance Icon
Represent our achievements and performance



GRI Icon
The corresponding GRI disclosure items



Reference Icon
More information on other pages of the Report



China Airlines



Mandarin Airlines



Tigerair Taiwan

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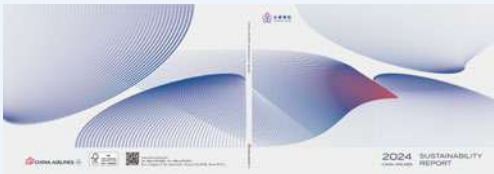
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About the Report

GRI 2-1-2-2-2-3-
2-4-2-5-2-14

China Airlines Co., Ltd. (hereafter referred to as CAL) has consistently dedicated itself to promoting sustainability in the areas of Environment, Social, and Corporate Governance (hereafter referred to as ESG), and its sustainability performance continues to receive external recognition. To maintain effective and open communication with stakeholders, CAL regularly publishes sustainability reports in both Chinese and English, and discloses relevant information on its corporate sustainability website, also addresses the sustainability concerns of its eight key stakeholders through specific sustainability policies and action plans. In response to international initiatives, CAL became the first Taiwanese transportation service provider to be certified by the Science Based Targets initiative (SBTi) in 2024. In recent years, we have actively pursued a fleet renewal program, accelerating the introduction of new-generation, eco-friendly, and energy-efficient aircraft to enhance overall operational efficiency. Additionally, China Airlines achieved a milestone as the first national airline to conduct passenger flights using Sustainable Aviation Fuel (SAF) and introduced a corporate SAF procurement collaboration for carbon reduction. In 2024, the airline further collaborated with supply chain partners and corporate clients to promote the use of SAF in passenger and cargo flights, supporting Taiwan's aviation industry's energy transition and low-carbon transport development. In terms of biodiversity, CAL continues to support natural carbon sink initiatives and national sustainable forestry projects. The airline also sponsored project partners to attend side events of the 16th Conference of the Parties to the United Nations Convention on Biological Diversity, promoting Taiwan's Satoyama Initiative achievements, and continues to progress towards the 2050 net-zero target.

Cover Story



Inspired by the Formosan Blue Magpie, a bird endemic to Taiwan, the design draws from its steadfast and direct flight posture as well as its graceful and agile presence. Merging these qualities with futuristic, technology-inspired lines, it reflects China Airlines' forward-looking vision and spirit of innovation in the global aviation market. The extended lines symbolize an international perspective that connects the world—where flying is not just about movement, but also about exploring new possibilities and opening new pathways to the future. This conveys the airline's image of steady progress, distinctive elegance, and bold ambition.

Reporting Principles & Standard Disclosures

This report is prepared in accordance with the Rules Governing the Preparation and Filing of Sustainability Reports by TWSE Listed Companies, following the 2021 edition of the Global Reporting Initiative (GRI) Standards issued by the Global Sustainability Standards Board. It also references the Integrated Reporting Framework (IR Framework) of the International Financial Reporting Standards Foundation (IFRS Foundation). Additionally, it incorporates sustainability indicators from the Sustainability Accounting Standards Board (SASB) of the IFRS Foundation, the Task Force on Climate-related Financial Disclosures (TCFD), the Taskforce on Nature-related Financial Disclosures (TNFD), and the United Nations Global Compact. For detailed information, please refer to the ESG data and appendices of the report, including the [GRI Standards Content Index](#), [SASB Index](#), [TCFD Index](#), [Climate-related Information Index for Listed Companies](#), [TNFD Index](#), and [UN Global Compact Index](#).

Basis of Report and Guidelines
GRI Standards of the Global Sustainability Standards Board
IFRS Foundation International Integrated Reporting Framework
Sustainability metrics of the Sustainability Accounting Standards Board (SASB) by the IFRS Foundation
Task Force on Climate-related Financial Disclosures (TCFD)
United Nations Global Compact
United Nations Sustainable Development Goals (SDGs)
Rules Governing the Preparation and Filing of Sustainability Reports by TWSE Listed Companies
Sustainable Development Best Practice Principles for TWSE/TPEX Listed Companies
Corporate Governance 3.0
Sustainable Development Guidemap for TWSE and TPEX Listed Companies
Sustainable Development Action Plans for TWSE and TPEX Listed Companies
Taskforce on Nature-related Financial Disclosures (TNFD)

Note: The contents of the report follow the 8 major reporting principles of the GRI Standards: Accuracy, balance, clarity, comparability, integrity, sustainability, timeliness, and verifiability.

Report Period & Boundary

Report Period

CAL discloses information from January 1, 2024 to December 31, 2024 in accordance with the GRI Standards. The reporting period of this report aligns with the financial statements; however some material information is subject to extended disclosure at May 30, 2025.

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Boundary of Data Content

The financial data in this report aligns with the boundary of CAL's consolidated financial statements. The disclosure boundary for sustainability-related indicators is primarily based on industry relevance and financial materiality, focusing on CAL. Some indicators extend to subsidiaries Mandarin Airlines (hereafter referred to as AE) and Tigerair Taiwan (hereafter referred to as IT), which will be specifically noted in the report. Future operational changes of the organization such as mergers, acquisitions, and disposals, as well as non-controlling minority interests, will be considered if necessary, using a consistent method for information disclosure. There are no significant changes in the boundary and topics of major themes from the previous year. Any restated disclosure information is explained in the notes of each chapter. Updates on the adoption progress of IFRS sustainability disclosure standards are also included in line with the FSC's roadmap.

Note 1: China Airlines, Mandarin Airlines, and Tigerair Taiwan account for 96% of consolidated revenue.
Note 2: Tigerair Taiwan has been officially listed on the stock market since 2023 and has begun separately compiling a Tigerair Taiwan Sustainability Report. (Source: [Tigerair Taiwan website](#))

Guarantee of Truthful Reporting

Internal Audit

The data and information in this report are provided by responsible units across the company, and are compiled and reviewed in accordance with the Corporate Sustainability Governance Procedures. After being incorporated into the internal control system and reviewed by the Executive Secretary Group of the Corporate Sustainability Committee (Sustainable Development Center of the Corporate Development Office), the report (including materiality analysis) is submitted to the Sustainability & Risk Management Committee and the Board of Directors for approval and issuance.

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 ESG Data and Appendix](#) for the Independent Limited Assurance Report.

Data Quality Management

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

Item	External Verification Agency
Sustainability Report (ISAE 3000)	KPMG
Financial Data	Deloitte Taiwan
ISO 9001 Quality Management System	DNV GL
ISO 27001 Information Security Management System	SGS
ISO 27701 Privacy Information 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
ISO 45001 Occupational Health and Safety Management System	SGS
TOSHMS Taiwan Occupational Safety and Health Management System	SGS



Publication History

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

First edition release date	August 2014	Current edition release date	August 2025
Previous edition release date	June 2024	Next edition release date	August 2026

Note: CAL notifies GRI of the use of its Standards and the statement of use after the release of the Report each year by sending an email to reportregistration@globalreporting.org

Feedback

If you have any suggestions or questions about this report, please contact:

China Airlines

Corporate Development Office, Sustainable Development Center

+886-3-399-3263

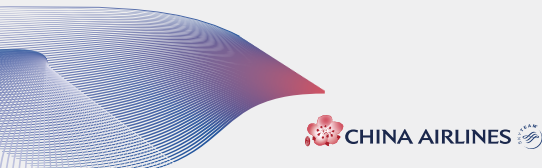
csr@china-airlines.com

No.1, Hangzhan S. Rd., Dayuan Dist., Taoyuan City, 33758, Taiwan (R.O.C.)

<https://calec.china-airlines.com/csr/en/>

Corporate Sustainability Website

Stakeholder Communication Channels Website



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Letter from Management

GRI 2-22

 Leading the Industry in Adhering to International Standards

In 2024, CAL continued to actively progress towards its 2050 net-zero goal, becoming a pioneer in promoting Sustainable Aviation Fuels (SAF) in the industry. On April 23, 2025, CAL actively responded to a Civil Aeronautics Administration initiative, implementing a trial program for SAF usage at Taiwan airports. As a pioneer in sustainable practices in the Taiwanese aviation industry, CAL has been leading the way since 2017. In that year, we became the first to introduce SAF to new aircraft operations. In 2023, CAL successfully carried out the first commercial flight with SAF in the Taiwanese aviation industry through the SkyTeam Aviation Challenge. Building on the achievements of the previous two challenges and CAL's commitment to sustainability, in 2024, practical actions were taken, including the use of sustainable aviation fuel, promotion of a value chain circular economy cooperation plan, implementation of airborne and ground carbon reduction operations, and execution of carbon offsetting. These initiatives demonstrate CAL's dedication and innovation in the field of sustainable development. Furthermore, a sustainable fuel customer cooperation plan for cargo transportation was launched, inviting upstream and downstream partners and customers to participate. This collaborative effort aims to advance Taiwan's aviation industry towards energy transition and low-carbon transportation development. This pioneering commercial operation model in the Taiwanese aviation industry allows corporate customers to join hands with CAL in using sustainable aviation fuel, not only directly reducing carbon emissions from flight transportation but also effectively decreasing the carbon footprint of customers' air travel and cargo delivery. This enables CAL to share carbon reduction benefits with customers, promoting sustainable cooperation within the supply chain and value chain.

China Airlines has also actively responded to international carbon reduction initiatives. In June 2024, we became the first transport service provider in Taiwan to have our carbon reduction targets officially approved through the Science Based Targets initiative (SBTi), and we continued to support the national natural carbon sink initiative and sustainable forestry projects, implementing the International Satoyama Initiative. Furthermore, we actively supported Taiwan's participation in the 16th Conference of the Parties to the United Nations Convention on Biological Diversity, promoting the achievements of Taiwan's Satoyama Initiative and witnessing a new milestone in the co-prosperity of international indigenous rights and biodiversity conservation.

 Implementing Corporate ESG and Sustainable Development

CAL is a pioneer in the international aviation industry for sustainability, continuously surpassing its own sustainability performance and achievements. It maintains a robust corporate environmental and energy risk management mechanism, leading the way by releasing an independent report on the Task Force on Climate-Related Financial Disclosures (TCFD) and integrating the TNFD framework, along with commitments to corporate forest and biodiversity conservation. To advance towards the goal of "Net Zero Carbon Emissions by 2050," CAL has set short, medium, and long-term carbon reduction targets for the transportation industry in Taiwan and proposed a comprehensive pathway to achieve net zero emissions by 2050, actively implementing carbon reduction operations in the air and on the ground. CAL continues to deepen its international cooperation with the IAGOS-PGGM Pacific Greenhouse Gas Monitoring program. As a global leader in conducting cross-Pacific regional climate observations, the airline combines collected data to contribute to international climate change research, strengthen its collaboration with international air route management, and enhance climate resilience.

At the same time, CAL adheres to the sustainable development philosophy of "giving back to society and creating social value" by continuously promoting a variety of social welfare and environmental conservation programs. These initiatives include support for disadvantaged seniors and children, collaboration between domestic industries and academia, volunteer teaching, public sports camps, beach clean-ups, tree planting, and the adoption of conservation species such as the pangolin at the Taipei City Zoo. Additionally, the company supports the Satoyama Initiative to promote the preservation of indigenous tribal culture and economic development, thereby actively fulfilling its corporate social responsibility.

CAL is committed to creating a comprehensive and happy enterprise, with talent development being one of our key objectives. The company provides holistic care and concern for employees, focusing on education, training, and development, promoting employee benefits, enhancing communication, and ensuring a healthy and safe workplace to foster a happy working environment. At the same time, to strengthen the competitiveness of talent in Taiwanese society, we continue to be part of "TALENT, in Taiwan: Sustainable Action Alliance for Taiwanese Talent," adhering to the principles of DEI to emphasize gender equality in the workplace. We have also introduced female pants uniforms, balanced employees' family lives, and increased the proportion of female supervisors within the company, all while cultivating diverse aviation

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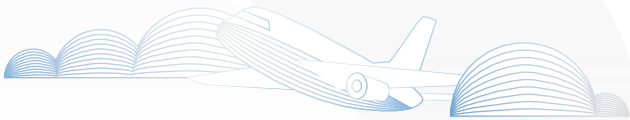
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professionals through a comprehensive training system and structure. The relevant executive performance has continuously won the "Happy Enterprise Gold Award" recognition and has also held onto the honor of "Asia's Best Corporate Employer Award" for consecutive years.

China Airlines has continued to cultivate sustainability efforts, receiving recognition from various domestic and international parties. In 2024, it achieved second place among 61 evaluated airlines globally in the DJSI rankings. It also ranked among the top 5% of the global aviation industry in the S&P Global Sustainability Yearbook assessment. China Airlines became the first airline in Taiwan to receive a "twA-" rating from Taiwan Ratings. Additionally, it has been included in the Taiwan Sustainability Index for six consecutive years and selected as a component stock of the FTSE4Good Index Series for nine consecutive years. It has won the Taiwan Corporate Sustainability Award for 11 consecutive years, with its sustainability report category receiving the highest honor of Best Report of the Year in the Service Industry for three consecutive years. CAL has taken concrete actions such as establishing a Corporate Sustainability Committee ahead of its industry peers, linking ESG sustainability governance overseen by the Board of Directors, implementing a systematic framework for environmental/energy risk management, promoting the enhancement of ISO operating systems, and obtaining third-party certifications. These efforts have positioned CAL as a leader in driving ESG sustainable development in the Taiwanese aviation industry. It was selected from over 30 participating companies as the inaugural recipient of the Ministry of Transportation's ESG Transport Sustainability Gold Award, the sole airline to receive this recognition.



 China Airlines Quality Starts from the Heart - Embracing a Brand New Future

In response to the rapidly changing global aviation operating environment and the increasing emphasis on sustainability by stakeholders, we have updated and released our core values of "Believe we can always do better," our mission of "Create more wonderful moments through flying," our vision of "Leading Asia-Pacific, Flying Worldwide," and our service declaration of "China Airlines Quality Starts from the Heart." We are committed to the highest standards of flight safety and sustainability, continuously introducing new-generation energy-efficient fleets, expanding our global route network, and deepening our alliance partnerships to enhance market competitiveness and operational resilience. We will accelerate digital transformation; strengthen information security governance and personal data protection; enhance the passenger flight experience with technology, humanity, and culture; refine and diversify passenger and cargo transportation services; and actively seize global high-value business opportunities. We will continue to uphold the core principles and policies of ESG sustainable development, properly address and respond to stakeholders' expectations, expand and deepen the ESG sustainable governance of the Group, implement climate governance and net-zero carbon goals, increase the use of SAF, collaborate with supply chain partners to promote value chain sustainable transformation, and comprehensively enhance ESG performance.

We believe that only through prudent management, innovation, embracing the Earth, and caring for society can we create more operational revenue and ESG sustainable development dividends, to create and pass on a happy and sustainable living environment for our generation and the next.



Chairman

Si H. Kuo



President

He Jia Chen

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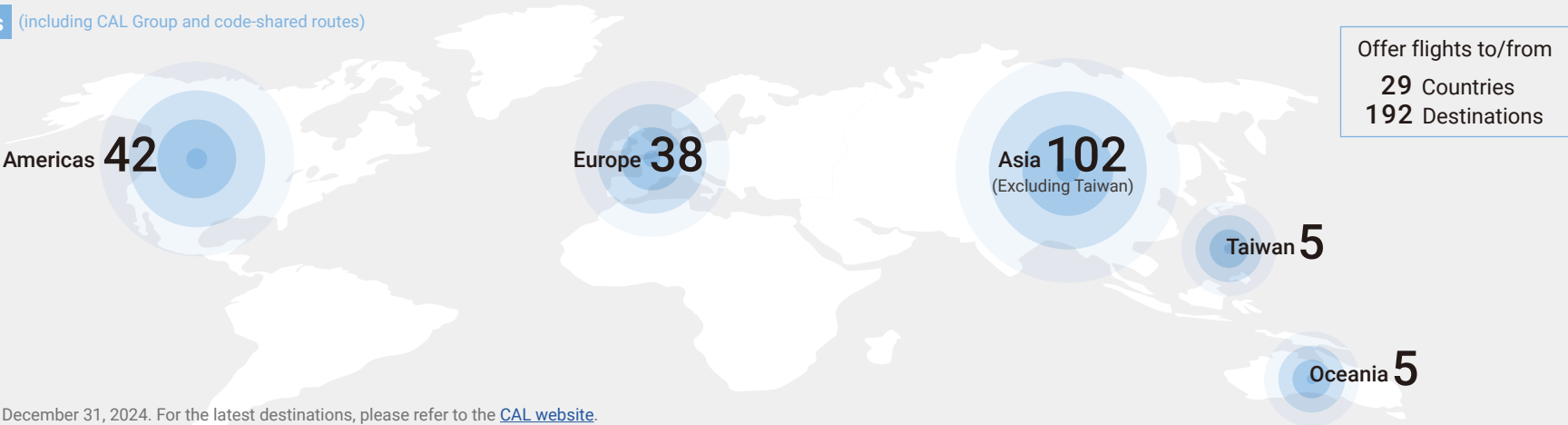
Business Overview

GRI 2-1-2-6

CAL (2610) is the largest airline in Taiwan. Based in Taiwan Taoyuan International Airport, CAL mainly provides international passenger and freight air transport services. CAL has two subsidiary companies: Mandarin Airlines (serving domestic and regional markets) and Tigerair Taiwan (offering a low-cost business model). With three airline companies for market segmentation, shared resources, and mutual support, CAL provides a variety of options for customers. For more information on the business development of the fleet and route network, refer to Business Overview in CAL's Annual Report. In 2024, China Airlines and Mandarin Airlines jointly operated flights to 29 countries/regions with other operators, serving 192 destinations, while Tigerair Taiwan served 28 destinations across 41 routes. In 2024, the global aviation industry continued to seek steady growth amidst the complex and ever-changing international

landscape. While there were signs of a gradual economic recovery worldwide, multiple challenges persisted. Geopolitical conflicts continued to escalate, exacerbating regional instability and impacting route adjustments and additional costs. Although inflationary pressures eased slightly, energy prices remained a key factor affecting airlines' operational costs. Insufficient resilience in supply chains and ongoing labor shortages also remained potential operational risks. In such a complex environment, CAL remains committed to enhancing operational efficiency and striving to achieve a robust financial performance. CAL Group achieved a pre-tax net profit of TWD 19.276 billion, with a post-tax net profit attributable to the parent company of TWD 14.383 billion. [See 3.2 for details on CAL Group's operational achievements](#)

Destinations (including CAL Group and code-shared routes)



Note: Statistics as of December 31, 2024. For the latest destinations, please refer to the [CAL website](#).

 China Airlines	 Mandarin Airlines	 Tigerair Taiwan
 Capital TWD 60.5 billion	 Capital TWD 4 billion	 Capital TWD 4.59 billion
 Employees 11,518	 Employees 954	 Employees 828
 Headquarters No.1, Hangzhan S. Rd., Dayuan Dist., Taoyuan City	 Headquarters No.3, Alley 123, Ln. 405, Dunhua N. Rd., Songshan Dist., Taipei City	 Headquarters No.3, Alley 123, Ln. 405, Dunhua N. Rd., Songshan Dist., Taipei City
 Fleet Size & Average Age 83 aircraft 9.6 years passenger planes 10 / 9.3years cargo planes 17 / 10.7years	 Fleet Size & Average Age 12 aircraft / 5 years	 Fleet Size & Average Age 15 aircraft / 6.7 years

Note: As of April 30, 2025. For the latest operating fleet size and age, please refer to the [CAL website](#).

Passenger Load Factor (China Airlines Group)



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2024 ESG Performance and Recognition



9th time selected for FTSE4Good Index Series

Selected in the FTSE4Good Index Series for nine consecutive years



3rd time selected for the MSCI Index

Has been selected as a constituent stock of the MSCI Global Standard Indexes since 2022



6th time in GCSA Award

CAL won the Sustainability Reporting Award for the sixth time and won Gold Class in 2024



6th time selected for FTSE4Good TIP Taiwan ESG Index

Selected in the FTSE4Good TIP Taiwan ESG Index for the sixth time



11th time receiving Taiwan Corporate Sustainability Award

Eleven-time winner of the Taiwan Corporate Sustainability Award; Best Annual Report (Service Industry) for 3 consecutive years



8th time in the Sustainability Yearbook

Ranked 2nd in ESG among global airlines in 2024 and is the only Taiwanese airline selected 8 times for the Sustainability Yearbook; named top 5% airline in 2025



twa- long-term credit rating upgraded by Taiwan Ratings

Long-term credit rating upgraded to twA- by Taiwan Ratings (Oct 2024); short-term rating twA-2 with stable outlook

Governance



Top 21%-35% of TWSE/TPEX listed companies

Selected in the top 21%-35% of the excellent corporation award in the 10th Corporate Governance Review



8th 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 eight consecutive years



100% signing rate for the Supplier Code of Conduct

The signing rate of the key first-tier suppliers for the Code of Conduct has reached 100%



Signed the IATA Safety Leadership Charter

CAL signed the Safety Leadership Charter and filmed a "Safety Talk" featuring senior executives to demonstrate our commitment to promoting a positive safety culture, and enhancing employee awareness through top management's safety commitment and actions



Continuing to Obtain IOSA safety certification

CAL has upheld its commitment to flight safety by obtaining the IOSA (IATA Operational Safety Audit) certification in 2005 and undergoing re-certification audits every two years in accordance with IATA regulations. In 2024, CAL successfully met the IOSA standards for the consecutive 12th time, and the next certification is scheduled for 2026

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Governance



Hosted Geopolitical Conflict Aviation Security Risk Seminar in 2024

The seminar is held to strengthen aviation security personnel’s awareness of risks from geopolitical conflicts and new security threats, equipping them to remain vigilant toward people, events, and objects. It was attended by 120 participants from the Ministry of Transportation, Air Force Command, government agencies, domestic airlines, and related enterprises



Co-organized 2024 International Aviation Safety Management Summit

CAL specially invited Japan Airlines to share insights on the JL516 Haneda Airport runway collision incident, providing a detailed understanding of the cabin crew’s response measures and the emergency evacuation situation for passengers at that time. Participating entities include the World Flight Safety Foundation, Airbus, Boeing, Japan Airlines, and senior managers from major national airlines. Through extensive discussions and exchanges during the conference, the aim is to consolidate a shared commitment to enhancing safety



Digital transformation and service optimization towards sustainable excellence

The Cabin Crew Division actively promotes digital operations and the application of AI technology to enhance service efficiency and implement sustainable development.

In 2024,

1. We continued to optimize the use of the iPad mini in cabin service and the Business Class ordering system, thereby reducing paper usage and enhancing operational efficiency
2. To support the introduction of new aircraft, we have implemented next-generation training equipment to enhance crew response capabilities and ensure flight safety.
3. Through the "Memory & Moment" service retraining and regular communication mechanism, we aim to deepen our brand image and improve customer satisfaction

Environmental



First Transportation Company in Taiwan to Pass SBTi Validation

In June 2024, CAL became the first transportation service provider in Taiwan to officially pass the review of the Science Based Targets initiative (SBTi), setting a 1.5°C-aligned emissions reduction pathway. This target aligns with the global climate goals under the UN Paris Agreement and demonstrates CAL’s commitment to science-based climate action and the transition to net-zero emissions



CDP SER A List Recognition

CAL has responded to the CDP climate change questionnaire for 12 consecutive years since 2012. After receiving a Leadership-level A-rating for five straight years, CAL was named to the CDP SER A-List in 2024 for its active efforts in climate action and supply/value chain management



11th TCSA Climate Leadership Award

CAL has received the Climate Leadership Award for 11 consecutive years since 2014, an unrivaled feat in Taiwan’s transportation service industry

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Collaborating with partners
to create carbon reduction value with SAF

First in Taiwan's aviation industry to introduce a SAF procurement model with traceable, verifiable carbon reduction reports. Leading collaboration with passenger and cargo partners to reduce aviation emissions and customers' travel and shipping carbon footprints, advancing the industry's energy transition



Action to Support Reforestation Initiatives

Hosted the "Exploration of the Mountains' Beauty" Event, bringing corporate resources to Indigenous tribal communities, with the aim of setting an example for others and inviting business partners to join in experiencing eco-friendly journeys together



Conducting cabin waste investigation to support
Circular Economy

CAL fosters ongoing communication among cabin service, air quality, and ground handling teams to optimize operations and promote recyclable materials re-entering the circular economy

Social



Over 62.38 million in charity activities

CAL invested TWD62,384,660 in charity activities in 2024



Over 1.46 million beneficiaries

In 2024, the total number of beneficiaries from business activities, charitable events, and community investments reached 1,460,687



Nearly 3,000 rural students benefited

In 2024, the CAL Volunteers Club, along with rural community organizations and the Love Walking Club, voluntarily traveled to remote areas to impart aviation knowledge, benefiting a total of nearly 3,000 students



420 senior citizens

Provided care for 420 disadvantaged senior citizens at three events in 2024



Employee training investment of 433 million

Actively conducting management and various professional training, with a total investment of approximately 433 million



Employment of 101 staff members with disabilities

CAL takes great pride in being the sole recipient of the Golden Exhibition Award in the aviation industry for employing 101 staff members with disabilities



99.14% union participation

99.14% of employees participate in the corporate union



Awarded the HR Asia Best Companies to Work for In Asia

CAL received the prestigious award of HR Asia Best Companies to Work for In Asia in 2024



Continuous Support for "TALENT in Taiwan"

On February 29, 2024, CAL reaffirmed its support for "TALENT in Taiwan," partnering with Commonwealth Learning and others to promote sustainable talent development

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2024 Award Records

FEBRUARY 2024.02

- Ranked among the top 5% of the global airline industry in the S&P Global 2024 Sustainability Yearbook.

JULY

2024.07

- Selected in the Taiwan Employment Creation 99 Index for eight consecutive years.



- Received the "HR Asia Best Companies to Work for In Asia" award for two consecutive years.



- The "China Airlines 2023 Sustainable Flight Challenge" video won the Sustainable Microfilm Silver Award at the Golden Eagle Awards.

JUNE 2024.06

- Selected in the Taiwan High Compensation 100 Index for eighth consecutive year.
- Ranked in the Taiwan Sustainability Index six times.
- Selected in the FTSE4Good Index for nine consecutive years.

SEPTEMBER 2024.09

- The Taiwan Ratings long-term credit rating of CAL was upgraded to "twA-".

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NOVEMBER

2024.11



- Received Taiwan Contact Center Development Association Excellence in Customer Service Award: Best AI System Application Team.



- Awarded "Global Five-Star Airline" for nine consecutive years by the Airline Passenger Experience Association (APEX), along with the "Best Food & Beverage Award" and the "Best Wi-Fi Award."



- Honored at the "2024 17th Taiwan Corporate Sustainability Award," winning five major awards in the 11th consecutive winning year, including three consecutive years receiving the "Best Annual Report in the Service Industry," the "Top 100 Sustainable Exemplary Enterprise Award in Taiwan," individual sustainability performance awards in the "Climate Leadership Award" and the "Social Inclusion Leadership Award," as well as the "Gold Award for Sustainability Reporting" global corporate sustainability award.

DECEMBER

2024.12



- Awarded the Gold Prize in the inaugural "ESG Transportation Sustainability Award", becoming the sole recipient in the aviation industry.



- Rated the "Best Airline in North Asia" by the renowned American travel magazine Global Traveler in their 21st annual reader survey.

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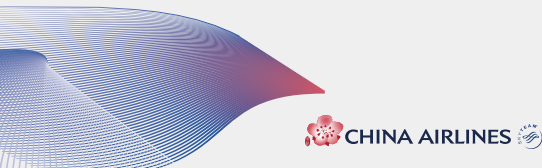
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1.1 Sustainability Vision and Strategies

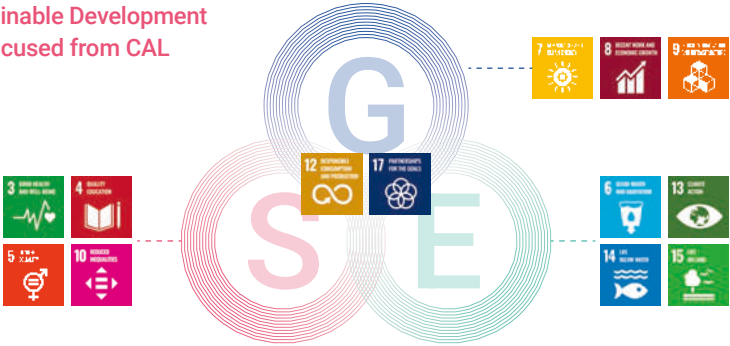
1.1.1 CAL's Sustainability Vision

In response to evolving market and operational demands, CAL regularly reviews its strategic indicators. In 2024, after reassessing internal and external environments, CAL updated its vision, mission, and values. Guided by the belief that “we can always do better,” CAL’s mission is “creating more wonderful moments through flying,” and its vision is “leading Asia-Pacific, flying worldwide.” CAL supports the UN’s 17 Sustainable Development Goals (SDGs), aligning with the SDG Compass and sustainability frameworks from ICAO, ATAG, and the global transport sector. Currently, CAL focuses on 13 SDGs to drive sustainability and create stakeholder value.

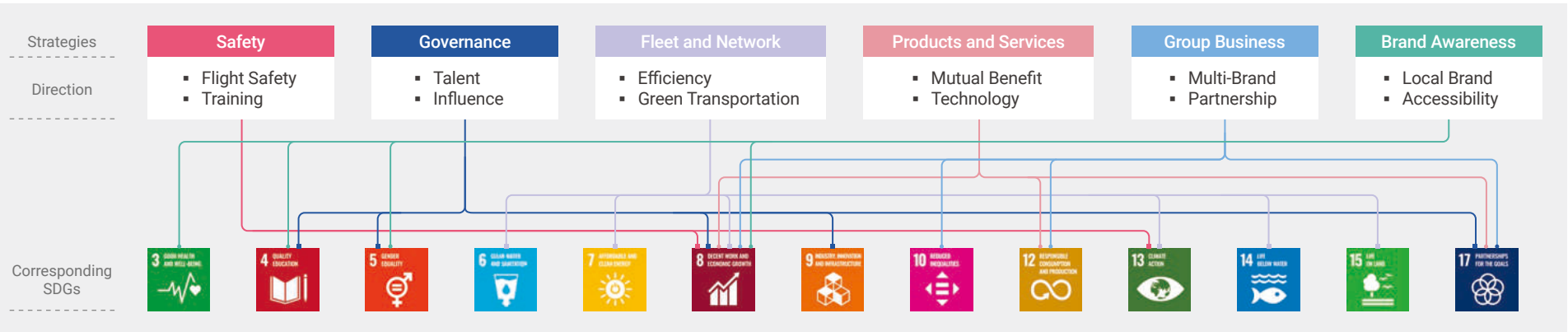
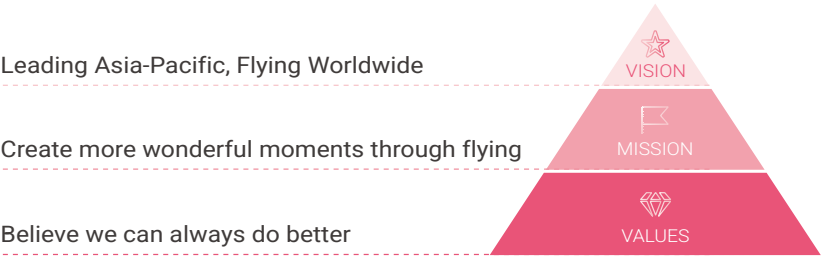
1.1.2 Sustainability Strategy

China Airlines is committed to its mission of “creating more wonderful moments through flying” and its vision of “Leading Asia-Pacific, Flying Worldwide.” Centered on “Safety” and “Governance,” CAL integrates its core strategies—“Fleet and Network,” “Products and Services,” and “Group Business”—to strengthen brand awareness. To enhance its sustainability image, CAL launched three action plans: “Smart Resilience” (adapting to extreme weather and public health concern), “Localized Global Operations” (sharing Taiwan’s culture globally), and “Youth Innovation” (engaging younger generations). These six strategic directions align with the UN Sustainable Development Goals (SDGs), forming a comprehensive sustainability framework. In 2024, CAL reviewed and updated its medium- to long-term sustainability goals. The strategy is led by the Corporate Sustainability Committee under the General Manager, and overseen by the Board-level Sustainability & Risk Management Committee and the Board of Directors.

13 Sustainable Development Goals Focused from CAL



China Airlines Sustainability Strategy



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1.2 Sustainability Management Structure

GRI 2-9.2-12.2-13.2-14.2-16.2-18

1.2.1 Corporate Sustainability Committee

China Airlines established the Corporate Sustainability Committee in 2014 as its highest-level sustainability governance body. In 2024, the Corporate Development Office set up the Sustainability Development Center, which acts as the committee's executive secretary and appointed a Chief Sustainability Officer to lead sustainability efforts. The Center oversees decision-making and manages impacts on the economy, environment, and people, including human rights. To enhance ESG governance, the board-level Sustainability & Risk Management Committee was formed in 2025 to strengthen oversight. In 2024, the Corporate Sustainability Committee, chaired by the President under the Chairman's guidance, held three meetings. It comprises six value-based working groups and a risk management group. In line with CAL's Sustainable Development Practice Code, the committee formulates goals and integrates strategies to drive sustainable development, reporting twice a year to the board-level committee and the Board of Directors. As the highest governance body, CAL's Board of Directors oversees and identifies external economic, environmental, and social (including human rights) impacts, conducting due diligence through internal controls and ESG audits. The Board assigns

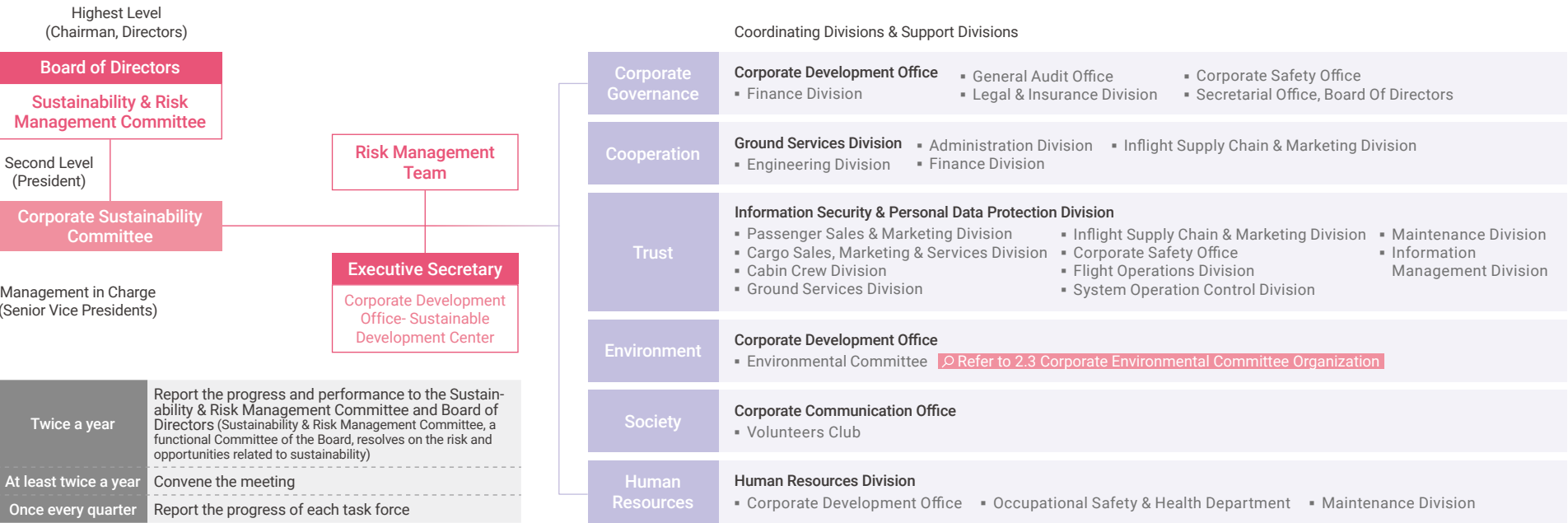
senior executives to engage in dialogue with stakeholders to address the identified impacts through multiple communication channels and platforms, which are detailed in [1.4.1 Stakeholder Engagement](#). In 2024, the Board of Directors held nine meetings to oversee the Company's due diligence and impact reporting on critical material events (Note 2), security management, operational risk management, financial conditions, greenhouse gas inventory and verification, climate governance report, human rights risks, and information security and personal risks, and to review the results of stakeholder engagement. CAL also established the performance evaluation procedures for the Board of Directors' supervision of the Company's impact on the economy, environment, and people (including human rights). It convenes at least two meetings of the Remuneration Committee each year to regularly review the overall compensation and benefits policies of senior executives. [Refer to 3.1 Governance Framework](#)



Sustainable Development Best Practice Principles

Note 1: The 2024 corporate ESG sustainability governance achievements were reported to the Board of Directors on January 13, 2025, and the contents of the 2024 Sustainability Report were presented at the third quarter meeting of the Sustainability & Risk Management Committee on August 6, 2025, and approved by the Board of Directors on August 8, 2025.

Note 2: Critical and significant events include those that are communicated to stakeholders through the grievance mechanism. Material incidents that are verified are communicated and reported to the Board of Directors based on the nature of the events.



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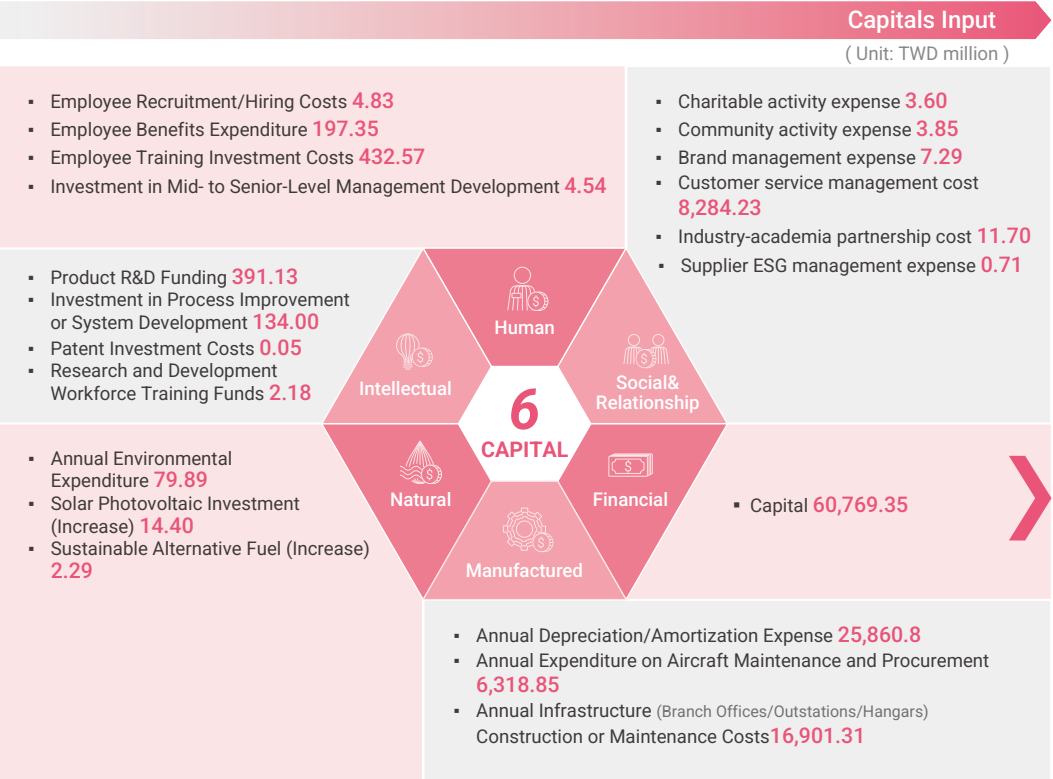
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1.3 CAL's Sustainability Value

1.3.1 Business Model and Value Creation



Sustainability Strategies	Definition of Strategy
Governance	Root sustainable concept in value chain to make positive influence
Safety	Embed the safety culture into products and services
Brand Awareness	Highlight Taiwan's local identity and friendly transport services to shape a distinctive brand and responsible corporate citizen image
Fleet and Network	Promote highly efficient fleets and network to forward environmental friendliness
Products and Services	Create sustainable services with sustainable value and technology
Group Business	Spread sustainability to group business to improve cooperation and sustainable development



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Value Creation				
Item	Output		Outcome	Relevant Report Sections
 Financial	Capital	175,182,455,000	Revenue increased by 8% compared to 2023, and traditional financial performance (EBITDA) rose by 22% compared to 2023.	3.2 Operational Achievements (P.159)
 Manufactured	Number of New Fleet Aircraft	- Two Boeing 777F cargo aircraft - Four Airbus A321neo aircraft	- From 2014 to 2016, ten 777-300ERs were introduced, delivering notable fuel savings. The 777F freighter, co-developed with Boeing and equipped with the same GE90 engines, supports streamlined engine management and lower maintenance costs. Differential training enables flight crew flexibility and more efficient resource deployment. - The A321neo offers improved fuel efficiency, lower unit costs, extended range, greater payload, and reduced noise. Its eco-friendly design cuts carbon emissions and noise pollution, strengthening our competitiveness on regional routes.	3.2 Operational Achievements (P.159) 2.1 Trust(P.45)
	Passenger Capacity of the New Fleet	720 seats	The A321neo features a newly designed cabin with diverse and innovative hardware and software, highlighting China Airlines' unique brand and competitive product advantages.	
	Aircraft Maintenance Performance Indicators	Actual on-time delivery rate for high-level maintenance: 100%	Achieved the target for on-time delivery rate of advanced maintenance (100%).	
	Number of incidents resulting in fatalities or total aircraft loss	0	0	
	Number of Destinations (Including New Additions)	- Passenger destinations : 71 - Cargo destinations : 30	- In 2024, one new passenger route was added (SEA). - In 2024, no new cargo routes were added.	
	New Flight Destinations	- In 2024, one new passenger route was added (SEA) - In 2024, no new cargo routes were added	- In 2024, one new passenger route was added (SEA). - In 2024, no new cargo routes were added.	
 Intellectual	Global Passenger/ Freight Transport Volume (RPK/FRTK)	- RPK: 37,267,000,000 - FRTK: 5,285,064,431	- RPK increased 10.2% over 2023 (33,808,000,000). - In 2024, cargo traffic reached 5,285 million tonne-kilometers, a decrease of 0.98% compared to 5,337 million tonne-kilometers in 2023.	2.1 Trust (P.45) 2.4 Human Resources (P.117)
	Number of Newly Launched Products or Services	- Two Boeing 777F cargo aircraft - Four Airbus A321neo aircraft	Fuel Conservation and Noise Reduction	
	Research and Development Achievements	0	NIL	
 Intellectual	Revenue/Passenger Numbers Generated by Newly Launched Products or Services	1. 787 New Aircraft Project ① 787-9 : Cabin equipment specifications finalized; testing and certification underway. First batch of products expected this year. ② 787-10: Seat, IFE, and interface specifications completed.	1. Project for New 787 Aircraft ① 787-9 : Completed PDR/CDR meetings for 16 aircraft, finalizing cabin system specifications and customization plans. ② 787-10: Completed Initial Technical Coordination Meeting (ITCM) for 8 aircraft, addressing seat, IFE, and fuselage interface specifications.	

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Value Creation				
Item	Output		Outcome	Relevant Report Sections
	Revenue/Passenger Numbers Generated by Newly Launched Products or Services	2. A350 Cabin Retrofit Scope and technical interfaces are being defined.Pre-ITCMs with Airbus are planned to confirm specifications	2. A350 Cabin Modification Selected cabin design consultant; design work is in progress. Pre-ITCMs completed with equipment vendors, IFE providers, and Airbus for 15 aircraft.	
	Cost savings (such as labor and materials)	89	Reduction in manpower: 119.2 person-months per year	
	Number of Patents	1	1	
	Number of Personnel Trained in R&D	573	Enhance IT personnel skills to support the development or update of various information systems within the company, covering 89 project plans.	
 Human	Number of New Employees in 2024	864	Continue to attract diverse talent to enhance the company's operational capacity.	2.4 Human Resources (P.117)
	Employee Retention Rate	- The retention rate for newly hired/recruited employees in 2024 was 91.20% - Employee retention rate before 2024: 92.49%	Compared to 2023, the retention rate of newly hired employees increased by approximately 1.3%, and the overall employee retention rate rose by 1.4%.	
	Employee Turnover Rate	5.26%	The turnover rate decreased by approximately 0.6% compared to 2023.	
	Total Training Hours for Employees	461,495 hours	Facilitate educational training to support operational needs.	
	Training Hours for Mid- to Senior-Level Management	9,400 hours	Conduct job-related training and provide additional development resources to enhance management skills and build consensus.	
 Natural	Electricity Consumption	31,856 kWh	260,881kWh	2.3 Environment (P.84)
	Carbon Emissions	6,570,077 tons	47,477 tons	
	Waste Volume	4,815,001 kgs	70,740 kgs	
	Water Consumption	114.37 tons	None	
	Noise Management Action Plan	5	Continue to implement five key strategies to ensure operational compliance with noise regulations.	
	Number of Green Buildings	2	Regenerative Power System: 11,304 kWh.	
	Percentage of Green Buildings in Total Construction	66.67%	66.67%	
	Solar Photovoltaic Investment	296,528 kWh	2024 Energy Savings: 296,528 kWh.	
 Social and Relationship	Sustainable Alternative Fuel	26,641 liters	In 2024, carbon emissions were reduced by 67.202 tons.	
	Number of Public Welfare Activities	20	This year, we continued supporting elderly individuals in Taoyuan—particularly those who are disabled, dependent, or living with dementia—by providing care packages during the three major festivals. Leveraging our aviation expertise, we also held pilot and flight attendant experience camps for underprivileged children. To deepen our corporate social responsibility and community engagement, we made ongoing donations to disadvantaged groups, foundations, and children in rural areas.	
	Number of Beneficiaries	1,460,687		

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Item	Output		Outcome	Relevant Report Sections
 Social and Relationship	Community activity number	28	Each year, CAL visits local schools near its offices to offer lectures, sharing core aviation knowledge and English education to support local learning and global awareness. CAL also advances its ESG goals through actions such as tree-planting sponsorships, beach cleanups, and wildlife conservation, creating shared value and promoting sustainable community development. In 2024, we held charitable basketball, table tennis, baseball, and badminton camps, combining sports with social welfare to inspire children to pursue their dreams.	2.1 Trust (P.45) 2.2 Cooperation (P.71) 2.4 Human Resources (P.117) 2.5 Society (P.139)
	Number of Community Participants	19,925		
	Number of External Sponsorships	58	In 2024, CAL continued its humanitarian efforts regardless of nationality, actively leveraging its resources to support global relief. This included transporting supplies for the Tzu Chi Foundation after the New Year's Day earthquake in Japan and supporting the "2nd Love Without Borders International Medical Mission" and the "31st Formosa Budding Hope Association Love Without Borders." These efforts reflect CAL's corporate strength and humanitarian spirit. Additionally, CAL continued to sponsor Taiwan's tourism, arts, culture, and sports, helping raise the global profile of local Taiwanese brands.	
	Number of Brand Promotion and Advertising Projects	6	1. Sustainability Promotions and Activities In 2024, CAL released the "Tree Planting" video, SAF collaboration ads, and a sustainability commercial. At the ITF Taipei Travel Fair, reusable lighting and bilingual balloons were featured. The 2025 desk calendar used eco-friendly ink, and sustainability results were disclosed in the PR annual report.	
	Brand Promotion Project Results	80,810,000	2. Seattle Route Marketing To support the launch of the Seattle route, CAL rolled out a multi-channel campaign covering outdoor, TV, social media, and print, reaching 208 million impressions. Post-launch, the average load factor approached 80%, showing strong sales performance.	
			3. 2024 ITF Travel Fair Results After eight months of preparation, CAL's booth won the "Best Pavilion Award." The four-day event attracted 364,000 visitors, with over 8,800 participating in activities. New Dynasty member sign-ups grew by 32.3%, and 16,747 tickets were issued with total sales reaching NT\$275 million.	
	Passenger Satisfaction Results	Passenger Net Promoter Score (NPS):72.5	According to the passenger satisfaction survey results from January to December 2024, NPS reached 72.5, exceeding the target value and showing an improvement over 2023. Looking ahead to 2025, we have raised our target from 62 in 2024 to 69, in response to passengers' recognition and expectations of China Airlines.	
	Number of Passenger Complaints	20,770	In 2024, China Airlines transported a total of 11,464,422 passengers, an increase of 1,867,863 passengers or 19.46% compared to the 9,596,559 passengers in 2023. The number of customer complaints in 2024 was 20,770, which is an increase of 3,845 complaints or 22.72% compared to 3,845 complaints in 2023.	
	Cargo Satisfaction Results	89.8	Each year, the Cargo Sales, Marketing & Services Division distributes a customer satisfaction survey to all global cargo service locations, encouraging clients to actively provide feedback. Additionally, it enhances the secure transportation of diverse products, expands e-commerce services, and improves tracking and responsiveness to customer service requests.	

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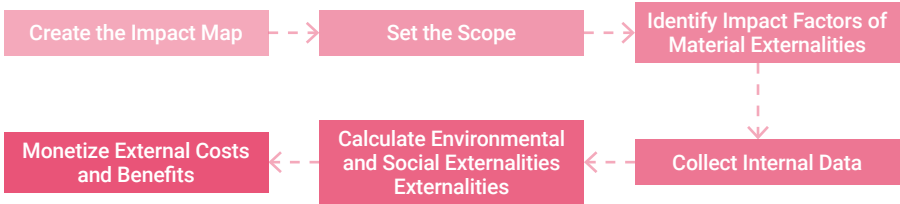
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Item	Output		Outcome	Relevant Report Sections
 Social and Relationship	Number of Cargo Complaints	0	All destinations continue to provide customers with relevant cargo services and are committed to further improving service quality.	2.1 Trust (P.45) 2.2 Cooperation (P.71) 2.4 Human Resources (P.117) 2.5 Society (P.139)
	Number of Partners	20	Continuing to Develop National Aviation Talent.	
	Number of Collaborative Projects	5	Continuing to Develop National Aviation Talent.	
	Number of Industry-Academia Collaborations	40	Continuing to Develop National Aviation Talent.	
	Supplier ESG Management Coverage Ratio	94.38%	In 2024, the coverage of sustainable management among suppliers decreased by 1.62% compared to 2023. This was primarily due to a reduction in bonus questions and the doubling of the weight of compliance questions. While scores in governance and general areas slightly improved, all other areas saw a decline. However, the average score for each area exceeded 80 points.	
	Overall Proportion of Supplier ESG Audits in the Past Three Years	100.00%	Supplier audits are conducted at least once every three years, with a completion rate of 100% from 2022 to 2024.	

1.3.2 True Value of China Airlines

In order to embrace mutual prosperity along with our stakeholders and endeavor to create sustainable value for all stakeholders, CAL based on China Airlines’ economic, environmental, and social reporting boundaries has integrated six forms of capital (financial, natural, manufactured, intellectual, human, and social relationship) 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.

Procedures for Assessing True Value



True Value

In 2024, China Airlines’ traditional EBITA rose by 21.67% year-over-year to TWD 42.95 billion. When accounting for economic, environmental, and social factors, the company’s true earnings reached TWD 54.79 billion—TWD 11.84 billion higher than EBITA and TWD 11.50 billion more than in 2023.

Key environmental improvements included a 22.12% increase in renewable energy use and a 73.29% rise in green fare adoption. However, greenhouse gas emissions grew by 6.97% due to a 15% increase in flight operations, while noise pollution fell by 7.35%. These impacts remain the primary environmental challenges.

Despite this, China Airlines actively advanced sustainability initiatives, including noise control, renewable energy, and green fares. Fleet renewal and fuel-saving efforts led by the Aircraft Fuel Management Task Force helped offset emissions growth.

In total, environmental externality costs in 2024 were estimated at TWD 13.07 billion, while economic and social value contributions reached TWD 24.91 billion.

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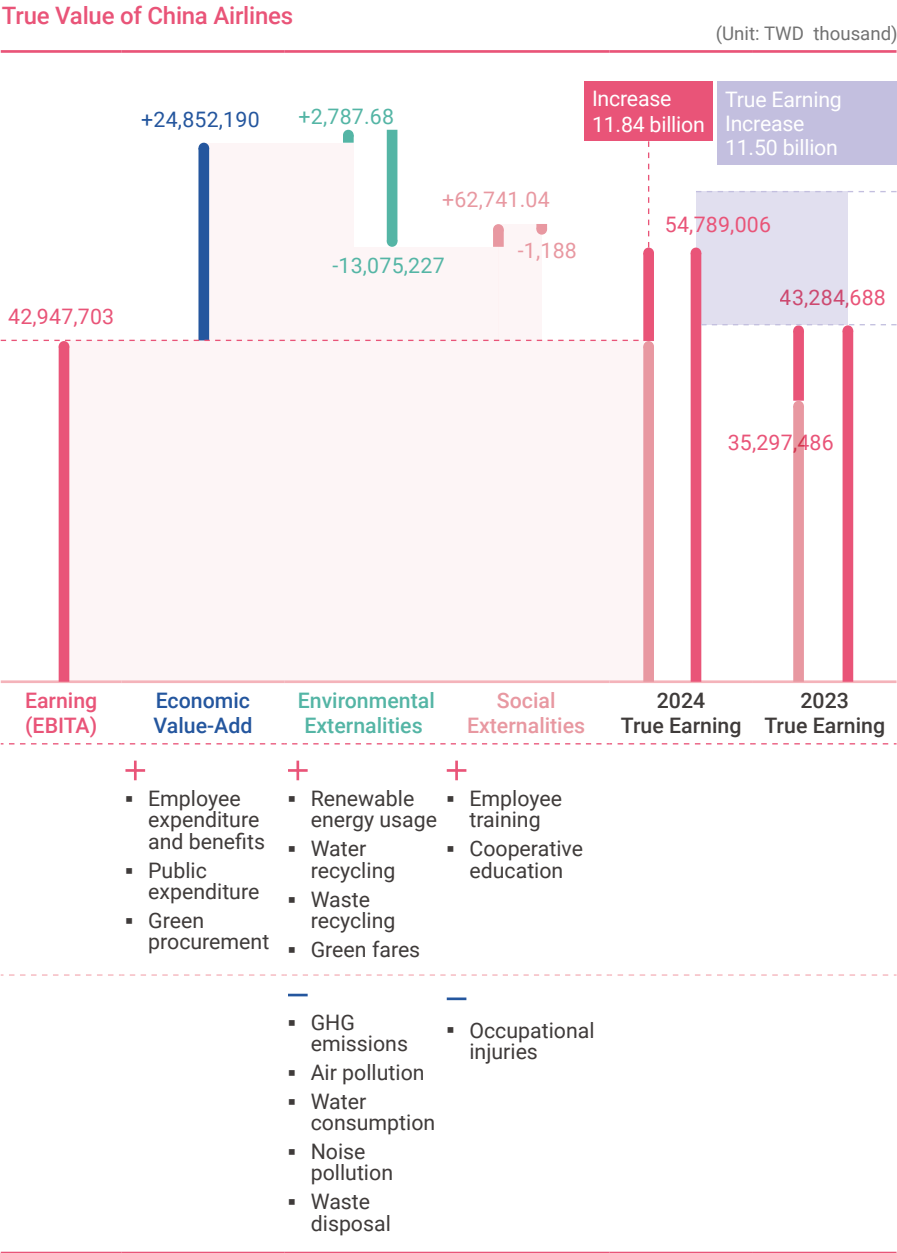
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1.4 Stakeholder Communication and Materiality Analysis

1.4.1 Stakeholder Engagement

GRI 2-26.2-29

China Airlines' eight primary stakeholders include employees (including other workers), customers, investors, government, partners (suppliers and contractors), society, media, and associations (including aviation organizations). When evaluating stakeholder concerns, we also consider a broad range of stakeholders such as business partners, non-governmental organizations (NGOs, associations), and disadvantaged groups. In addition to using materiality analysis questionnaires to understand stakeholder concerns regarding sustainability topics, we have established dedicated stakeholder sections on the China Airlines website tailored to the attributes and needs of each stakeholder group. These sections provide open communication channels and platforms. Stakeholders can express suggestions or concerns regarding China Airlines' business policies and practices through these individual communication channels and platforms to convey their needs and expectations. Furthermore, China Airlines reports to the Board of Directors at least once a year on the status, frequency, and actual content of stakeholder communications. The results of stakeholder communication and discussions for 2024 were reported to the Board on January 13, 2025.

Stakeholder Contact

Frequency

! On demand	R Regularly	1.6 Once every 6 months	2.v Twice every year
N As needed	M Monthly	Y Yearly	4.6 Four to six times a year
D Daily	Q Quarterly	1.v Once every year	

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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 work place. CAL is dedicated to maintaining harmonious labor-management relations through unimpeded communication channels, thus creating a win-win situation

Material Issues		Corresponding Chapter Section	Key Points of Communication	Communication Channels and Frequency	
Governance and Business Integrity	Labor Relations and Communication	2.4 Human Resources	1. Recruitment and Retention	Labor-management meetings	China Airlines newsletter
Information Security	Privacy Management	2.3 Environment	2. Employee development, rights and interests, healthy and safe workplace	Labor Unions	China Airlines Retirees Portal
Flight Safety Management				Employee suggestion boxes	Meetings of the Occupational Safety and Health Committee
Communication Results			Highlights of Communication Results		
1. Employee Engagement The employee engagement survey was conducted in December 2024 and the score was 7.9 (score out of 10), which was higher than the score in the previous survey.			- On January 15, 2025, CAL and the China Airlines Employees Union signed their seventh collective agreement, covering 79 articles for a three-year term. Both sides continue to improve labor conditions and benefits, maintaining strong labor relations through mutual goodwill. Additionally, CAL and the Taoyuan Union of Pilots signed a collective agreement on December 29, 2021. These agreements are typically renegotiated every three years, and during the transition period, existing terms on working conditions remain in effect by law. - CAL has established the Occupational Safety and Health Committee in accordance with laws. It convenes a meeting every three months to review and coordinate occupational safety and health issues. The discussions are compiled into meeting minutes which are announced on the Intranet. - Recognition as one of the HR Asia Best Companies to Work for in Asia: Efforts were acknowledged in 2024 with our being named among the "HR Asia Best Companies to Work for In Asia," standing out among 368 participating companies in our first submission.		
2. Attracting, Cultivating, and Retaining Talent CAL spares no expenses in employee training and development and invested approximately TWD 433 million in employee training in 2024.					
3. Labor Relations and Communication CAL enforces anti-discrimination policies and provides communication channels and grievance procedures, with public disclosure of handling statistics. In 2024, six peaceful labor-management meetings were held at headquarters.					
4. Privacy Management Employee Training In 2024, 22,835 participants attended training sessions to reinforce the importance of personal data protection and proper conduct.					



Customers

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

Material Issues		Corresponding Chapter Section	Key Points of Communication		Communication Channels and Frequency
G Governance and Business Integrity		2.1 Trust	1. Customer Relations Management	3. Providing an information integration platform for flight changes during the pandemic	! Customer satisfaction survey
		2.3 Environment			! CAL's website, CSR website, Facebook / Instagram, e-mail, text messages, and In-flight entertainment
G Customer Satisfaction			2. Protecting customers' rights and interests: privacy, food safety, and in-flight drinking water quality	4. Increase of green consumption awareness	1.v Global business meetings
G Information Security				5. Demand increase on green transport	2.v Taiwan business meetings
S Flight Safety Management					N Discussions with travel agencies
S Privacy Management					! Customer-service hotline
					N Corporate customer visits
Communication Results			Highlights of Communication Results		
1. Overall Passenger Net Promoter Score (NPS): 72.5% 2. Cargo satisfaction rate 89.8 3. Maintenance Division satisfaction rate was 9.0 (score out of 10) 4. Sustainable-themed Boarding Videos: A Selection of 12 Films 5. The official website of China Airlines states in its "Privacy Protection Policy" that personal data is collected, processed, and utilized in a reasonable and secure manner for authorized purposes.			- CAL's website focuses on optimizing website functions, reservations and ticketing services, streamlining website architecture, and enhancing system functions. This allows passengers to complete all necessary services for their journey through the website in a one-stop manner, providing passengers with a better digital platform usage experience. - CAL promoted and broadcasted a boarding video under the idea of "Beauty of Taiwan, Sustainable China Airlines, We are all here." Inviting passengers to embark on CAL's flights together, the video showcases the beauty of Taiwan from high above and proclaims to the world that environmental conservation is our responsibility.		

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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

Material Issues		Corresponding Chapter Section	Key Points of Communication	Communication Channels and Frequency	
Financial Performance	Attracting, Cultivating, and Retaining Diverse Talent	3.1 Governance Framework	1. Operational results	Shareholders' meeting	Road shows
Customer Satisfaction		2.1 Trust	2. Flight safety and passenger transport	Shareholders hotline / mailbox	Interviews
Flight Safety Management	Privacy Management	2.3 Environment	3. Risk management model		
Communication Results		Highlights of Communication Results			
1. Continue to announce and respond with operation-related results according to laws, regulations, and investors' demand		▪ The shareholders' meeting was held on May 30, 2024. During the meeting, shareholders raised questions regarding the company's flight safety management and employee hiring. All inquiries were addressed and answered by the chairman or designated personnel. For details, please refer to the minutes of the 2024 annual shareholders' meeting.			
2. To identify the related risks in processing of personal data, CAL stipulates standard operation procedures for the classification of personal data files and implements regular review as the basis for planning the risk management mechanisms.		▪ In 2024, we were invited to attend institutional investor conferences held by brokerage firms on June 6 and November 21. During these meetings, we presented an overview of our company's overall operations, business plans, and outlook to the institutional investors. Please refer to the presentations from the first and second institutional investor conferences of 2024 for details.			
		▪ The company has demonstrated stable operational performance post-pandemic. Given the continued strong demand for passenger services and the growth in the air cargo market driven by global e-commerce and electronic product demand, it is expected to sustain overall operational cash flow and enhance the company's profitability. In October 2024, Taiwan Ratings Corp. announced an upgrade of CAL's long-term credit rating to "twA-" and maintained the short-term credit rating at "twA-2," with a "stable" outlook.			
		▪ Integrate the TCFD and TNFD frameworks to disclose natural and climate change management information in the sustainability report, and independently publish the TCFD report for four consecutive years.			



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 exerts influence on CAL's operations

Material Issues		Corresponding Chapter Section	Key Points of Communication	Communication Channels and Frequency	
Governance and Business Integrity	Flight Safety Management	3.1 Governance Framework	1. Communication and implementation of relevant laws and regulations	Missives	Organization of or participation in business seminars and audits
Information Security	Labor Relations and Communication	2.1 Trust	2. Sharing of important industry information	Visits	
		2.3 Environment	3. Supporting campaigns for business development, establishment, and research activities in civil aviation	Participation in projects	Participation in initiatives
				Participation in public hearings, seminars, and negotiation forums	Audits
Communication Results		Highlights of Communication Results			
1. Selected as one of the top 21% - 35% excellent companies in the 10th Corporate Governance Evaluation for listed companies.		▪ At the 2024 International Aviation Safety Management Summit hosted by the Civil Aviation Administration, CAL invited Japan Airlines to share insights on the JL516 Haneda runway collision, focusing on cabin crew response and emergency evacuation. The event gathered representatives from the Flight Safety Foundation, Airbus, Boeing, and major airlines to reinforce collective aviation safety efforts.			
2. Selected for the Taiwan High Compensation 100 Index and the Taiwan Employment Creation 99 Index.		▪ CAL held the "Geopolitical Risk's Impact on Aviation Security Seminar" to strengthen aviation security personnel's risk awareness and response to emerging threats. Held at the Civil Aviation Administration, the seminar drew 120 attendees from government agencies, the military, airlines, and related sectors.			
3. Engaged in seminars to exchange insights and enhance flight safety.		▪ Participated in five sessions of the CAA-led Global Market-Based Mechanism (GMBM) working group and SAF-related discussions.			
		▪ Participated in the Ministry of Environment's Net Zero Workshop and the Taiwan-France Aerospace Industry Cooperation Conference.			
		▪ Invited to attend the ROC Civil Aviation Society's seminar to share on environmental topics.			
4. Launched GHG inventory and verification guidance for subsidiaries under consolidated financial statements.		▪ In response to the Ministry of the Interior's National Park Service's Forum on Promoting the Construction of the Formosa Sustainable Axis.			

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Partners (Suppliers and Contractors)

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

Material Issues		Corresponding Chapter Section		Key Points of Communication	Communication Channels and Frequency	
G Governance and Business Integrity	G Customer Satisfaction	2.1 Trust	2.3 Environment	Sustainable Supply Chain Management	N TEL	N Business visits
	S Fleet Development and Innovation	2.2 Cooperation			N e-mail	1 Site inspections
	S Flight Safety Management				N Coordination meetings	
Communication Results		Highlights of Communication Results				
1. 100% of critical tier-1 suppliers signed the Supplier Code of Conduct. 2. Green procurement in 2024 increased by 71% compared to 2023. 3. Convened the group sustainable governance and environmental management communication meeting in 2024.		▪ In November 2024, CAL held a supplier conference with 28 suppliers and 42 participants, focusing on global sustainability trends, carbon reduction, biodiversity, and circular economy. The event covered CAL's sustainable practices and the use of SAF, with bilingual materials shared with domestic and overseas tier-1 suppliers.				
		▪ CAL also joined IATA communication meetings to exchange insights on the international carbon market and SAF developments.				
		2024 Convene Annual Supplier Conference				



Society

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.

Material Issues		Corresponding Chapter Section		Key Points of Communication	Communication Channels and Frequency	
G Governance and Business Integrity	E Green Services and Sustainable Catering	2.1 Trust	2.4 Human Resources	1. Support for social development 2. Assumption of social responsibility 3. Create a sustainable society	N Charity events	M News releases
	S Customer Satisfaction	2.3 Environment	2.5 Society		N Community activities	D Online mailbox
G Information Security	S Flight Safety Management					
	S Privacy Management					
Communication Results		Highlights of Communication Results				
1. In 2024, CAL's charitable and public welfare efforts benefited a total of 4,853,610 people. 2. CAL regards environmental protection as a key business operation. There were no major environmental pollutions in 2024. We also actively promote energy conservation and carbon emissions reduction to fulfill environmental protection ideals and policies.		As a global citizen, CAL actively fulfills its social responsibility. In 2024, the airline supported international humanitarian efforts, including transporting relief supplies for the Japan earthquake, and backing medical missions and charity programs like the "2nd Love Without Borders" and the "31st Formosa Budding Hope Association." CAL also advanced ESG practices through tree planting, beach cleanups, and wildlife conservation advocacy. The company aims to create a positive cycle between community development and business operations. Additionally, CAL continued sponsoring Taiwan's tourism, culture, and sports, and held four charity sports camps to inspire children to pursue their dreams.				



Media

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

Material Issues	Corresponding Chapter Section		Key Points of Communication	Communication Channels and Frequency	
S Flight Safety Management	2.1 Trust	2.4 Human Resources	Collection of issues of stakeholders' concern and promotion of transparent communication.	N News releases	N Interviews
	2.3 Environment			N Press Conference	N Active communication of industry information
S Occupational Safety and Health					
Communication Results	Highlights of Communication Results				
Released 124 announcements (including press releases, statements, revenue reports, and news) in 2024.	China Airlines is dedicated to ESG development and actively discloses its sustainability efforts. In 2024, this included support for the underprivileged, employee beach cleanups, charity sports camps, reforestation, the SkyTeam The Aviation Challenge (TAC), and the airline's first marathon event—each paired with media outreach to enhance its sustainability image. To meet rising travel demand, CAL announced new routes, promotions, and fleet plans, including A350 cabin retrofits and 24 new aircraft orders. The airline also continues to improve cabin service, offering passengers diverse, high-quality travel experiences.				

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Associations (including Aviation Organizations)			
Material Issues	Corresponding Chapter Section	Key Points of Communication	Communication Channels and Frequency
Sustainable Supply Chain Management Information Security Flight Safety Management Occupational Safety and Health Privacy Management	2.1 Trust 2.3 Environment	1. Collection of trends at home and abroad and promotion of business operations 2. Coordination of business relationships and promotion of mutual benefits 3. Improvement of flight safety through discussions on safety issues, information exchange, and sharing security management experience	M N R Participation in project meetings Participation in work seminars Organizing or participating in summits, executive summits, committees, and coordination meetings R N Participation in government convened meetings Telephone, e-mail, and exchange platforms
Communication Results	Highlights of Communication Results		
In 2024, we participated in over 48 meetings held by TAA, ICAO, IATA, SkyTeam, AAPA, and other organizations, engaging in discussions on environmental sustainability management, strategies, and actions to build consensus and explore solutions.	1. China Airlines supported SkyTeam's sustainability efforts and won the "Best Forward-looking Strategy Award" in the Aviation Challenge (TAC). 2. CAL regularly attends monthly IATA environmental policy meetings and AAPA Environmental Working Group sessions, participating in 25+ discussions on SAF, sustainable cabins, carbon footprint, and illegal wildlife transport. 3. Actively engaged in 10+ sustainability exchanges with SkyTeam, including Aviation Challenge pre-meetings and SDG consultations, to enhance sustainability management. 4. Participates in IATA's CO2 Connect program to track carbon footprint tools and share data for global airline sustainability. 5. Aligns with SkyTeam's UN SDGs, providing recommendations in Executive Board and Sustainability Advisory Group meetings.		

1.4.2 Initiatives and Organization

GRI 2-28

To maintain political neutrality and avoid corruption risks, China Airlines (CAL) has never engaged in lobbying or made political contributions. Instead, CAL focuses on participating in international aviation and nonprofit organizations that influence public policy, aiming to promote industry exchange, development, and sustainability.

In 2024, CAL invested approximately NT\$50.33 million in organizational initiatives—NT\$47.79 million (94.95%) in aviation industry operations and development, and NT\$2.54 million (5.05%) in corporate sustainability, environmental, and related professional fields. Detailed participation expenses are disclosed in the ESG data and Appendix—Organizational Initiative Policy Donations and Other Expenditures.

Memberships

Airline Development
International Air Transport Association (IATA) Sustainability & Environment Advisory Council (SEAC), CSR Work Group, Carbon Offsetting and Reduction Scheme for International Aviation Work Group (CORSIA), Air Freight Carbon Footprint Work Group. CAL's 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. It was also involved in environmental discussions relevant to international civil aviation, and supports research and studies of related environmental subjects.



Contribution and Benefit in 2024

- CAL assisted IATA's Executive Committee in formulating and implementing global aviation environmental and sustainability strategies to align with the Paris Agreement carbon reduction targets.
- As a member of the Sustainability and Environment Advisory Committee, CAL monitored international trends in sustainable aviation fuel and cabin waste, offering timely input to support Taiwan's policymaking.
- In 2024, CAL joined the IATA Carbon Footprint Data Sharing Program, contributing to industry sustainability through data sharing and practical exchange.
- CAL participated in the IATA 25by2025 initiative to monitor industry workforce diversity and promote gender equality.

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Airline Development



Association of Asia Pacific Airlines (AAPA)

Founding Member

CAL's Role and Participation

CAL is a founding member of AAPA, exerting every effort to facilitate the cohesion of operators in the Asia-Pacific region and dedicating ourselves to advocating for the development of aviation industry players in the Asia-Pacific region. CAL also served as the chair of the 35th Environmental Working Group (EWG) meeting.

Contribution and Benefit in 2024

- In 2024, AAPA focused on environmental issues, facilitating information exchange among member airlines through meetings and sharing carbon reduction practices.
- In support of the Paris Agreement and AAPA's goal of 5% SAF usage by 2030, CAL urged regional governments, fuel producers, and industry stakeholders to collaborate in strengthening the SAF supply chain and reducing aviation carbon emissions.

Airline Development



Taipei Airlines Association (Taipei Airlines Association, TAA)

Director

CAL's Role and Participation

TAA was established in March 1990, with CAL as a founding member airline. Serving in an advisory and coordinating role, CAL acts as a communication bridge between the government and the industry, participating in the annual Member Representative Assembly and board meetings to implement government directives and advocate for industry interests.

Contribution and Benefit in 2024

- To combat human trafficking, CAL coordinates with central agencies to provide staff training and reminds foreign travelers at departure counters to provide contact information for emergency support.
- In response to rising bird strike risks due to climate change, CAL supported TAA in submitting recommendations to the Civil Aeronautics Administration and Taoyuan Airport Corporation to improve flight safety at domestic airports.

Airline Development



SkyTeam

Alliance Board and Executive Board Member

CAL's Role and Participation

CAL became the fifteenth member of SkyTeam on September 28, 2011, and was the first airline in Taiwan that joined SkyTeam. To optimize services and markets in the aviation industry, CAL attends working meetings at all levels, as well as annual meetings held by the Executive Board and the Alliance Board on a regular basis.

Contribution and Benefit in 2024

- SkyTeam supports CAL in expanding its global network and strengthening cooperation with member airlines to connect Taiwan with major destinations.
- CAL joined the SkyTeam RISE Female Leadership Program to foster the development of female executives.
- CAL participated in the SkyTeam 2024 The Aviation Challenge (TAC) to enhance international visibility.
- CAL also actively took part in alliance SDG meetings to build consensus on feasible environmental sustainability strategies, ensuring alignment with the goals of the Paris Agreement.

Airline Development



Flight Safety Foundation-Taiwan (FSFT)

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

CAL's 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.

Contribution and Benefit in 2024

- CAL leads efforts to collect and study international regulations, promote education, and propose amendments or strategies to improve national legislation and industry competitiveness.
- CAL also drafts proposals and lobbying documents to urge the government to align with global carbon reduction targets and develop sustainable fuel strategies.

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Association of Atmosphere Protection in Taiwan (AAPT)

Executive Director

CAL's 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.

Contribution and Benefit in 2024

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 and climate in Taiwan.

Corporate Sustainability



Taiwan Center for Corporate Sustainability(TCCS)

Advisory Director

CAL's Role and Participation

CAL served as an advisory director of the Center for Corporate Sustainability, regularly sharing its sustainability practices as a lecturer during themed meetings. CAL also participated in training courses and seminars on sustainable competitiveness and reporting to stay updated on industry trends.

Contribution and Benefit in 2024

- As a member and advisory director, CAL gained insights into the latest sustainability laws, regulations, and standards while using the platform to advocate for the industry's interests.
- On April 25, 2024, CAL co-hosted the 36th Board Meeting of the Taiwan Institute for Sustainable Energy, delivered a speech on ESG practices, and facilitated ESG discussions alongside a visit to its flight simulator and museum to support the sustainable growth of Taiwan's aviation sector.

External Advocacy and Evaluation Support

2017-2024	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 79 other airlines to stamp out the transport of illegal wildlife in conformity with the UN's SDGs.  Signing the Initiative to Ban Illegal Wildlife Trafficking
2016-2024	Dow Jones Sustainability Indices (DJSI) China Airlines supports the DJSI in promoting global sustainable development information disclosure. Since 2015, it has proactively completed the DJSI questionnaire, disclosing management objectives, strategies, and practices in the environmental, social, and economic/governance dimensions. In 2024, our CSA results ranked us second highest in the global airline industry and received the Top 5% honor in the airline industry in the 2025 Sustainability Yearbook.
2012-2024	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) Package-1 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. To strengthen greenhouse gas monitoring operations and collect more data on the types of high-altitude air and changes for global atmospheric and greenhouse gas research, CAL commenced collaboration with National Central University, In-service Aircraft for a Global Observing System (IAGOS) of the EU, and Japan Aerospace Exploration Agency (JAXA) to install Package-2, the add-on components for Package-1 in 2023. It will monitor changes in the concentration of NOx, CO₂, and CH₄. CAL became the second airline company in the world and the first airline company in Asia to be fitted with laser sensors for precision detection of CO₂ and CH₄. The project also promoted collaboration in scientific research between Taiwan, Japan, and the EU. By the end of December 2024, CAL assisted in collecting high-altitude atmospheric data from a total of 20,977 flights.
2012-2024	Carbon Disclosure Project (CDP) CAL supports CDP in promoting the global environmental disclosure system to enhance the management of issues related to carbon, water, and forests worldwide. CAL is Taiwan's first service provider to independently review greenhouse gas emissions generated from its operations and 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, management of risks and opportunities,

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indicators and targets, greenhouse gas emissions, and reduction management and performance. After receiving a Leadership-level A- rating for five straight years, CAL was named to the CDP SER A-List in 2024 for its active efforts in climate action and supply/value chain management. CAL will continue to review and improve carbon management strategies through participation in the CDP.

2022~2024

Science-Based Targets Initiative (SBTi)

China Airlines actively responded to international carbon reduction initiatives by being the first to sign the Science Based Targets initiative (SBTi) in 2022. CAL continuously refines its carbon reduction targets according to the guidelines. In June 2024, China Airlines became the first transportation service provider in Taiwan to officially pass the SBTi organizational review. It was also recognized for aligning with the science-based pathway of limiting global average temperature rise to 1.5°C, as outlined in the United Nations Framework Convention on Climate Change - Paris Agreement. This demonstrates that China Airlines' carbon reduction goals are in line with international sustainability trends, establishing it as a leader in the domestic industry.

2008~2024

Earth Hour

CAL has supported the event since 2008 by working with the Group's partners, providing support through concrete actions, and urging the public to take notice of the impact of global warming and climate change through media outlets.

2018~2024

Task Force on Climate-related Financial Disclosures (TCFD)



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, we assisted in completing the translation of the TCFD guidelines into Traditional Chinese and participated in several industry government academia promotional activities. Since 2021, we have annually published an independent Task Force on Climate-Related Financial Disclosures report showcasing the results of internal management through press releases and social media channels. In 2024, we further followed the Task Force on Nature-Related Financial Disclosures (TNFD) to integrate the TCFD operational mechanism, enhancing the management of nature and climate issues. Additionally, CAL implemented an internal carbon pricing mechanism, initially using the operational costs of international carbon regulations, SAF, and renewable energy as decision-making references for company operations and carbon reduction initiatives. CAL continues to establish a climate governance framework through the Sustainability Committee, Environmental Committee, and TCFD platform. The execution results are reported annually to the Board of Directors for supervision and management, ensuring continuous progress along the carbon reduction pathway.

Assessment of Climate-Related Lobbying Activities and Industry Association Participation

CAL actively engages in public affairs in accordance with internal procedures, including the "Procedures for Joining Domestic and International Tourism Organizations" formulated by the Social Task Force under the Corporate Sustainability Committee's Corporate Communication Office, and the "[Participation of China Airlines in International Initiatives and Organizational Operations](#)" issued by the Sustainable Development Center under the Corporate Development Office's Corporate Governance Task Force. These guidelines help evaluate whether participation supports ESG promotion, corporate strategies, and operational goals. To fulfill its corporate social responsibility and support industry development, CAL actively participates in climate-related forums and industry associations in Taiwan, promotes SAF policy and the 2025 pilot program, engages in public dialogue, and provides SAF-related recommendations to international organizations and the Taiwan government. An annual review mechanism ensures alignment between association involvement and company objectives. In line with the Paris Agreement, CAL also expects participating associations to support climate goals. In 2024, CAL continued evaluating its participation in climate-related direct lobbying and external organizations, including IATA, AAPA, SkyTeam, TAA, FSFT, AAPT, and TCCS, to ensure consistency with global carbon reduction and sustainability commitments. CAL will continue to work with relevant organizations to help limit global warming to well below 2°C.

1. Public Affairs Participation Management Mechanism/Audit Organization

- ① CAL evaluates public affairs participation based on the "Procedures for Joining in Domestic and International Tourism Organizations" (by the Public Affairs Department under the Corporate Communication Office of the Social Task Force) and the "Participation of China Airlines in International Initiatives and Organizational Operations" (by the Sustainable Development Center of the Corporate Development Office of the Corporate Governance Task Force). Proposals are submitted to the Corporate Sustainability Committee, chaired by the President, for approval.
- ② The Environmental Task Force under the Corporate Sustainability Committee, specifically the Corporate Environmental Committee, conducts semi-annual reviews and pre-assessments of climate-related lobbying activities according to the corporate environmental management system and TCFD framework. These reviews determine whether participating associations have clear climate policies aligned with the Paris Agreement.
- ③ The results of these reviews will be reported annually to the Corporate Environmental Committee and the Corporate Sustainability Committee (both chaired by the President) to regularly assess and supervise participation in climate-related lobbying activities and public associations.

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2. Management Scope of Climate-Related Public Associations

CAL complies with the Paris Agreement and expects the industry associations it participates in to do the same. China Airlines is involved in various initiatives and organizations related to the development of the aviation industry both domestically and internationally, corporate sustainability, environmental issues, and other professional fields. The external organizations it participates in, including IATA, AAPA, SkyTeam, TAA, FSFT, AAPT, and TCCS, are all included in the management scope of climate-related associations.

3. Evaluate Whether the Associations Participated in Comply with the Paris Agreement

Evaluation includes the climate change policy positions disclosed by public associations, relevant declarations and principles, adopted countermeasures, the implementation of action plans, and performance.

- ① The association publicly supports climate change policies that align with the Paris Agreement's climate change goals.
- ② The public declarations and principles related to climate change disclosed by the association set a 2050 net-zero carbon emission target to comply with the Paris Agreement climate change goals, and climate change countermeasures are effectively implemented in daily operations.
- ③ Verify whether the public association has effectively implemented climate change action measures in its daily operations.

4. Response Measures for Association's Failure to Comply with Paris Agreement Targets

- ① For associations that have not complied with the climate change targets of the Paris Agreement, improvement recommendations will be proposed, and compliance with the Paris Agreement climate change targets will be facilitated through communication and coordination.
- ② If there is no improvement before the next evaluation, CAL will take appropriate measures, such as withdrawing from the association.

In 2024, CAL participated in industry associations related to aviation industry development and corporate sustainability. The climate-related associations adhered to the annual assessments and analysis results of the Paris Agreement as follows:

Organization Name	Analysis Results			Compliance Status (Are the objectives aligned?)
	Publicly supports the Paris Agreement	Unpublicized support for the Paris Agreement but declared alignment with the 2050 net-zero carbon emissions target	No actions supporting the Paris Agreement were found	
International Air Transport Association (IATA)	✓			✓
Association of Asia Pacific Airlines (AAPA)		✓		✓
SkyTeam	✓			✓
Taipei Airlines Association (TAA)		✓		✓
Flight Safety Foundation-Taiwan (FSFT)		✓		✓
Association of Atmosphere Protection in Taiwan (AAPT)	✓			✓
Taiwan Center for Corporate Sustainability (TCCS)	✓			✓

1.4.3 Materiality Analysis

GRI 3-1.3-2.3-3



Corporate Sustainability Website

CAL identified eight stakeholders in accordance with the five major principles defined in the AA1000 Stakeholder Engagement Standard (SES), and followed the Reporting principles of GRI Standards (accuracy, balance, clarity, comparability, completeness, sustainability context, timeliness and verifiability) to establish a materiality analysis process and evaluate the significance of material issues every year in terms of their impact on the economy, environment, human rights and other social challenges. They are used as the basis for planning the sustainable development strategies to identify material issues of stakeholders' primary concern. Different channels of communication are also established to respond to stakeholders' needs and expectations.

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Step 1 Analyze Sustainability Context

1. We analyzed CAL's core operations, value chain relationships, and the risks and challenges faced by the industry across legal, economic, environmental, and human rights aspects, and identified key stakeholders for sustainability issues.
2. Refer to sustainability ratings and standards relevant to the airline industry when identifying material issues.
3. Understand CAL's potential impacts on the economy, environment, and people across the value chain.

Step 2 Identify Actual and Potential Impact

1. CAL analyzed the organization and consulted experts to identify 17 sustainability issues related to CAL (divided into 34 sustainability topics with positive/negative impact).
2. The members of the task forces of CAL's Corporate Sustainability Committee and unit managers discuss the opinions and feedback of eight major stakeholders and identified the level of impact of CAL on the economy, environment, people, and company operations in each sustainability issue.
3. They also identified business relationships with negative/positive impact and actual and potential impact to effectively manage the impact of material issues.

Step 3 Evaluate the Significance of Impact

1. After identifying sustainability issues, CAL conducted internal materiality assessments and surveys. Externally, a sustainability issues survey was conducted with eight key stakeholder groups in early 2025 to integrate internal and external perspectives and assess the impact of these issues on the economy, environment, people (including human rights), and company operations.
2. Based on actual and potential, positive and negative impacts, different assessment methods were applied accordingly. Following the double materiality principle, each topic's impact on CAL's operations was evaluated, combined with the level of stakeholder concern across eight groups to score, analyze, and categorize issues as material, secondary, or ongoing attention.

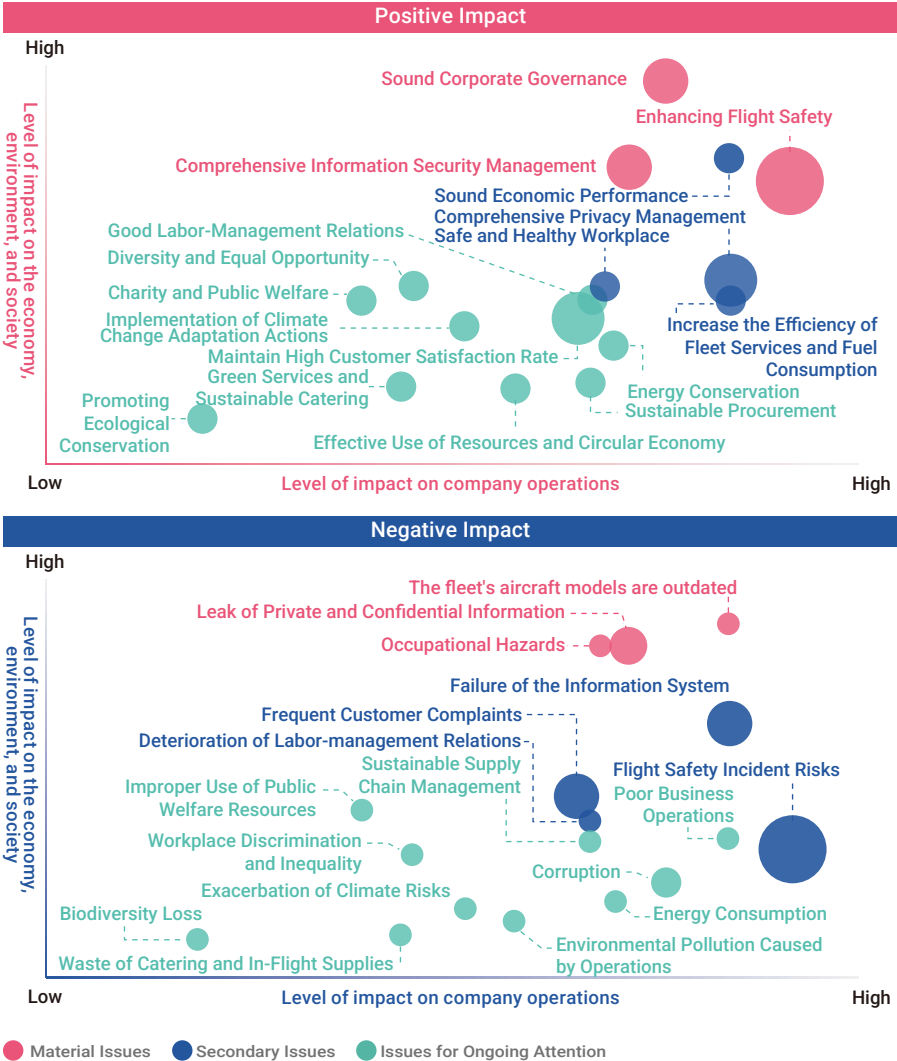
Negative impact : Evaluate impact based on the severity and probability of occurrence and consider the negative impact of human rights violations.

Positive impact : Evaluate impact based on the scale and scope of the impact and the probability of occurrence.

Step 4 Set Priorities for the most Significant Impact

1. Through surveys conducted by Corporate Sustainability Committee Task Forces, managers, and stakeholders, CAL gathered 454 valid responses to assess the impact of sustainability issues.
2. These were benchmarked against aviation industry standards. Following expert discussions, three material positive and negative topics were identified and included in the 2024 Materiality Analysis Matrix.
3. Final decisions were made by the Corporate Sustainability Committee and submitted to the Board of Directors for review. Management policies are detailed in this report, with stakeholder responses disclosed on CAL's sustainability website.

2024 Materiality Analysis Matrix



Note:Based on the GRI Material Topics 2021 Reporting Principles, CAL has identified and ranked material topics through stakeholder perspectives and a double materiality assessment across three dimensions. X-axis:The impact on company operations (encompassing both negative impacts and positive influences), Y-axis:The impact on the economy, environment, and society, and Z-axis: the size of the circle indicates the level of concern from eight key stakeholders. CAL has categorized the topics based on impact assessment into 3 major positive impact topics, 4 secondary topics, and 10 topics for ongoing attention; 3 major negative impact topics, 4 secondary topics, and 10 topics for ongoing attention, totaling 34 sustainability topics. Major topics are highlighted in red in the Major Impact Analysis Matrix.

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Importance of and Changes in Material Topics for 2024

Economy	No.	Sustainability Issues for 2024	Issues of Concern to Human Rights at CAL	Positive / Negative Impact of Sustainability Issues	Significance of Impact	Issue Classification	Correspondence Regarding Changes in Material Topics in 2023
	1	Governance and Business Integrity	v	⊕ Sound Corporate Governance	A robust governance framework and strong ethics are key to sustainability. We aim to enhance governance, uphold ethical practices, protect our reputation, and earn the trust of investors and customers	●	≈
			v	⊖ Corruption (Note 1)	Corruption and unethical business practices or advertising may result in loss of assets or damage to the Company's reputation or affect upstream and downstream suppliers or shareholders' equity	●	↘
	2	Financial Performance		⊕ Sound Economic Performance (Note 2)	The purpose of companies is to continuously improve business performance, increase profitability, and support capital market operations to contribute to the local, national, and global economies	●	↘
				⊖ Poor Business Operations (Note 3)	Poor business operations will affect the Company's smooth operations and even cause losses to investors	●	↘
	3	Fleet Development and Innovation		⊕ Increase the Efficiency of Fleet Services and Fuel Consumption	We can help reduce greenhouse gas emissions by launching new aircrafts and new services, improving fleet efficiency, and retiring older aircrafts that consume large quantities of energy	●	≈
				⊖ The fleet's aircraft models are outdated.[*](Note 4)	The inability to provide innovative services with new aircraft models would reduce CAL's competitiveness, subsequently affecting revenue performance. This may also impact flight safety and hinder the achievement of greenhouse gas reduction targets	●	☆
	4	Customer Satisfaction		⊕ Maintain High Customer Satisfaction Rate	Use comprehensive customer relationship management to optimize and improve the customer experience and increase customer retention and loyalty	●	≈
				⊖ Frequent Customer Complaints [*]	Failure to meet customer expectations has led to complaints and even consumer disputes, negatively impacting CAL's corporate image and subsequently affecting revenue performance	●	☆
	5	Sustainable Supply Chain Management	v	⊕ Sustainable Procurement	Through fair and equitable selection, we consider quality, delivery time, local sourcing, and suppliers' ESG performance to drive positive impact across the value chain	●	≈
			v	⊖ Sustainable Supply Chain Management	CAL selects suppliers with care to avoid environmental harm and human rights issues such as pollution, child labor, forced labor, workplace accidents, and poor labor relations	●	≈
	6	Information Security		⊕ Comprehensive Information Security Management [*]	Implement robust information security management to comply with regulations, prevent penalties, and protect trade secrets, safeguarding the company's and shareholders' interests	●	☆
				⊖ Failure of the Information System	An insufficient information security system can lead to system crashes or cyber attacks, causing data breaches and disrupting business operations	●	≈

[*] The symbol indicates that this impact aspect is a new positive/negative impact subdivision for 2024.

⊕ Positive ⊖ Negative ● Material Issues ● Secondary Issues ● Issues for Ongoing Attention ↗ Increasing ↘ Declining ≈ Maintaining ☆ Newly Added

- Note 1. CAL has long been committed to integrity in governance, establishing a comprehensive internal control system. In recent years, there have been no major corruption incidents, and the assessed likelihood of impact on external economic and social aspects has gradually decreased. Therefore, this year, the focus has shifted to ongoing attention.
- Note 2. In recent years, CAL has operated steadily, with revenue repeatedly achieving excellent results. The overall financial performance is good and tends to be stable. The level of attention from the eight major stakeholders has slightly decreased, thus this year it has shifted to a secondary issue.

- Note 3. Considering CAL's overall financial performance in recent years has been good and stable, and there have been no significant financial or social impacts due to poor operations, the level of concern from the eight major stakeholders has slightly decreased. Therefore, this year, the focus has shifted to ongoing attention.
- Note 4. This impact is a newly added negative impact under the "Fleet Development and Innovation" topic for this year. The CAL Sustainability Committee's various groups generally believe that the issue of outdated fleet models may have significant negative effects on the environment and society (such as high carbon emissions or flight safety issues), and therefore it is classified as a material issue.

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Environment	No	Sustainability Issues for 2024	Issues of Concern to Human Rights at CAL	Positive / Negative Impact of Sustainability Issues	Significance of Impact	Sustain-ability Issue Classification	Correspondence Regarding Changes in Material Topics in 2023
	7	Climate Change Mitigation and Adaptation		⊕ Implementation of Climate Change Adaptation Actions[*]	CAL has identified climate change-related risks within the company and proposed specific adaptation measures to successfully mitigate the impacts of climate risks	●	☆
				⊖ Exacerbation of Climate Risks (Note 5)	Failure to control greenhouse gas emissions worsens climate change and heightens climate risks, threatening the business environment of the aviation industry	●	↘
	8	Energy Management		⊕ Energy Conservation (Note 6)	The aviation industry consumes significant fuel and electricity. Effective energy management enables usage monitoring and conservation, helping reduce overall energy use, costs, and financial risks	●	☆
				⊖ Energy Consumption [*]	Without proactive energy transition planning for flight and ground operations, energy use will continue to rise, hindering net-zero goals, weakening sustainability and competitiveness, and further harming the environment	●	☆
	9	Environmental protection benefits and resource management		⊕ Effective Use of Resources and Circular Economy	If a lifecycle model is adopted to effectively manage water and waste resources, it would help reduce environmental risks and increase the benefits for the ecology in the Company's operations	●	↘
				⊖ Environmental Pollution Caused by Operations	Enterprises must manage environmental indicators like sewage, waste (general, hazardous, food), packaging, chemicals, toxins, noise, and air pollutants (nitrogen and sulfur oxides) to reduce risks and prevent pollution of the environment and nearby communities	●	↘
	10	Green Services and Sustainable Catering	v	⊕ Green Services and Sustainable Catering	Promote green consumption and local procurement, use innovative solutions in service processes and operations to reduce product and food waste and disposal costs, and continuously improve the environmental friendliness of services	●	↘
			v	⊖ Waste of Catering and In-Flight Supplies [*]	Failing to promote green consumption and recycling leads to unnecessary waste of in-flight catering and supplies, causing higher handling costs and increased waste generation	●	☆
	11	Biodiversity		⊕ Promoting Ecological Conservation [*]	CAL accurately assesses its operational impact on the environment and actively participates in ecological conservation to strengthen sustainability and enhance its corporate image	●	☆
				⊖ Biodiversity Loss	If company operations harm biodiversity—through resource overuse or misuse—without proper management, they can negatively affect natural ecosystems	●	≈

[*] The symbol indicates that this impact aspect is a new positive/negative impact subdivision for 2024.

⊕ Positive ⊖ Negative ● Material Issues ● Secondary Issues ● Issues for Ongoing Attention ↗ Increasing ↘ Declining ≈ Maintaining ☆ Newly Added

Note 5. Despite the ongoing global climate risks, CAL has gradually established a comprehensive climate risk management mechanism in recent years. In the short term, these risks have not caused significant impacts on the company's operations. We will continue to pursue and refine various climate goals. Therefore, this year, the focus has shifted to ongoing attention.

Note 6. In recent years, CAL has consistently implemented various energy-saving and electricity-saving measures, achieving stable results with minimal economic, environmental, and social impact. Moving forward, we will continue to execute and refine these efforts towards its goals. Therefore, this year, the focus has shifted to ongoing attention.

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People	No	Sustainability Issues for 2024	Issues of Concern to Human Rights at CAL	Positive / Negative Impact of Sustainability Issues	Significance of Impact	Sustain-ability Issue Classification	Correspondence Regarding Changes in Material Topics in 2023
	12	Flight Safety Management	v	⊕ Enhancing Flight Safety [*] (Note 7)	With the aspiration to become one of the safest airlines, CAL continuously conducts safety assessments and personnel training to ensure the flight safety of our customers and crew	●	☆
			v	⊖ Flight Safety Incident Risks	The aviation industry's highest goal is zero flight safety accidents, as any serious incident can cause significant loss of life, property, and customer trust	●	≈
	13	Attracting, Cultivating, and Retaining Diverse Talent	v	⊕ Diversity and Equal Opportunity	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	●	≈
			v	⊖ Workplace Discrimination and Inequality	Create an equal, diverse, and inclusive workplace environment, including equal pay for men and women, and a friendly work environment for minorities or disadvantaged groups	●	≈
	14	Labor Relations and Communication	v	⊕ Good Labor-Management Relations [*]	CAL has an effective labor-management communication mechanism that enhances interaction, reduces conflicts, and strengthens employee trust and identification with the company	●	☆
			v	⊖ Deterioration of Labor-management Relations	Without effective communication to understand employee feedback, maintaining harmonious labor relations and a secure work environment becomes difficult.	●	≈
	15	Occupational Safety and Health	v	⊕ Safe and Healthy Workplace [*]	Creating a healthy work environment, CAL continues to promote employee health programs to assist employees in managing their health, ensuring their physical and mental well-being	●	☆
			v	⊖ Occupational Hazards (Note 8)	Due to poor workplace environments and labor conditions, occurrences of occupational accidents or hazards to employee health may arise, potentially affecting service quality over time	●	↗
	16	Privacy Management	v	⊕ Comprehensive Privacy Management [*] (Note 9)	CAL has a comprehensive personal data management system to prevent data leaks and misuse, helping avoid penalties and build customer trust	●	☆
v			⊖ Leak of Private and Confidential Information (Note 10)	If the Company fails to protect personal information of employees and customers, it may face data breaches and privacy violations, leading to regulatory fines, reputational harm, and significant financial impacts	●	↗	
17	Social Feedback and Engagement		⊕ Charity and Public Welfare	CAL uses its professional capabilities and devote themselves to social welfare and social responsibility to win the support of the society	●	↘	
			⊖ Improper Use of Public Welfare Resources [*]	Lacking a comprehensive selection mechanism for charities has led to funding inappropriate or poorly viewed organizations, harming our corporate social responsibility image	●	☆	

[*] The symbol indicates that this impact aspect is a new positive/negative impact subdivision for 2024.

⊕ Positive ⊖ Negative ● Material Issues ● Secondary Issues ● Issues for Ongoing Attention ↗ Increasing ↘ Declining ≈ Maintaining ☆ Newly Added

Note 7. This impact is a positive addition to this year's "Flight Safety Management" issues. After analysis, the CAL Sustainability Committee's Task Force leaders generally believe that enhancing flight safety has a significant impact on company operations. Additionally, it is of high concern to the eight major stakeholders, and thus it is classified as a material issue.

Note 8. Considering the workplace safety incident that occurred at CAL in early 2024, we have actively responded by conducting hazard identification assessments and implementing improvements. Additionally, we have strengthened our occupational safety management system and prevention mechanisms to ensure workplace safety. Therefore, this issue has been elevated to a material issue.

Note 9. This impact is a positive addition to this year's "Privacy Management" issues. Personal data protection has become an increasingly important topic in the international community. CAL's Sustainability Committee Task Force also believe that comprehensive privacy management reduces the risk of infringing on the personal data rights of customers and employees, and therefore, it is classified as a material issue.

Note 10. As the international community increasingly emphasizes the importance of personal data protection, any incidents of privacy breaches will have significant economic and social impacts. Therefore, this issue has been elevated to a material issue.

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Sustainability Issues Corresponded to GRI Standards

Economy	Sustainability Issues	Positive/ Negative Impact	Sustainability Topic	Corresponding to GRI Topic-Specific Standards	Initiatives and Organizations	Position of the Sustainability Issue on the Value Chain			Management Strategies (Corresponding Chapters and Page Number)
						Upstream	CAL Internal	Downstream	
	Governance and Business Integrity	⊕	Sound Corporate Governance	- GRI 2-9 Governance structure and composition - GRI 2-10 Nomination and selection of the highest governance body - GRI 2-11 Chair of the highest governance body - GRI 2-15 Conflicts of interest - GRI 2-17 Collective knowledge of the highest governance body - GRI 2-19 Remuneration policies - GRI 2-20 Process to determine remuneration	TAA, TCCS, United Nations Global Compact (UNGC)		●		3.1 Governance Framework/ 3.4 Regulatory Compliance/ ESG Data and Appendix-GRI Content Index
		⊖	Corruption	- GRI 2-23 Policy commitments - GRI 2-24 Embedding policy commitments - GRI 2-25 Processes to remediate negative impacts - GRI 2-27 Compliance with laws and regulations - GRI 412-2 Employee training on human rights policies or procedures - GRI 205-2 Communication and training about anti-corruption policies and procedures - GRI 206-1 Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	TAA, TCCS, United Nations Global Compact (UNGC)	●	●	●	3.4 Regulatory Compliance/ ESG Data and Appendix-Management of Material Human Rights Issues in 2024
	Financial Performance	⊕	Sound Economic Performance	GRI 201-1 Direct economic value generated and distributed			●		3.2 Operational Achievements/ ESG Data and Appendix for Financial Performance Presentation
		⊖	Poor Business Operations				●		
	Fleet Development and Innovation	⊕	Increase the Efficiency of Fleet Services and Fuel Consumption	- GRI 2 General Disclosures 2021 - GRI 2-1 Organizational details - GRI 2-6 Activities, value chain and other business relationships	IATA, SkyTeam, and AAPA	●	●		Preface, Business Overview/ 2.1 Trust
		⊖	The fleet's aircraft models are outdated			●	●	●	
	Customer Satisfaction	⊕	Maintain High Customer Satisfaction Rate				●	●	2.1.4 Customer Relations Management
		⊖	Frequent Customer Complaints			●	●	●	
	Sustainable Supply Chain Management	⊕	Sustainable Procurement	- GRI 2-6 Activities, value chain and other business relationships - GRI 204-1 Proportion of spending on local suppliers	United Nations Global Compact (UNGC)	●	●		
		⊖	Sustainable Supply Chain Management	- GRI 308-2 Negative environmental impacts in the supply chain and actions taken - GRI 407-1 Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk - GRI 414-2 Negative social impacts in the supply chain and actions taken		●	●		2.2 Cooperation

⊕ Positive ⊖ Negative

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Economy	Sustainability Issues	Positive/ Negative Impact	Sustainability Topic	Corresponding to GRI Topic-Specific Standards	Initiatives and Organizations	Position of the Sustainability Issue on the Value Chain			Management Strategies (Corresponding Chapters and Page Number)
						Upstream	CAL Internal	Down-stream	
Environment	Information Security	⊕	Comprehensive Information Security Management			●	●	●	2.1.5 Information Security Management
		⊖	Failure of the Information System			●	●	●	
	Climate Change Mitigation and Adaptation	⊕	Implementation of Climate Change Adaptation Actions	▪ GRI 305-1 Direct (Scope 1) GHG emissions ▪ GRI 305-2 Energy indirect (Scope 2) GHG emissions	Pacific Greenhouse Gases Measurement (PGGM), Task Force on Climate Related Financial Disclosures (TCFD), Earth Hour, Carbon Disclosure Project (CDP), IATA, AAPA, AAP				
		⊖	Exacerbation of Climate Risks	▪ GRI 305-3 Other indirect (Scope 3) GHG emissions ▪ GRI 305-4 GHG emissions intensity ▪ GRI 305-5 Reduction of GHG emissions ▪ GRI 305-7 Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions		●	●	●	
	Energy Management	⊕	Energy Conservation	▪ GRI 302-1 Energy consumption within the organization ▪ GRI 302-2 Energy consumption outside of the organization ▪ GRI 302-3 Energy intensity		●	●		2.3 Environment/ ESG Data and Appendix - Environmental Performance
		⊖	Energy Consumption	▪ GRI 302-4 Reduction of energy consumption ▪ GRI 302-5 Reductions in energy requirements of products and services					
	Environmental protection benefits and resource management	⊕	Effective Use of Resources and Circular Economy	▪ GRI 303-1 Interactions with water as a shared resource ▪ GRI 303-2 Management of water discharge-related impacts ▪ GRI 303-3 Water withdrawal ▪ GRI 303-4 Water discharge ▪ GRI 303-5 Water consumption	Buckingham Palace Declaration	●	●		
		⊖	Environmental Pollution Caused by Operations	▪ GRI 306-1 Waste generation and significant waste-related impacts ▪ GRI 306-2 Management of significant waste-related impacts ▪ GRI 306-3 Waste generated ▪ GRI 306-4 Waste diverted from disposal ▪ GRI 306-5 Waste directed to disposal					
	Green Services and Sustainable Catering	⊕	Green Services and Sustainable Catering		United Nations Global Compact (UNGC)	●	●	●	
		⊖	Waste of Catering and In-Flight Supplies						
	Biodiversity	⊕	Promoting Ecological Conservation	▪ GRI 304-1 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas ▪ GRI 304-2 Significant impacts of activities, products and services on biodiversity	Buckingham Palace Declaration	●	●	●	2.3 Environment/ ESG Data and Appendix - TNFD Table
		⊖	Biodiversity Loss	▪ GRI 304-3 Habitats protected or restored ▪ GRI 304-4 IUCN Red List species and national conservation list species with habitats in areas affected by operations					

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						Upstream	CAL Internal	Downstream	
	Flight Safety Management	⊕	Enhancing Flight Safety	▪ GRI 404 Training and Education	FSFT	●	●		2.1 Trust
		⊖	Flight Safety Incident Risks				●	●	
	Attracting, Cultivating, and Retaining Diverse Talent	⊕	Diversity and Equal Opportunity	▪ GRI 404-1 Average hours of training per year per employee ▪ GRI 2-7 Employees ▪ GRI 2-8 Workers who are not employees ▪ GRI 202-2 Proportion of senior management hired from the local community ▪ GRI 401-1 New employee hires and employee turnover	United Nations Global Compact (UNGC)		●		2.4 Human Resources/ ESG Data and Appendix: Talent Value Data
		⊖	Workplace Discrimination and Inequality	▪ GRI 405-1 Diversity of governance bodies and employees					
	Labor Relations and Communication	⊕	Good Labor-Management Relations	▪ GRI 2-30 Collective bargaining agreements ▪ GRI 201-3 Defined benefit plan obligations and other retirement plans ▪ GRI 401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees ▪ GRI 401-3 Parental leave ▪ GRI 402-1 Minimum notice periods regarding operational changes ▪ GRI 405-2 Ratio of basic salary and remuneration of women to men ▪ GRI 2-23 Policy commitments ▪ GRI 2-25 Processes to remediate negative impacts ▪ GRI 406-1 Incidents of discrimination and corrective actions taken ▪ GRI 412-1 Operations that have been subject to human rights reviews or impact assessments	United Nations Global Compact (UNGC)		●		2.4 Human Resources/ ESG Data and Appendix: Talent Value Data
		⊖	Deterioration of Labor-management Relations				●	●	
	Occupational Safety and Health	⊕	Safe and Healthy Workplace	▪ GRI 403-1 Occupational health and safety management system ▪ GRI 403-2 Hazard identification, risk assessment, and incident investigation ▪ GRI 403-8 Workers covered by an occupational health and safety management system ▪ GRI 403-9 Types of injury and rates of injury, occupational diseases, lost days, and absenteeism ▪ GRI 403-10 Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities	United Nations Global Compact (UNGC)	●	●		2.4 Human Resources/ ESG Data and Appendix: Talent Value Data
		⊖	Occupational Hazards						
	Privacy Management	⊕	Comprehensive Privacy Management	▪ GRI 418-1 Substantiated complaints concerning breaches of customer privacy and losses of customer data	United Nations Global Compact (UNGC)	●	●	●	2.1.6 Privacy Management
		⊖	Leak of Private and Confidential Information						
	Social Feedback and Engagement	⊕	Charity and Public Welfare				●	●	2.5 Society
		⊖	Improper Use of Public Welfare Resources						

Note 1: The sustainability topics impact assessments cover all CAL internal, upstream and downstream operation activities of the value chain, with a coverage rate of 100%.

Note 2: Upstream (e.g., Suppliers and Contractors)
Note 3: Downstream (e.g., Customers and Travel Agencies)

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1.5 Achieving Sustainable Development Goals

Sustainable Development Goals for Six Value Task Forces

★ Goal Exceeded ✓ Goal Attained ✕ Goal Not Attained

Task Force Corresponding SDGs	2024 Objectives	Progress	Key Results and Performance	Short-term Targets (2025)	Medium-term Targets (2030)	Long-term Targets (2040)
Corporate Governance ⑥ Governance and Business Integrity ⑥ Financial Performance ⑥ Fleet Development and Innovation  	Achieving 100% of sustainability tasks for the year and implementing the employee awareness improvement plan	✓	1. From 2018 to 2024, a total of 3 "Sustainable Development Awareness Training" e-Learning sessions have been held for all employees of the China Airlines Group 2. Provided employee ESG awareness training and added mandatory online courses for new employees	Regularly reporting progress on ESG tasks to the Corporate Sustainability Committee and holding at least two ESG training sessions for affiliates	Disclosing sustainable development of airline transport affiliates	Continuously cooperating with regulatory authorities and international trends to comprehensively disclose the boundaries of the group
	Implementing operating mechanisms for SDGs	✓	1. Conduct a rolling review of each working group's SDGs sustainability goals and action plans annually 2. The working group submits progress reports on a quarterly basis, and the Corporate Sustainability Committee reviews the implementation progress of the task force annually 3. CAL has held a "Sustainable Flight Seminar" in December 2024, inviting corporate customers to participate and share China Airlines' net zero strategy and practices to help	Supporting industry partners in developing sustainable capacity	Support international sustainability initiatives to enhance industry influence by participating in two initiatives or public associations	Support international sustainability initiatives to enhance industry influence by participating in five initiatives or public associations
Trust ⑥ Customer Satisfaction ⑥ Information Security ⑤ Flight Safety Management ⑤ Privacy Management      	Implementing personal data management systems, in accordance with GDPR and personal data protection laws	✓	1. Established a personal data management system aligned with laws and ISO standards, implemented through tiered documentation and the PDCA cycle for effective control 2. Expanded personal data inventories at overseas branches; conducted annual unit-level self-audits to identify and correct issues promptly 3. Held four training sessions in 2024 on personal data and cybersecurity—executive management seminars, personal data regulations and management guidelines, incident case studies, and new employee training—tailored to job roles, with quarterly awareness newsletters also issued 4. Developed internal audit SOPs, set annual audit plans each Q4, and reviewed results via the Information Security and Personal Information Committee 5. Conducted response drills to enhance incident reporting and handling procedures 6. CAL's passenger sales and marketing processes in Taipei and Kaohsiung were certified under ISO 27701 Privacy Information Management System	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	Maintaining validity of ISO27701 Privacy Information Management certificate; Adjustment of our personal data management system based on the regulations, international trends, and our company's operational needs to minimize the risk of data breaches



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Task Force Corresponding SDGs	2024 Objectives	Progress	Key Results and Performance	Short-term Targets (2025)	Medium-term Targets (2030)	Long-term Targets (2040)
Trust Customer Satisfaction Information Security Flight Safety Management Privacy Management 3 Good Health and Well-being 4 Quality Education 6 Clean Water and Sanitation 9 Industry, Innovation and Infrastructure 13 Climate Action 17 Partnerships for the Goals	Increasing the cargo service customer satisfaction to 88.5 points	✓	89.8 points in 2024 for Customer Satisfaction in Cargo Transport	Customer Satisfaction of Cargo Transport		
				89points	90 points	90 points
	Performing aviation data study and analysis for future release	✓	1. Domestic Aviation Safety Seminar: "Geopolitical Conflicts and Aviation Security Risk Seminar" 2. Co-organized the 2024 International Summit on Flight Safety Management	Publishing the results of flight operations studies to improve the technical capacity of the aviation industry	Developing innovation plans with other airlines to drive innovation momentum	Expanding collaborative research projects with domestic and international transportation peers and manufacturers/suppliers to enhance environmental performance
	Continuing to pass IOSA certification standards and improve the safety management system	✓	1. After completing the 12th IOSA recertification audit in 2024, CAL is preparing for IATA's more rigorous Risk-based IOSA in 2026 to maintain alignment with top international safety standards 2. To promote a safety culture and reinforce 2024 safety policies, targets, and performance indicators, CAL completed SMS training for 11,396 employees across all units 3. Continuing the spirit of experiential learning, we organized a visit to Taiwan High Speed Rail Corporation for practical experience sharing and exchange. This was aimed at enhancing our personnel's understanding of air traffic controllers' responsibilities, air traffic control operations, and the safety management system of the Air Traffic Control Center. The goal is to improve awareness of the purpose and related tasks of air traffic control across various departments, thereby reducing potential operational risks caused by human error	Continuing to pass IOSA certification standards and improve the safety management system (SMS)	Continuing to pass IOSA certification standards and improve the company safety culture	In consideration of safety regulations and international requirements, we continue to pass rigorous safety certification standards
	Continuously strengthening the development of core business information systems and conducting annual disaster recovery drills, while actively promoting innovative application services to increase revenue, reduce costs, and enhance daily work efficiency for the Company	✓	1. CAL continuously improves its disaster recovery plan, conducts annual drills, and enhances offsite recovery facilities to address geopolitical risks and ensure business continuity 2. Upgraded domestic backbone network equipment to meet future high-speed connectivity needs 3. Strengthened compliance with the Cyber Security Management Act by enhancing the ICT security framework and implementing an Endpoint Security Protection Mechanism to monitor, detect, block, and preserve evidence of intrusion incidents. Also reconstruct the attack chain and preserve forensic evidence to support post-incident analysis and continuous improvement 4. Applied BI tools for data analysis (e.g., duty-free sales, overseas living costs, fuel usage) to support business decisions on revenue growth, cost control, and service improvement	1. Promoting a smart airport: Establish a smart airport at Terminal 3 of Taiwan Taoyuan International Airport and increase customer satisfaction with digital and innovative technology application	1. Promoting smart tourism: Achieving horizontal and vertical integration of tourism-related industries to provide a one-stop smart travel eco-system	Promote smart airports: Expand the application of new technologies and passenger-sharing platforms to more overseas operating terminals, and actively collaborate with airports, suppliers, or other innovative technology companies

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Task Force Corresponding SDGs	2024 Objectives	Progress	Key Results and Performance	Short-term Targets (2025)	Medium-term Targets (2030)	Long-term Targets (2040)
Trust Customer Satisfaction Information Security Flight Safety Management Privacy Management 3 GOOD HEALTH AND WELL-BEING 4 QUALITY EDUCATION 8 DECENT WORK AND ECONOMIC GROWTH 9 INDUSTRIAL INNOVATION AND INFRASTRUCTURE 13 CLIMATE ACTION 17 PARTNERSHIPS FOR THE GOALS			5. Promoted process automation with RPA, automating tasks like SAP/ Email system integration, maintenance invoice dispatch, and SABRE fare verification to reduce manual workload 6. Optimized AI chatbot services and developed internal AI assistants (e.g., cabin crew assistant, IT helpdesk) to enhance service and query efficiency 7. Deployed generative AI tools (e.g., contract templates, smart cargo checks, safety compliance inspection, talent selection) to boost work efficiency and productivity 8. Created AI-generated virtual characters (e.g., crew, staff, pilots) for use in videos and aviation visuals, reinforcing CAL's innovative brand image in AI application	2. High-speed ICT network: Set up a dedicated optical fiber and terminal system network to increase data and audio connection performance and increase operating efficiency 3. Continuous improvement of disaster recovery plans by ensuring on-site redundancy with adequate hardware and software to handle core database anomalies and maintain high system availability	2. continuously optimize and expand the disaster recovery capacity	
Human Resources Attracting, Cultivating, and Retaining Diverse Talent Labor Relations and Communication Occupational Safety and Health 4 QUALITY EDUCATION 5 GENEALITY 8 DECENT WORK AND ECONOMIC GROWTH 10 REDUCED INEQUALITIES	Organizing eight expert seminars that provide an opportunity for internal cross-disciplinary networking	★	In 2024, we completed four aviation expert seminars, covering topics such as the effective use of employee tickets, flight dispatch, the intricacies of in-flight meals, and engine introductions, with a total of 527 participants. From 2021 to 2024, we successfully held a total of 14 sessions, achieving our short-term goal for 2021-2024 of completing 8 in-house aviation expert seminars.	We conducted four internal aviation knowledge-sharing sessions, with a total participation of 350 people.	Between 2026 and 2030, CAL will conduct a total of 15 internal aviation knowl-edge-sharing sessions, with cumulative participation reaching 1,800 attendees	From 2031 to 2040, CAL conducted a total of 30 internal aviation knowledge-sharing sessions, with cumu-lative participation reaching 3,600 attendees
	Optimizing CAL's aviation management talent training mechanisms	✓	Optimizing talent pools for different levels of management (including a master talent pool, management training courses, and advanced management courses) and related training mechanisms to develop talent for the company over the long term and lay the foundation for passing on knowledge and experience	Establishing the optimal learning path for CAL's aviation management talent pool	The cumulative number of CAL's aviation management talent training reaching 150 individuals by 2030	The cumulative number of CAL's aviation management talent training reaching 400 individuals by 2040
	Percentage of female executives reaching 25%	★	The percentage of female managers has risen to 30.33% in 2024	Percentage of female executives reaching 26%27%30%		

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Task Force Corresponding SDGs	2024 Objectives	Progress	Key Results and Performance	Short-term Targets (2025)	Medium-term Targets (2030)	Long-term Targets (2040)
Cooperation  	Maintain SAQ score at 89 points	✓	1. Four high-risk suppliers were identified in the 2024 sustainability self-assessment questionnaire 2. The average annual score for 2024 is 94.38 points	SAQ risk assessment ratio		
				▪ 100% of critical tier-1 suppliers ▪ 20% of non-critical tier-1 suppliers	▪ 100% of critical tier-1 suppliers ▪ 40% of non-critical tier-1 suppliers ▪ 30% of critical non-tier-1 suppliers	▪ 100% of all tier-1 and critical non-tier-1 suppliers
				Ratio of purchasing units to include at least 5% ESG performance in procurement evaluation criteria		
				Before making a purchase, the purchasing unit should establish a selection plan that takes into account the specific case	40% of purchasing units	100% of purchasing units
	Before 2024, CAL will hold a supplier conference and improve key suppliers' sustainability scores to above 89 points.	✓	1. Supplier Code of Conduct Signing Rate 100% 2. In 2024, we successfully held a supplier conference, inviting a total of 28 suppliers to participate 3. The average sustainability score for key suppliers reached 94.38, achieving a completion rate of 100% 4. The review coverage of high-risk suppliers is 100%	Ratio of suppliers signing contracts should be obligated to comply with the commitments of the "Forest and Biodiversity Conservation Commitment"		
				Both new suppliers signing contracts and existing suppliers renewing contracts should be obligated	40% of suppliers	100% of suppliers
				Assessment ratio of critical tier-1 suppliers		
				100% of critical non-tier-1 suppliers and high-risk suppliers	30% of critical non-tier-1 suppliers	100% of both critical tier-1 suppliers and critical non-tier-1 suppliers
Environment	Improving annual aviation fuel efficiency by 1.5% (flight operations)	✓	1. Maintain leading position among Asia Pacific airlines with fuel efficiency at 0.2284 tons per 1,000 RTK 2. Implemented 11 fuel saving measures	Establish a comprehensive supply chain improvement plan and capacity-building program		
				50% implementation of improvement measures and 50% implementation of the capacity-building program	100% implementation of improvement measures and 100% implementation of the capacity-building program	100% implementation of improvement measures for high-risk suppliers to ensure regulatory compliance
				Used SAF		
				0.5%	5%	40%

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Task Force Corresponding SDGs	2024 Objectives	Progress	Key Results and Performance	Short-term Targets (2025)	Medium-term Targets (2030)	Long-term Targets (2040)
Environment Climate Change Mitigation and Adaptation Energy Management Environmental protection benefits and resource management Green Services and Sustainable Catering Biodiversity 6 Water 6.1 7 Renewable Energy 7.2 12 Responsible Consumption and Production 12.2 13 Climate Action 13.1 14 Life Below Water 14.1 15 Life on Land 15.1	Reducing carbon emissions in ground operations by 3% compared to 2023	✕	1. Reducing carbon emissions in ground operations by 2% compared to 2023 2. Implemented 89 environment and energy improvement plans	Reduction in ground operations' carbon emissions compared to 2023: 5%15%60%		
				Renewable energy installation capacity has reached contracted capacity: 10%15%		
	Reducing general waste (non-recyclable) by 6% compared with 2018	✕	1. Increased output in 2024 by 5% compared to 2018 2. Enhancing resource recycling through Management by Walking Around	Reducing general waste (non recyclable) compared with 2018 7%12%15%		
	Increasing industrial waste recycling ratio to 44%	★	1. Industrial waste recycling ratio reached 61% in 2024 2. Renovate the temporary storage area for construction waste and optimize its layout	Reducing general waste (non recyclable) compared with 2018 45%50%58%		
	Reducing water consumption from ground operations by 6% compared to 2018	★	1. Reduced water consumption from ground operations in 2024 by 23% compared to 2018 2. Review and optimize the irrigation process and timing	Reduced water consumption from ground operations compared to 2018 7%10%12%		
	Reducing paper consumption by 22% compared to 2018	★	1. Reduced paper consumption in 2024 by 30% compared to 2018 2. Continuously promote the digitization of cabin service and air quality operation processes	Reducing paper consumption compared to 2018 30%50%52%		
				Ratio of Sustainably Certified Paper/ Wood Items in Air and Ground Services 10%50%80%		
	Embargoing transport of endangered species and prohibiting use of illegal species as food ingredients	✓	1. CAL did not transport illegal wild animals and plants 2. We expanded collaboration with the Forestry and Nature Conservation Agency, engaging the Saisiyat tribe for reforestation and nurturing. The adoption area grew by 5.25 hectares, supporting sustainable tourism at Jialishan Trail 3. Led by the Senior Vice President, the Corporate Environmental Committee participated in a tree-planting activity	Embargoing transport of endangered species and prohibiting use of illegal species as food ingredients Since 2023, we at CAL have participated in and implemented a total of biodiversity conservation activities or initiatives. 2410		
	Reducing total in-flight waste by 33% compared to 2018	✓	1. Reduction of in-flight waste in 2024 by 33% compared to 2018 2. Plan and execute the cabin waste weighing project Note: The original per capita in-flight meal waste target has been consolidated into the total in-flight waste target.	Reduction of in-flight waste compared to 2018 50%65%70%		
	Reducing use of disposable plastics for in-flight services by 80%	✓	1. Reducing use of disposable plastics for in-flight services by 80.9% 2. We continue to promote a variety of alternative SUP service items, such as RPET plastic cups, headrest covers, and stainless steel cutlery for economy class.	Reduction in the number of disposable plastics by 90%	Reduce use of disposable plastics for in-flight services by 100%	Reduce use of disposable plastics for in-flight services by 100%

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Task Force Corresponding SDGs	2024 Objectives	Progress	Key Results and Performance	Short-term Targets (2025)	Medium-term Targets (2030)	Long-term Targets (2040)
Society S Social Feedback and Engagement 	We aim to increase Taiwan's global presence by implementing sponsorship programs and harnessing the influence of businesses to support the humanitarian values of international rescue operations	✓	This year, we continued to respond to international relief efforts by assisting Tzu Chi Foundation in transporting disaster relief supplies following the New Year's earthquake in Japan. Additionally, we supported the "2nd Love Without Boundaries International Medical Mission" and the "31st Sprout of Hope Love Without Borders Medical Mission" through practical actions, demonstrating the corporate commitment to creating, prospering, and benefiting together with society	Supporting international initiatives and organizing at least one long-term charity project	Supporting international initiatives and organizing at least one long-term charity project	Establishing long-term cooperation with international relief organizations to organize at least one long-term charity project
	Organize at least one educational charity event in rural areas outside of Taoyuan, as part of our long-term commitment to volunteer teaching activities and public welfare sports camps, thereby expanding the beneficiaries	✓	1. Volunteer Teaching: In 2024, we continued visits to six nearby elementary schools and expanded to four rural schools in Lanyu, Miaoli, and Taitung, promoting core aviation knowledge and educational equity 2. Public Sports Camps: Held a charity basketball camp with P.League+ Taoyuan Pauian Pilots; organized a charity baseball camp in Hualien with baseball stars Chen Wei-Yin, Chen Yung-Chi, and Chen Po-Yu; hosted a charity table tennis camp in Kaohsiung with table tennis master Chuan Chih-Yuan; and conducted a charity badminton camp with gold medalist badminton players Lee Yang and Lin Chun-Yi. These four charity sports camps were all inspired by the personal experiences shared by star athletes, encouraging young players to bravely pursue their dreams	Organize at least one educational event in rural areas to promote international educational opportunities for young students	Integrate central and local resources to host at least one rural education event, ensuring equal access to education for all	Partner with international education organizations to coordinate a minimum of one rural education event, thereby improving the quality of national education
	To fulfill our corporate social responsibility, we will collaborate with indigenous peoples or local farmers in Taiwan to provide PR gifts, as well as giving back to another vulnerable group to create mutual benefits and enhance the value of our sponsorship program	✓	1. CAL purchased 326 cans of cookies produced by non-profit organizations and Indigenous communities this year to include in care packages, in collaboration with the Huashan Foundation, for elderly residents in Taoyuan who are disabled, dependent, or suffering from cognitive impairment. This mutually beneficial partnership aims to fulfill the commitment to achieving social equality and welfare 2. Additionally, CAL has long collaborated with Taiwan Good Agriculture to offer Taiwanese snacks in the Sky Lounge, continuously promoting local agricultural products. In 2024, we introduced new Hualien local snacks, the Forget Worries Five Elements Pastry and Vanilla Red Quinoa Stick, on board. This initiative aims to increase the income of farmers and producers, promote the development of local agriculture, and bring Hualien's agricultural specialties to the skies	Organize an event aimed at promoting economic growth and providing employment assistance in rural areas, thereby enhancing social wellbeing	Boost the efficacy of sponsorship, sponsoring an event aimed at promoting regional economic growth and providing employment assistance in rural areas, thereby enhancing social wellbeing	Organize projects to support economic development in underdeveloped regions or developing countries, enhancing employment opportunities in those areas

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



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2.1 Trust

★ Highlights



President Signed the IATA Safety Leadership Charter

CAL participated in the signing initiative of the Safety Leadership Charter, launched by the International Air Transport Association (IATA). A "Safety Talk" video featuring senior management was produced to demonstrate the Company's commitment to fostering a positive safety culture. Through leadership commitment and concrete actions taken by senior management, the initiative aims to strengthen safety awareness across all levels of the organization.



Organized the 2024 Geopolitical Risk's Impact on Aviation Security Seminar

To enhance and solidify the awareness of aviation security personnel regarding the risks posed by geopolitical conflicts, this seminar sought to provide relevant personnel with a clearer understanding of new security threats and suspicious behaviors, enabling them to maintain vigilance towards people, events, and objects in their surroundings. Participants included 120 individuals from the Ministry of Transportation, Air Force Command, government agencies, domestic airlines, and related enterprises.



12th consecutive IOSA safety certification achieved

CAL has maintained its commitment to flight safety by obtaining the IOSA (IATA Operational Safety Audit) certification in 2005 and undergoing re-certification audits every two years in accordance with IATA regulations. In 2024, CAL met the IOSA standards for the 12th time (the next certification will be in 2026), and continues to meet the highest international standards.



Co-organized the 2024 International Aviation Safety Management Summit

CAL specially invited Japan Airlines to share insights on the JL516 Haneda Airport runway collision incident, providing a detailed understanding of the cabin crew's response measures and the emergency evacuation situation for passengers at that time. Participating entities include the World Flight Safety Foundation, Airbus, Boeing, Japan Airlines, and senior managers from major national airlines. Through extensive discussions and exchanges during the conference, the aim is to consolidate a shared commitment to enhancing safety.



Digital transformation and service optimization: advancing toward sustainable excellence

The Cabin Crew Division actively promotes digital operations and the application of AI technology to enhance service efficiency and implement sustainable development. In 2024, we continued to optimize the use of the iPad mini in cabin service and the Business Class ordering system, thereby reducing paper usage and enhancing operational efficiency. To support the introduction of new aircraft, we have implemented next-generation training equipment to enhance crew response capabilities and ensure flight safety. Through the "Memory & Moment" service retraining and regular communication mechanism, we aim to deepen our brand image and improve customer satisfaction. At the same time, we promote fair assessment and management optimization, establish a self-disciplined and trusting team culture, and focus on employees' physical and mental well-being. Fully initiate the optimization and renovation project to create an improved work environment, fostering a happy workplace atmosphere, and continuously enhancing service quality and corporate competitiveness.

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Best Practices

Corporate AI Applications and Development

In response to the rapid rise of generative AI, China Airlines proactively integrated AI across its operations by late 2023. Key initiatives included using GitHub Copilot to refactor legacy systems, improving development efficiency by 30%, and developing AI-generated virtual personas for digital platforms. Internally, AI was applied to automate workflows such as customer service quality inspection, intelligent chatbots, contract template generation, and asset inventory management. The AI-driven customer service inspection project earned the 2024 CSEA Excellence in Customer Service Award. We also adopted Microsoft Copilot to boost productivity and collaboration. In 2024, China Airlines regularly held four Innovation and Service Application Showcases to foster cross-departmental innovation and support digital transformation.

Key Achievements

Prioritizing Office Efficiency and Sales Forecasting, Developing 14 AI Application Services

AI Copilot for Code Refactoring System

Improve development efficiency **30%**

CAL AI Virtual Assistant

Supports static and dynamic models for versatile use on internal and external platforms

Internal Applications

AI automates workflows to boost work efficiency.

AI Customer Service Quality Check

AI-Generated Contract Templates

Internal AI Customer Service

Inventory Asset Check

Awarded
2024 CSEA Outstanding Customer Service Award – Best AI System Application Team

AI Customer Service Quality Check
Average handling time reduced from 35 mins to **↓5 mins**

Copilot AI Integration

Enhances efficiency and collaboration.

1. Two AI-driven recognition systems have been implemented: image recognition for Smart Cargo Inspection, enabling real-time anomaly detection, and voice/semantic recognition for Customer Service Quality Inspection, increasing inspection volume and reducing processing time by 85%. The latter earned the 2024 Excellence in Customer Service Award for Best AI System Application Team.

Using smart glasses with AI image recognition to read container numbers and provide voice-controlled assistance for cargo staff in inventory management, enhancing the efficiency and accuracy of container asset inventory operations.

Utilizing automated AI quality inspection processes to replace the repetitive and time-consuming task of manually listening to audio files, enhancing the efficiency and quality of quality inspections while reducing the workload of customer service quality inspectors.

2. Predictive AI with visual analytics uses quarterly sales data of duty-free products to forecast next-quarter sales by brand and category, projecting item-level volume, total sales, and profit.

3. Service-oriented AI, integrated via third-party platforms, enables AI-generated contract templates and quality checks, streamlining and improving contract processes. AI assistants for HR, cabin crew, and IT now provide instant and accurate responses through natural language processing via Team+ or web platforms.

4. AI-generated virtual personas, initially used in print, have evolved with micro-animation and lip-sync features for occupational safety advocacy and as virtual hosts on internal platform. The Information Management Division will continue tracking dynamic image generation advancements for future use.

5. CAL integrated Microsoft's latest "AI Assistant Tool – Copilot" into Office tools (Word, Excel, PowerPoint, Teams), boosting daily work efficiency and internal collaboration.

Using generative AI to create personas and aviation-themed items that align with China Airlines' style and brand image, providing internal and external digital platforms with on-demand usage options.

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Management Approach



Material Issues

Flight Safety Management Customer Satisfaction Information Security Privacy Management



Importance of Material Issues

Zero accidents are the foundation of sustainable value at China Airlines (CAL), where safety and reliability are core values. As a professional transportation service provider, CAL sees service quality as key to sustainable operations. We protect customer privacy, deliver premium service and listen to feedback to meet expectations, and continuously innovate to enhance customer experience and value.

Recognizing the importance of information security, CAL continuously strengthens personal data protection mechanisms, complies with international data protection laws, regularly updates its data policies, and limits data collection to appropriate scopes. Advanced encryption and routine audits safeguard personal data, and contact channels are provided to help passengers exercise their legal rights. If there is a suspicion of a breach of personal data, CAL immediately takes action to preserve and protect the rights and interests of the parties.

Customer satisfaction is a top priority. CAL collects feedback through proactive surveys and multiple accessible channels. Survey results are analyzed and shared with relevant departments to drive ongoing service improvements and deliver an exceptional passenger experience.



Commitment and Long-term Goals

Commitment

Flight safety is CAL's most solemn and important commitment to customers and the public in its 65 years of history. We strictly comply with regulations and strive for zero safety incidents, ensuring the safety of every passenger and shipment. During the COVID-19 pandemic, we upheld our service values by respecting customer and their rights, aligning with global and national measures, and prioritizing their interests to ensure a reliable, high-quality travel experience.

Long-term Goals

2025

1. Receiving ISO27701 Privacy Information Management System (PIMS) 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 to 89 points
3. Publishing the results of flight operations studies to improve the technical capacity of the aviation industry
4. Continuing to pass IOSA certification standards and improve the safety management system (SMS)
5. Promoting a smart airport: Establish a smart airport at Terminal 3 of Taiwan Taoyuan International Airport and increase customer satisfaction with digital and innovative technology application
6. High-speed ICT network: Set up a dedicated optical fiber and terminal system network to increase data and audio connection performance and increase operating efficiency
7. Continuous improvement of disaster recovery plans: Provide on-site redundancy with sufficient hardware and software capacity to respond to anomalies in the core database system and ensure high availability of the database system

2030

1. Maintaining validity of ISO27701 Privacy Information Management System (PIMS) certificate
2. Increasing the cargo service customer satisfaction to 90 points
3. Developing innovation plans with other airlines to drive innovation momentum



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- 4. Continuing to pass IOSA certification standards and improve corporate safety culture
- 5. Promoting smart tourism: Achieving horizontal and vertical integration of tourism-related industries to provide a one-stop Smart Travel Eco-system
- 6. Evaluate the adoption and applications of new technologies and continuously optimize and expand the disaster recovery capacity

2040

- 1. Maintaining validity of ISO27701 Privacy Information Management System (PIMS) certificate; Adjustment of our personal data management system based on the regulations, international trends, and our company's operational needs to minimize the risk of data breaches
- 2. Maintaining the cargo service customer satisfaction at 90 points
- 3. Expanding collaborative research projects with domestic and international transportation peers and manufacturers/suppliers to enhance environmental performance
- 4. Promoting a smart airport: Expand the application of new technologies and passenger-sharing platforms to more overseas operating terminals, and actively collaborate with airports, suppliers, or other innovative technology companies

 Unit in Charge	Corporate Sustainability Committee – Trust Task Force, Corporate Safety Committee			
 Management Mechanisms	▪ The meeting of the Corporate Sustainability Committee, at least twice a year ▪ The meeting of Corporate Safety Committee, every quarter on a regular basis ▪ The quality review and target setting meeting, every year on a regular basis ▪ The Trust Value Task Force reports the KPI progress to the Corporate Sustainability Committee, every quarter ▪ The information security and personal data review meeting, every year on a regular basis			
 Grievance Mechanism	 Stakeholder Contact	 Cargo Website Cargo Branch Offices	 Passenger Website Passenger Branch Offices	 Maintenance Service Maintenance Organization emo.customer@china-airlines.com

Objectives and Plans

Key Point	SPI (Note 1)/KPI	2024			2025 Objectives
		Objectives	Performance	Achievement	
Flight Safety	Fatal & Hull loss Accidents (Accidents Rate) (Note 2)	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
	Mid-Air Collision (MAC)	0	0	100%	0
Customer Service	Overall Passenger Net Promoter Score (NPS)	62	72.5	100%	69
	Overall Cargo Service Satisfaction (point)	88.5	89.8	100%	88.5
	Overall Maintenance Satisfaction (point)	8.4	9.0	100%	8.4

Note 1: SPI refers to Safety Performance Indicator.
Note 2: Fatal & Hull Loss Accidents refer to aviation incidents that result in passenger fatalities or the total aircraft destruction. Over the past four years (2021-2024), the Company has not experienced any incidents resulting in passenger fatalities or total aircraft destruction.

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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, and undergoes re-certification audits every two years in accordance with IATA regulations to maintain its commitment to flight safety. The Company has successfully passed the IOSA (IATA Operational Safety Audit) certification for the 12th consecutive year in 2024 (the next certification will be in 2026), continuously meeting the highest international safety standards. The core of CAL's 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) for comprehensive tracking, control, and risk mitigation.



Safety Policy and Objectives

1. Safety Policy and Performance Indicator/Target (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 Civil Aviation Organization (ICAO), 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, meeting flight safety management requirements to meet domestic and international safety standards and attain the highest safety standards.

Safety Management Meeting



2. Safety Reporting System

To strengthen flight safety awareness, CAL encourages employees to proactively identify and report potential risks in their daily work through the Safety Reporting System. Risk data is collected and analyzed to prevent incidents and enhance overall safety. CAL conducts seasonal risk assessments by considering characteristic of flight operations, trends of flight safety, and changes in internal and external environments, and shares safety protocols through announcements and meetings. A reward system further motivates reporting. To encourage employees to report

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abnormalities and safety issues, CAL launched the mobile SMS eReports app in 2022, allowing employees to conveniently submit reports using their own devices. In 2024, 1,436 hazard reports were submitted, with 147 employee recognitions awarded (financial incentives). CAL has been ranked first in the number of hazard reports submitted at Taoyuan International Airport in hazard reports for five consecutive years, reflecting the success of its proactive safety culture.



Safety Risk Management

Safety Risk Management (SRM) is a key component of the Safety Management System (SMS). It predicts potential safety issues in normal system operations and incorporates risk criteria in the development of products and services. Through hazard identification, risk assessment, and continuous monitoring, CAL reduces risks to ALARP (As Low As Reasonably Practicable) levels. To instill the concept of risk management into the operation units and strengthen employees' use of risk management, Since 2015, CAL has provided regular Safety Risk Management (SRM) training and required frontline units to conduct self-audits based on internal and external information, changes in the operation environment, adjustment of regulations, and changes in procedures and equipment. To manage the effectiveness of the SRM, CAL conducts monitoring through SRM assessment and the yearly review of SPI/SPT.

CAL identifies, counts, and analyzes the main hazards and risks in the operating procedures. In 2024, the main risks CAL identified is the rise in extreme weather and unpredictable turbulence due to climate change. In response, CAL enhanced turbulence prevention and response procedures, issued awareness bulletins, and conducted joint Crew Resource Management (CRM) training for flight and cabin crews to strengthen coordination before, during, and after turbulence, thereby reducing the risk of injury. CAL also remains fully compliant with monitoring requirements set by Taiwan's Civil Aviation Administration.



Active Alertness and Compliance with Laws and Regulations

In 2024, China Airlines was subject to one penalty issued by the Civil Aeronautics Administration for non-compliance. The violation involved the failure to perform aircraft maintenance in accordance with the procedures outlined in the manufacturer's maintenance manual. Upon discovering personnel operational negligence, CAL proactively submitted a report to the CAA. In addition to strengthening the training of the personnel involved, monitoring their job performance, and sharing case studies to inform relevant personnel, CAL reviewed and improved operating procedures based on the investigation result of the events and established preventive measures to prevent human error and recurrence of similar events. Related corrective action plans were all approved by the CAA, and we will continue to implement safety management and maintain flight safety.



Safety Assurance

1. Flight Operations Quality Assurance

CAL uses flight data monitoring programs and Flight Operations Quality Information System (FOQIS) developed by CAL to identify potential risks in flight crew operations and provide timely guidance, in line with the R.O.C. Civil Aviation Act and FOQA standards. Monthly FOQA trend reports support fleet safety oversight. In the event of a FOQA occurrence (e.g., an anomaly in flight operation parameters), CAL conducts investigations, implements corrective actions, and monitors their effectiveness to reduce operational risks and ensure flight safety.

2. Fatigue Management

In addition to complying with domestic civil aviation regulations 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 manage fatigue through a prescriptive approach. Since 2019, CAL has integrated fatigue management into its safety policy, adopting a new crew scheduling system (AIMS) and a flight crew fatigue management system (FRMSc-SAFE) to optimize crew planning through predictive risk management.

In 2024, CAL received 8 crew fatigue reports, all found compliant with regulations and assessed using the Samn-Perelli Seven-Point Fatigue Scale. Most cases were due to unforeseen delays. CAL addressed crew concerns, adjusted rosters as needed, and encouraging personnel to seek fatigue management consultations and medical advice based on their individual conditions.

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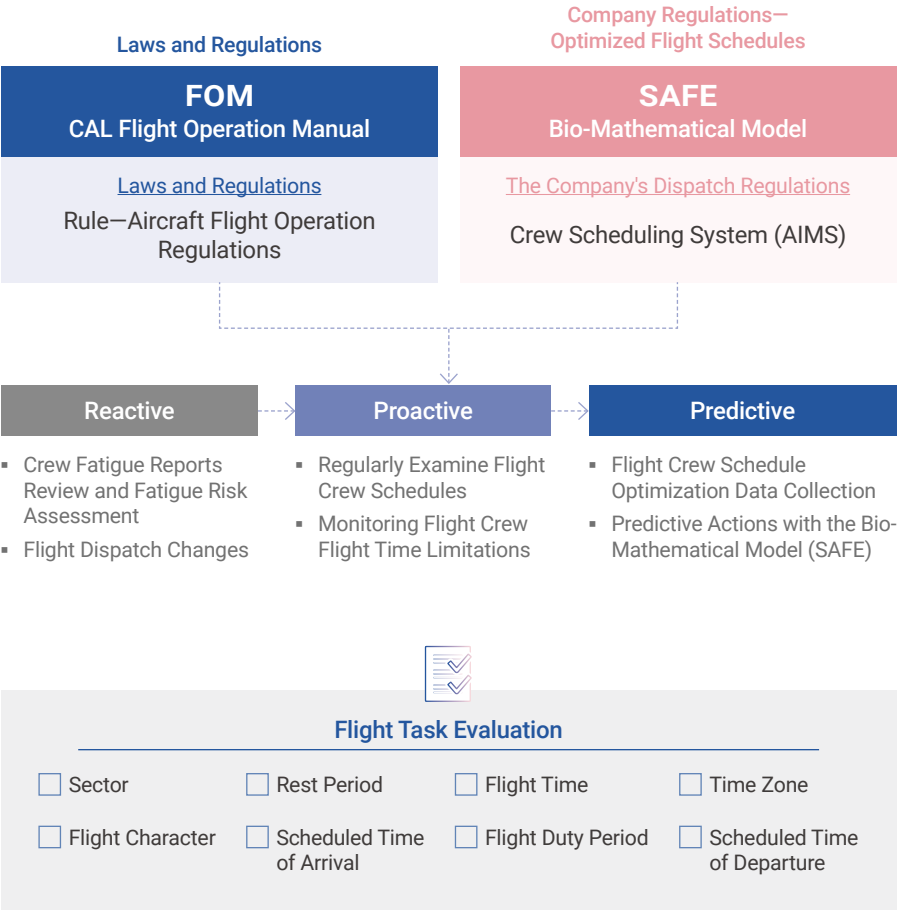
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CAL Fatigue Risk Management Framework and Implementation



3. Alcohol Test Mechanism

In line with Article 199 of the CAA Aircraft Flight Operation Regulations, CAL has established the alcohol test mechanism to conduct alcohol testing for flight crew, cabin crew, dispatchers, and maintenance personnel to ensure they are alcohol-free while on duty. Tests cover at least 30% of personnel annually (7.5% per quarter). Anyone who fails or refuses a test is immediately removed from duty. This protocol reinforces vigilance and safeguards flight safety.



Safety Promotion

To ensure flight safety, CAL organizes annual educational and entertaining safety events to instill the significance of safety among all employees and constantly enhance their awareness of flight safety. The safety training activities in 2024 continued the essence of safety management for "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. Externally, CAL promoted safety by hosting a Geopolitical Risk's Impact on Aviation Security Seminar and co-hosting an International Aviation Safety Management Summit in 2024.

1. Safety Education Training and Incentive Activity

① SMS e-Learning Program

To strengthen overall employee safety awareness, enhance alignment with the Company's safety culture, and promote the 2024 safety policy, objectives, and performance indicators, CAL completed the 2024 Safety Management System (SMS) training program as part of its ongoing efforts to advance safety practices. A total of 11,396 employees across domestic and international units successfully completed the training.

② Three Chapters of Online Breakthrough Campaign and Safety Knowledge Quiz Gashapon Event

In 2024, CAL launched an online breakthrough campaign featuring three levels, each focusing on key themes—(1) Cabin Operation, (2) Ground Services, and (3) Cargo Operations—using past case studies. Through engaging and interactive scenario-based learning, the activity encouraged cross-departmental safety knowledge sharing, fostering a culture where correct safety concepts and work attitudes are deeply instilled in all employees. Additionally, to promote active participation in the Safety Management System (SMS), CAL organized four Safety Knowledge Quiz Gashapon events in 2024. These events involved direct, real-time interactions with frontline operational units, enhancing employees' understanding of the Company's safety and security management practices.



"Three Chapters of Online Breakthrough Campaign" in 2024



May 14-17, 2024—Safety Knowledge Quiz Gashapon Event

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③ SAG (Safety Action Group) Incentive Activity

In order to internalize safety into day-to-day work, and be part of every conversation and considered in every decision, SAG(Safety Action Group) Incentive Activity have been developed since 2016. This activity is designed based on the SMS framework and is evaluate every six months. The SAG(Safety Action Group)financial incentive shall be utilized in safety promotion.

2. Cross-industry and intra-industry exchange and improvement

① Safety Experience and Safety Seminars

Continuing its “learning by walking around” approach, CAL organized a site visit to Taiwan High Speed Rail for practical knowledge exchange. To deepen understanding of air traffic control and its Safety Management System, CAL invited the ROC Air Traffic Controllers’ Association to deliver a lecture titled “Air Traffic Managers – A Discussion on the Role of Air Traffic Controllers”, enhancing cross-unit awareness and reducing human error risks.



June 5 & 12, 2024 - Site Visit and Exchange Activities with Taiwan High Speed Rail Corporation



December 27, 2024-Aviation Lecture: “Air Traffic Managers–A Discussion on the Role of Air Traffic Controllers”

② Co-organized the 2024 International Aviation Safety Management Summit

At the 2024 International Aviation Safety Management Summit, CAL invited Japan Airlines to share insights on the JL516 Haneda runway collision, focusing on cabin crew response and passenger evacuation. Participants included major airlines, Airbus, Boeing, and the World Flight Safety Foundation, fostering a shared commitment to safety.



June 25, 2024–Co-hosted the “2024 International Aviation Safety Management Summit”

CAL also hosted a Ground Safety Management Seminar with nearly 90 attendees from aviation authorities, airport operators, and partners, featuring a lecture on ramp safety and runway incursions. We also organized meetings with affiliated companies and agents to

discuss security and ground safety, and held a “Geopolitical Risk’s Impact on Aviation Security Seminar” at the CAA. The event was attended by 120 representatives from the Ministry of Transportation, Air Force Command, government agencies, domestic airlines, and related enterprises to raise awareness of new security threats and suspicious behaviors, enabling participants stay alert to people, events, and objects in their surroundings.

Flight Crew Management

Professional Training and Evaluation

GRI 404-2

CAL manages risks through prediction, proactive, and reactive approaches, adapting to changes like new airports, routes, aircraft, and procedures. Through targeted training, systematic flight training, FOQA, and recurrent evaluation of instructors and examiners, CAL ensures flight crews maintain high professionalism and competency to guarantee passenger safety.

Note: FOQA aims to decrease the probability of accidents and hull damage by using past flight data and flight log excerpts to identify abnormal incidents and to analyze each fleet’s operational characteristics. The outcomes are then assessed in order to identify and resolve any relevant safety risks.

1. Stringent Training and Objective Testing

To meet growing international demand, CAL enforces strict flight training and evaluations to uphold safety. Flight crew complete training for new aircraft models, promotions, type transfers, and requalification. Cadet pilots are required to successfully complete a 11-month of ab-initial training programs at reputable flight training facilities in the United States or Australia. Since 2018, CAL has adopted Evidence-Based Training (EBT) to replace conventional proficiency training and check. By leveraging big data analysis, including individual behavior, fleet performance, operation sites, and incident records etc. to enhance crew proficiency in handling abnormal situations. In 2024, CAL achieved 100% EBT on annual retraining for a total of 2,417 flight crew.

2. Professional Training Facilities

As the first airline to introduce Flight Simulation Training Devices 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 show the tolerance limits of aircraft designs and carry out training in any possible extreme and dangerous situations without incurring any risk during the exercise. The training process can also be recorded as a basis for reviewing and improving flight skill and expertise.

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CAL has certified Full Flight Simulators approved by CAA and Cabin Emergency Evacuation Trainers which are provided for training for other domestic airlines. In response to the introduction of the new B787 fleet, CSL incorporated advanced training capabilities in December 2024 by introducing a B787 flight simulator, flight training devices, and an emergency evacuation training cabin. This proactive approach aims to enhance flight safety through the early implementation of high-level training resources. Additionally, the emergency evacuation training cabin previously used for the B738 model was replaced with one designed for the A321neo, further optimizing the realism and functionality of training equipment. The Company will continuously invest in and upgrade training equipment to ensure flight safety.

3.A Comprehensive Management System

To enhance training management and digitize records, CAL launched the Integrated Pilot Training System (IPTS) in 2014. The system supports Evidence-Based Training (EBT) and programs for new aircraft models, type transitions, promotions, and requalification. Following the 2019 integration of IPTS with the new scheduling system (AIMS), training resources are now managed more efficiently. CAL regularly reviews and updates training content by aircraft type to improve quality and flight safety. With the introduction of aircraft such as the A321neo, B777F, and the upcoming B787, relevant training has continued. In 2024, CAL conducted 377 training sessions covering new hire, aircraft type transition, and promotion-related long-term and short-term training programs. Additionally, 55 instructor training sessions to expand capacity. All programs comply with national and international aviation standards and CAL's internal quality requirements to ensure safe operations.

Management by Walking Around

1.Managers Implement Management by Walking Around

Fleet supervisors assist in license inspections and pre-flight briefings as needed to ensure proper procedures are followed. They also conduct risk assessments related to special airports and weather conditions, offering operational guidance to support safe flight operations.

2.Supervisory Flight (S-Flight)

Fleet supervisors and Check Pilots (CPs) conduct Supervisory Flights (S-Flights) as needed to assess pilots' adherence to procedures, threat and error management (TEM) effectiveness, and crew resource management (CRM) skills. These reviews help identify areas for improvement and guide corrective actions to enhance flight safety. In 2024, 244 S-Flights were completed.

Flight Crew Health and Management

To ensure that flight crew can successfully complete every flight duty, 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 life 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 raise awareness of stress and mental health, CAL incorporates human factors and CRM training into flight crew training and retraining programs. While moderate stress enhances performance, excessive stress may impair focus and emotional stability. The training emphasizes recognizing personal stress and proposes problem-solving and emotional regulation strategies for flight crew members to choose the most appropriate way to manage their stress. It also covers mental health topics, including symptoms, impacts, and challenges faced by pilots. CAL offers support channels such as free psychological counseling to help crew members address related issues.

3.Alcohol and Drug Management

CAL enforces strict rules prohibiting alcohol and drug use, including alcohol-containing food and substances, as well as narcotic drugs or other drugs that may impair performance. Flight crews are banned from consuming alcohol within 12 hours before a flight. Since April 10, 2017, alcohol testing has been conducted for all flight crew on flights departing Taiwan to uphold safety standards.As for narcotic drugs testing, flight crews are required to cooperate with urine testing (the proportion of random testing should not be less than 10% of the total number of personnel tested each year), and the testing results are submitted to the CAA on a monthly basis. Should a flight crew member fail or refuse an alcohol test or narcotic drug test, he or she will be suspended from duty immediately, and the case will be carefully reviewed then followed up in accordance with relevant rules or regulations.

4.Improved Communication and Crew Services

To strengthen communication and cohesion, CAL holds meetings as needed and regularly checks on crew members on unpaid leave. Support is provided through group emails and instant messaging to address concerns during duty periods. These efforts aim to ensure a supportive and secure work environment.

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Proactive Planning

- Monthly review and discuss next month schedules with fleet office
- Better rosters for flight crew's dispatch and rest time before/after flight duties
- If crew members 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



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 for sick leave. The care team also inquires about flight crew's physical and mental conditions



Prediction

- Following fleet evaluations for new routes, crew dispatch requirements and staffing configurations are determined accordingly.
- CAL continues to monitor health-related regulations in each country and incorporates these considerations into the evaluation criteria.

Inflight Monitoring and Control

To ensure safe and timely arrivals, CAL's System Operation Control Division monitors all flights and site operations in real time, tracking aircraft positions and coordinating with flight crews during irregularities. Operating 24/7, the division uses designated seats and communication tools to control of all factors that may cause abnormal flight operations (e.g., military exercise, geopolitical shifts, epidemics and epidemic prevention policies of different countries, weather forecast at different airports, emergencies such as volcano and tsunami, and status of ground operations at airports such as de-icing/anti-icing capacity and strike).

Main seats in the Control Center	Missions
Air traffic control seat	Monitors flights and operations of flight schedules
Weather monitoring seat	Provides the latest hazardous weather updates for aircraft in the air
Flight dispatcher seat	Plans routes and fuel quantities, and monitors airspace conditions
Repair management seat	Monitors flight maintenance status of aircraft
Flight status monitoring seat	Monitors the operational status of airports in various locations and maintains real-time awareness of aircraft positions to ensure compliance with civil aviation regulations.
Taoyuan International Airport management seat	Supervises the inbound/outbound operations of the Company's main hub

The System Operation Control Division leverages various software and hardware to support decision-making. This includes connecting to domestic and international Airport Collaborative Decision Making (A-CDM) systems for flight movement data, aircraft tracking systems for real-time positioning, TPE Airport CCTV for inbound/outbound operations, and WNI weather software to monitor hazardous conditions and assist in risk avoidance during flights.

To enhance communication, operational readiness, and risk management during adverse weather or emergencies, the System Operation Control Division conducts various situation drills and review meetings. Key 2024 initiatives included:

- Typhoon Response Drill: In preparation for the typhoon season, we understood this year's typhoon trends and created a simulated typhoon track through the drill process. We formulated contingency plans for System Operation Control Division and aircraft evacuation plans and promoted relevant safety concepts and operation safety during typhoon to colleagues.
- On-time Rate Review: To effectively improve flight on-time rate, meet passenger expectations, and ensure smooth outbound operations of flights with reduced delays, the Company conducts review on flight on-time rate every quarter, analyzing and evaluating the operation time of each unit.

Looking ahead, 2025 will be a pivotal year marked by innovation and recovery. The aviation industry is expected to adopt AI-driven solutions in scheduling, baggage handling, and security screening to boost efficiency and reduce delays.

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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. Maintenance Quality

CAL Maintenance Division holds aircraft maintenance organization certifications from 11 countries and regions, including the European Union and the United States, and plans to obtain certification from the CAA of Macau in 2025. As the largest and most modern airframe maintenance center in Taiwan, the facility features hangars capable of accommodating simultaneous maintenance for five wide-body aircraft, as well as an engine test cell rated for thrust levels up to 120,000 pounds—supporting advanced maintenance for a wide range of aircraft types.

2. Establishing a New Maintenance Training Center

In response to rapidly growing demand for maintenance service 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 321 training courses have been offered, and 3,324 trainees have completed training.

3. Elevating the Quality Management System

CAL’s maintenance organization acquired ISO 9001 certification for its Quality Management System in 1996 and continuously maintained the effectiveness of the system. 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 (IAQG)(Note). CAL continuously renewed its re-evaluation contracts with the accreditation institution each year. 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 main 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

Modern Fleet, Top-Quality In-Flight Service

CAL continues its fleet renewal to strengthen its global passenger and cargo services. In 2024, we added one leased A350-900, four A321neo, and two 777F aircraft. In 2025, A321neo deliveries will continue, alongside the introduction of the Boeing 787. The modernized fleet enhances service quality and efficiency. The current 737-800 fleet (average age 9.5 years) will be gradually retired by 2028 in line with A321neo integration.

To meet the demands of fleet capacity adjustments and network expansion, China Airlines announced on December 19, 2024, the procurement of ten Airbus A350-1000 passenger aircraft, ten Boeing 777-9 passenger aircraft, and four Boeing 777-8F cargo aircraft. The new fleet is expected to be delivered starting in 2029 and will be utilized for long-haul passenger and cargo services to North America and Europe.

The new wide-body passenger aircraft will feature a three-class configuration, including luxurious business class, premium economy, and economy class, providing passengers with a more spacious, comfortable, and tranquil flying experience. This will offer an unprecedented journey experience, making long-haul flights more enjoyable. Furthermore, the Company remains committed to its corporate sustainability principles, focusing on the introduction of its new fleet to enhance service quality and strengthen overall operational efficiency.

The new aircraft demonstrate outstanding fuel efficiency, with an estimated 25% reduction in fuel consumption and carbon emissions compared to previous models, showcasing the airline’s commitment to environmentally friendly flight operations. CAL will continue its journey toward achieving the goal of net-zero carbon emissions by 2050, setting a benchmark for sustainable development in the global aviation industry.

Premium Training Equipment Deployed for the 787 Fleet

By the end of 2024, CAL launched new single-aisle and twin-aisle Emergency Training Simulators, enhancing cabin crew’s emergency response capabilities and strengthening flight safety. A 360-degree VR tour of the A321 was also introduced for flexible, self-directed learning, breaking the time and space limitations of classroom training. It allows trainees to review key procedures on demand, reinforcing essential areas and improving learning efficiency. Meanwhile, CAL leveraged advanced technologies to optimize training quality, establishing itself as a benchmark for learning excellence in the industry and showcasing an innovative corporate image. The VR training program will continue to expand with the introduction of new aircraft types, further enhancing overall training quality and effectiveness.

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In response to the recovery of the aviation market, CAL designed annual regulatory and service refresher trainings under the theme “Memory & Moment: Creating a Memorable Journey” to strengthen cabin crew competency, helping them better understand passengers’ needs and uphold high service standards. Practical assessments ensured consistent professional skills across the team. In 2024, CAL completed seven new hire programs, certifying 147 cabin crew; provided high-class regional service training for 290 crew members; and held 26 cabin management competency sessions, with 244 passing the oral evaluations. These initiatives not only reinforced organizational succession and management capabilities, but also aimed to translate the learning journey into greater passenger satisfaction, brand trust, and customer loyalty, while ensuring flexible manpower deployment and improved operational efficiency.

Integrate passenger transport aircraft resources of CAL Group

In 2024, Mandarin Airlines introduced three new ATR aircraft. During the ferry flight of B-16861 from France to Taiwan, the aircraft used Sustainable Aviation Fuel (SAF) with a 30% biofuel blend—marking the first use of SAF by a Taiwanese domestic airline. All new ATRs feature upgraded PW127XT-M engines, reducing fuel consumption by over 3% and lowering carbon emissions, underscoring the airline’s commitment to sustainability while enhancing domestic service quality. Leveraging CAL Group’s fleet, Mandarin Airlines provided 2.25 million domestic seats, with AE/ATR-72 aircraft supplying 80% and CI/B738 aircraft 20%, effectively meeting demand for both tourism and homecoming travel.

Following the April 3 magnitude 7.2 earthquake in Hualien, Mandarin promptly added flights between Kaohsiung, Taichung, and Hualien on April 3–4 to support disrupted ground transport. To aid local recovery, the airline launched the “Dynasty Flyer Free Travel to Hualien and Taitung” campaign, alongside discounted student tickets and the “Mandarin Holidays” travel packages to boost regional tourism.

To improve air access to outlying islands, Mandarin Airlines resumed the Kaohsiung–Matsu route after a 20-year hiatus, launching its inaugural charter on November 6. The



Arrival of Mandarin Airlines' New ATR Aircraft at Songshan Airport



Inaugural charter flight on the Kaohsiung–Matsu route successfully launched

flight, welcomed with a water salute in Nangan, was attended by Distinguished guests, including the President of Mandarin Airlines, the Magistrate of Lienchiang County, Legislators, the Minister of Transportation and Communications, the Director General of the Civil Aeronautics Administration, and the Director General of the Tourism Administration, personally greeted the flight at the aircraft side. They joined VIP passengers from the Kaohsiung City Government, who traveled on the inaugural flight, in a red banner-holding group photo, creating a historic and memorable moment.

To provide enhanced passenger services, Mandarin Airlines launched a newly upgraded version of its mobile application (APP) on September 26, 2024. The new version offers significantly improved itinerary management functions, enabling passengers to more easily and efficiently book, purchase, and modify reservations. Personalized features have also been introduced, allowing users to save frequently used passenger profiles, contacts, and preferred routes, thereby reducing data entry time and optimizing the overall service experience. In addition, Mandarin Airlines implemented a new POS baggage check-in system, which provides passengers with clearer information on baggage policies. Baggage tags now include the passenger’s flight details and name, effectively reducing the likelihood of baggage misrouting or misclaiming.



(left) Arrival of Mandarin Airlines' New ATR Aircraft at Songshan Airport
(right) POS baggage check-in system enhances passenger convenience

Flight Punctuality

In 2024, CAL’s internal flight on-time rate was 84.96%, which was 1.96% higher than the KPI on-time rate target (KPI 83%). 76,421 flights were completed in the year, with a total of 375 abnormal flights (return, diversion, ground taxi back, cancellation, etc.) and a reliable dispatch rate of over 99.5%. According to the “international and cross-strait passenger flight punctuality rate” published by the CAA, the Company’s on-time rate was 73.59% for international flights and 84.34% for cross-strait flights.

The on-time rate for 2024 was lower compared to the full-year average of 85.73% recorded in 2023. The primary reasons are as follows:

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- 1. In 2024, more extreme weather conditions compared to previous years, including an extended typhoon season lasting through November, led to widespread flight delays and cancellations. Additionally, jet stream anomalies impacted the flight times of long-haul routes, and volcanic eruptions necessitated airspace rerouting.
- 2. Flight delays were frequently caused by baggage transfer bottlenecks at airports and air traffic flow management restrictions along flight routes.
- 3. Geopolitical Tensions: Ongoing conflicts such as the Russia-Ukraine war and the Israel-Palestine conflict resulted in longer flight times on European and North American routes, subsequently affecting connecting flights and contributing to onward flight delays.

In this regard, the Company continuously pays close attention to the change of international situation, duration of long-haul flights, and ground operations for connecting passengers. It closely monitors flight operations and makes adjustments for abnormal flights.

Innovative in-flight services engage the New Generation of Youth

In alignment with the “Brand Awareness” pillar of its sustainability strategy, CAL actively embraces innovative thinking to resonate with the younger generation. CAL has initiated a comprehensive upgrade of its digital experience:

- 1. Launching premium in-flight entertainment enhancements, including a new high-quality Podcast service and upgraded movie resolutions. Through its digital publication platform, Dynasty Sky Reading, passengers across all cabin classes enjoy unlimited downloads of hundreds of magazines.
- 2. Passengers aboard A321neo and 737-800 aircraft can connect their personal electronic devices to the in-flight entertainment system, enabling high-altitude access to multimedia streaming services. Beyond audiovisual indulgence, CAL is equally dedicated to elevating the culinary experience.

- 3. In order to continuously provide passengers with a high-quality travel experience and enhance the competitiveness of its cabin products, China Airlines has initiated an upgrade of the A350-900 cabin facilities. The upgrade will include the installation of the latest generation of cabin seating, along with a new high-definition personal in-flight entertainment system. In line with the latest industry trends, the airline will also feature highly customized cabin configurations with advanced specifications.



All advertising and marketing content produced by China Airlines adheres strictly to the following ethical commitments:

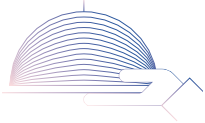
- 1. Providing accurate and balanced information regarding all products and services;
- 2. Truthfully disclosing the Company’s actions related to ESG initiatives;
- 3. Protecting customers with limited access to information by ensuring the provision of correct and sufficient information;
- 4. Refraining from disparaging competitors’ products and services.

China Airlines upholds integrity and accountability to deliver outstanding service and promote sustainability. In 2024, CAL was named “Best Airline in North Asia” by Global Traveler for the 11th time and received the APEX Five Star Global Airline rating for the ninth consecutive year.

Beyond service excellence, CAL enhances the inflight experience with gourmet cuisine and creative offerings. Depending on the route, passengers can enjoy dishes by Michelin Guide-recommended restaurants, artisanal desserts, and co-branded treats, including themed menus inspired by healing anime Intellectual Property (IP) and collaborations like BLAH BLAH Bar X SUNMAI. A new amenity kit designed with MOSCHINO also brings fashion to the skies.

By the end of 2024, CAL launched a new brand campaign featuring witty taglines, turning simple act of traveling between two points into a joyful and memorable curve of smiles—continuing CAL’s mission: “create more wonderful moments through flying.”

Local Sustainability at 30,000 Feet: Savoring the Flavors of Formosa



China Airlines is a leader in ESG-driven sustainable development in aviation. Its in-flight catering is designed around the UN SDGs, particularly “Responsible Consumption and Production” and “Decent Work and Economic Growth.” Emphasizing sustainability, carbon reduction, and local sourcing, CAL promotes low-carbon dining and a zero food waste culture onboard.

With a focus on eco-friendly and health-conscious choices, the airline selects locally sourced ingredients with traceability and international certifications. Through cross-industry collaborations with like-minded local food providers, CAL supports local economies and advances shared sustainability goals.

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China Airlines In-flight Dining Experience



Business Class Welcome Cold-Pressed Juice

As a Business Class welcome drink, CAL partners with premium cold-pressed juice brand Natural Benefits to offer the exclusive “Taiwan Blueberry Juice,” sourced from fresh blueberries cultivated at the foothills of Alishan in Taiwan. The juice preserves authentic fruit texture and flavor, delivering a naturally sweet, layered taste. Seasonal cold-pressed juices made from local fruits and vegetables are also served onboard, supporting CAL’s vision of shifting from imported to locally sourced ingredients.



Business Class Assorted Fiber-Rich Fruits

Clean Label-certified mixed fruits and nuts—featuring unsalted, low-temperature baked almonds, cashews, cranberries, and raisins—are served in Business Class as a natural and healthy snack option.



China Airlines X YOSHI BAKERY Co-branded Bread

In 2024, CAL launched co-branded in-flight breads across all cabin classes, featuring Taiwanese ingredients like tea, dried peaches, Tainong No. 57 and No. 66 sweet potatoes, purple glutinous rice, and Dahu strawberries.—merging classic techniques with local innovation.



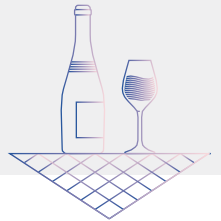
Skylounge Snacks

Through its ongoing collaboration with “The Wonderful Food” platform, CAL promotes Taiwan’s small-scale agriculture and creative industries via curated snack displays to increase visibility. This initiative aims to promote responsible consumption and production while contributing to the reduction of carbon footprints, fulfilling the airline’s social responsibility towards the shared well-being of the planet.



China Airlines X Yang Ming Spring-In-Flight Pure Plant-Based Cuisine

Since 2022, CAL has partnered with Michelin Green Star restaurant Yangming Spring to offer fully vegan business class meals made with natural, locally sourced ingredients. A 2024 highlight is the “Yangming Spring Golden Plum Golden Brick Fruit Crisp,” combining aged plums and whole pumpkin in a nutrient-rich, plant-based dessert. These offerings reflect CAL’s dedication to sustainability, local sourcing, and providing passengers with a refined and responsible dining journey in the sky.



In-flight catering is a key part of cabin service, and China Airlines continues to enhance it with sustainability in mind. To reduce food waste, CAL closely monitors meal orders and wastage while actively promoting its pre-selection service. Business Class and Premium Economy passengers receive reminders via email, SMS, and app to choose meals in advance, with Business Class passengers able to browse detailed menus and select according to preference.

To accommodate diverse needs, CAL offers 20 types of special meals across all classes. Business Class menus are printed using soy-based ink on FSC-certified paper, while digital menus are available on B777, A350-900, and A321neo aircraft, enabling all passengers to view detailed meal information.

These efforts improve the dining experience while demonstrating CAL’s commitment to environmental responsibility and sustainable development.

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Digital Platform Upgrade for Better Booking Experience

CAL is committed to optimizing the user experience on its website and mobile app by enhancing the booking and ticketing process and strengthening online itinerary management services. Continuous efforts have been made to streamline website content and optimize page design, enabling passengers to intuitively browse and access essential travel information, such as baggage policies, fare products, special service requests, and information on flight movement updates.

1. CAL Website:

Continuously optimizing website functionality from the passenger’s perspective, in May 2024, CAL upgraded its booking and ticketing process with a new user interface, featuring ticket card display, one-click selection, and simplified process steps. Additionally, the integration of the itinerary management page and optimization of online self-service modification features aim to enhance overall satisfaction with the CAL website.

2. In-Flight Wi-Fi:

CAL provides complimentary Wi-Fi for business class passengers and high-tier members. In November 2024, the airline was honored with the “Best Wi-Fi Award” by the Airline Passenger Experience Association (APEX).

For more details, please visit: <https://www.china-airlines.com/tw/en/discover/news/press-release/20241125>



CAL Website
Booking and
Ticketing

Building Brand Ambassadors and e-Services for Better In-Flight Experience



Smart Cabin: e-Processes and AI Assistant

To support CAL’s commitment to promoting green energy initiatives and enhancing carbon reduction efforts, iPad minis have been fully distributed to cabin crew members as personal operational tools since 2023. In 2024, the application of these electronic devices was further optimized by integrating e-books, pre-recorded cabin announcement audio files, and enhancing flight time limit calculations and report compilation functionalities. These improvements not only strengthen information integration and cybersecurity control to mitigate information security risks, but also significantly reduce paper consumption, aligning with the Company’s environmental sustainability vision. In addition, iPad minis were introduced to facilitate inflight meal ordering in Business Class, enabling digital operations to enhance cabin service efficiency and deliver a modernized passenger experience.

In response to the evolving landscape of AI, the Company also launched the “Cabin Crew AI Assistant” on the Team+ platform. In its initial phase, this smart customer service tool provides ground service personnel with keyword search and real-time response functions. Continuous testing and refinement are being conducted to improve the accuracy of AI-generated responses. In the second phase, the service will be fully extended to all cabin crew members, with the goal of fostering community interaction among crew and further advancing the Company’s sustainability and shared prosperity objectives.



Create a “Brand Endorsement” with Professional Image of Cabin Crew

In alignment with the Company’s corporate vision of “Leading Asia-Pacific, Flying Worldwide” and upholding the mission of “Create more wonderful moments through flying,” we are guided by the core value of “Believe we can always do better.” With this foundation, the Company is committed to elevating cabin service standards by focusing on the following four key service objectives:

- Implementing a Responsibility Area Accountability System — Cabin crew are expected to respond promptly to passenger needs, proactively assist in resolving issues, and ensure consistent service quality.
- Enhancing Premium Cabin Guest Services — Emphasis is placed on service attitude and professional knowledge to deliver a refined and attentive premium cabin experience.
- Greeting Elite Frequent Flyers — Crew members proactively greet elite passengers within their assigned responsibility areas, with the Cabin Manager extending formal greetings on behalf of the Company to strengthen customer relationships.
- Proactively Assisting Special Passengers (Elderly, Children, and Pregnant Women) — Special attention is given to passengers with specific needs, offering timely assistance to further enhance the Company’s brand competitiveness and image.

Through these initiatives, the Company aims to cultivate a professional yet warm cabin crew image, positioning crew members as the Company’s best brand ambassadors.



Service with Heart, Journey with Warmth

In 2024, 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:

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1. China Airlines Digital Boarding Pass: Delivering Exclusive Festive Surprises

China Airlines is committed to providing travelers with thoughtful and heartfelt service. To enhance the check-in experience through the China Airlines App, the design of the digital boarding pass dynamically reflects exclusive artwork aligned with various festive occasions. Whether it is the joyful atmosphere of Lunar New Year, the rich cultural heritage of Dragon Boat Festival and Mid-Autumn Festival, or the warm sentiment of Christmas, each digital boarding pass features meticulously crafted festive illustrations. These designs infuse the journey with a celebratory spirit, allowing passengers to immediately feel the joy of the season and the personalized care from CAL from the moment their travel begins.



2. Listen to the Needs of Employees and Strengthening Collaborative Partnerships

In 2024, China Airlines held 44 virtual Work Seminars with 705 participants and 113 Cabin Management Meetings attended by 1,400 crew members. These regular sessions fostered service commitment, team morale, and empathy through focused discussions and thematic guidance, encouraging staff to deliver thoughtful, customized service and uphold CAL's signature service excellence.

Internally, CAL leveraged interactive platforms such as "No problem, I'll help you," "Cabin Crew Loudspeaker", "Flight Training Magic Channel", and "Speak one's Mind" to collect real-time feedback. These tools enhanced communication, strengthened teamwork, and supported continuous improvement in safety, service quality, and crisis response.

3. Establishing a New Generation Management Model to Foster a Self-Disciplined and Trust-Based Cabin Crew Team

To ensure fair and comprehensive evaluations, China Airlines refined its annual performance assessments by adjusting evaluation weightings and introducing a two-way evaluation mechanism for Pursers. Through effective CRM-based communication, CAL upholds fairness and objectivity in implementing prevention, management, and improvement measures, enhancing safety, service quality, and fostering a high-performing, continuously improving cabin crew team.

4. Encouraging Physical and Mental Well-Being to Foster Lasting Happiness

In response to employees' internal and external needs, two "Cabin Crew Division Town Hall Meetings" were held in May and June 2024. Management proactively engaged with employees, providing appropriate support and fostering a sense of belonging through initiatives such as proxy mechanisms, process optimization, and resource alignment. Additionally, diverse emotional expression channels were established, incorporating human-centric needs into planning to enhance employees' happiness and satisfaction. These efforts aim to strengthen team cohesion, ensure consistent delivery of high-quality service, and enhance the Company's overall competitiveness.



Cabin Crew Division Town Hall Meetings

5. Fully Committed to Creating a Warm and Comfortable Work Environment, Promoting Physical and Mental Well-Being, and Fostering Lasting Happiness

To enhance the work environment and support sustainable development, China Airlines' Cabin Crew Division launched renovation projects at CAL Park and the Songshan Office in 2024. In October, the female crew changing room at CAL Park was upgraded into 21 multifunctional spaces combining makeup and changing areas, with added privacy curtains to improve usability and comfort.

At the Songshan Office, on-call areas were renovated in December with updated restrooms, new carpeting, added power outlets, and soft lighting to create a more welcoming space. Meanwhile, a comprehensive upgrade of the CAL Park briefing room began in December 2024. With all crew now equipped with iPad Minis, the outdated equipment will be replaced, and the room reconfigured for multifunctional use. Completion is expected by March 2025, further demonstrating CAL's commitment to employee well-being and workplace sustainability.



Renovation of the Female Cabin Crew Changing Room at the CAL Park



Renovation of the Cabin Crew On-Call Area at the Songshan Office

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Customer Health and Safety and Sustainability

 In-flight Catering Food Safety

CAL prioritizes in-flight food safety to protect passenger health. Catering providers must comply with international food safety and hygiene standards and operate comprehensive safety management systems. All processes—from sourcing and preparation to storage and transport—are strictly temperature-controlled and meet hygiene standards. Incoming ingredients undergo lab testing and microbiological sampling. CAL also conducts random audits, requiring corrective action or imposing penalties for non-compliance. Internally, all staff receive HACCP and related food safety training to ensure consistent implementation of food safety principles and maintain meal quality.

Examples of International Certifications for In-flight Catering		
ISO 22000	HACCP	Halal-certified Kitchen
		

 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. Every year, audits are performed 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

2.1.3 Cargo transport service

Passenger and Cargo Services

In 2024, the air cargo market thrived, boosted by AI-driven inventory destocking, server and electronics replacement cycles, and steady cross-border e-commerce growth. Demand remained strong for high-value, time-sensitive goods like semiconductors, biopharmaceuticals, fresh produce, and automotive parts.

China Airlines optimized its dual cargo fleet—777F and 744F—to maximize fuel efficiency and payload advantages. The 777F excels on long-haul routes with superior fuel savings, while the 744F’s high capacity and nose-loading capability suit regional consolidation and oversized shipments. This flexible deployment strengthened CAL’s position as a key Asia-Pacific air cargo hub.

High-value cargo shipments, especially temperature-controlled containers, increased significantly—from 1,204 in 2021 to 2,640 in 2024—demonstrating CAL’s excellence in handling sensitive pharmaceuticals and vaccines. Additionally, the transport of aviation parts rose to 824 units in 2024, reflecting strong trust in CAL’s specialized cargo expertise.



Ramp Loading and Unloading Operations



Cold-chain Transportation

Quality Cargo Service

According to the IATA statistics, China Airlines achieved 5,285 million freight tonne-kilometers (FRTK) in 2024, maintaining a leading position in international air cargo. The fleet modernization continued with the addition of the 8th and 9th Boeing 777F in mid-2024, and a 10th expected in Q2 2025. In light of the post-pandemic recovery of passenger traffic and the progressive increase in belly transport volume, CAL will continue to review the operational scale of its cargo aircraft fleet, accelerating the retirement and replacement of 744F aircraft, strategically plan its cargo operations based on market conditions, fully leveraging the complementary advantages of its dual-aircraft types to enhance overall operational efficiency and profitability, while actively expanding its presence in the global cargo market.

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Diversified Delivery Services

① Continuous Development of Special Cargo Service

CAL Cargo leads among Taiwanese carriers, with extensive experience in transporting a wide range of special cargo—from general goods and precision instruments to large-scale equipment. To meet the evolving needs of the logistics industry and provide tailored services, CAL continuously innovates with safety as the foundation. For example, the introduction of center-loaded 10-foot pallets on B777 freighters has enhanced cargo space flexibility, enabling higher capacity for diverse cargo types and long-haul flights. Under the oversight of a dedicated team, CAL is also expanding its capability to transport high-value items such as the full series of Rolls-Royce Trent engines using B777Fs. Combining deep expertise, soft power optimization, and the next-generation B777 freighters, CAL continues to grow steadily—delivering excellence in service quality, energy efficiency, and flight safety. CAL Cargo has become an indispensable force in global air logistics.



Ramp Operations



Transportation of Live Animals (large animals)

② Upgraded Cold Chain Service

In response to increased demand for air transport of 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. CAL became the first airline company in Taiwan to obtain the CEIV Pharma certification and will continue to maintain this certification to provide diversified and quality temperature-controlled cargo service for customers around the world. Additionally, CAL demonstrates the innovation and flexibility of the CAL cargo transport team and support global customers in the post-epidemic era.

③ Embargo on Illegal Animals and Plants

Supporting IATA and UN SDGs, CAL signed the Buckingham Palace Declaration and implements four concrete actions against illegal wildlife trafficking, including “expression and demonstration of agreement to tackle the illegal wildlife trade,” “information sharing and detection,” “practical measures to stop the transportation,” and “new mechanisms tackling illegal wildlife trade.”



Temperature-control Containers



Professional Team's Commitment to Safety

① Cargo Safety Management

CAL has enhanced risk controls through systems like Safety Reporting, cargo service platforms, ground damage databases, and weather alerts. A risk prevention mechanism based on safety assessments and walk-around checks improves warehouse and apron management. Quarterly feedback from ground service agencies drives ongoing service quality improvements.

② Professional Training

CAL regularly provides training on dangerous goods, live animals, temperature-controlled cargo, and load balancing to ensure safe and professional handling. Starting in 2024, training materials have transitioned to digital formats to enhance efficiency and support paperless operations. CAL has also trained certified handlers and established operational procedures to ensure the secure transport of special cargo. With the easing of border restrictions, more in-person global training sessions are planned to continuously upgrade cargo service quality.



Special Cargo Delivery (car)

③ Authorized Economic Operator (AEO)

As an Authorized Economic Operator (AEO), CAL enhances its competitiveness in the global supply chain and fosters collaboration with international trade partners. Since receiving AEO certification in 2012, CAL has conducted annual self-assessments based on security review criteria and undergoes on-site validation audits by Customs every three years. The latest audit was conducted by Taipei Customs in late 2023, and CAL was officially re-certified in January 2024. In October 2024, the Cargo Sales, Marketing & Services Division has led a company-wide self-assessment, with participation from the Management Committee and key divisions including the Corporate Safety Office, Human Resources Division, Information Management Division, Administration Division, Cargo Sales & Service Taiwan, Engineering Division, and In-flight Services Division, and the results were submitted to the Customs Administration for verification.



Authorized Economic Operator (AEO) On-site Calibration Meeting

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 Efficient Transportation Processes

① e-Air Waybill & e-Freight

CAL supports IATA’s electronic air waybill and e-freight initiatives, enabling paperless data exchange with cargo information providers, contractors, customs authorities, and warehouses. This streamlines communication, reduces operational costs for all stakeholders, minimizes delays caused by input errors or document loss, and significantly lowers paper consumption, thereby advancing CAL’s goal of achieving net-zero carbon emissions by 2050.



② Apron Mobility

Wireless transmission delivers real-time cargo and loading updates to mobile devices, preventing loading errors. Using PDAs to communicate with ground handlers reduces the idle time of ramp supervisors and improved cargo agents’ productivity.

A Ramp Supervisor Uses a PDA for Ramp Monitoring Operations

③ iCargo New System Implementation

In 2024, China Airlines successfully integrated the iCargo system developed by IBS Software into its strategic management infrastructure. By adopting the industry-leading iCargo digital technology, China Airlines has taken a significant step forward in its digital transformation journey, reinforcing its position among the world’s top 15 air cargo carriers. The implementation of iCargo has strengthened China Airlines’ capabilities in cargo sales management and import/export operations, optimizing cargo operational efficiency and enhancing customer satisfaction.

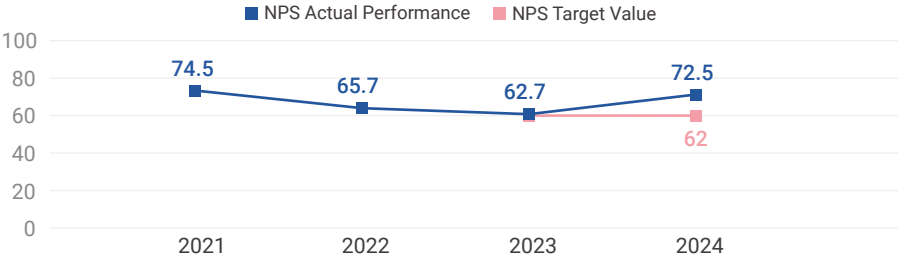
This technological transformation forms a key component of China Airlines’ broader digital transformation program. Through the gradual phase-out of legacy cargo systems and the proactive transition to a cloud-based SaaS model, the Company is expanding its cargo ecosystem, further integrating third-party software, streamlining operational processes, and improving overall efficiency. These initiatives also support China Airlines’ commitment to achieving net-zero carbon emissions by 2050.

2.1.4 Customer Relations Management

 Passenger Service Customer Satisfaction

To enhance the travel experience, China Airlines has established a comprehensive feedback mechanism. In addition to continuously monitoring customer satisfaction and willingness to recommend through passenger satisfaction surveys, passengers are also encouraged to provide feedback and suggestions regarding services through customer feedback channels and other communication platforms. By leveraging diverse feedback sources, China Airlines continuously identifies and addresses service gaps to improve passenger satisfaction and loyalty.

According to the results of the passenger satisfaction surveys conducted from January to December 2024, the Net Promoter Score (NPS) reached 72.5, exceeding the target value and representing an improvement over 2023. Looking ahead to 2025, we have raised our NPS target from 62 in 2024 to 69, reflecting passengers’ recognition of and expectations for China Airlines.



 Cargo Service Customer Satisfaction

The Cargo Sales, Marketing & Services Division distributes annual customer satisfaction surveys to cargo sales stations worldwide and actively encourages customers to provide feedback. In 2024, the customer satisfaction score reached 89.8. Due to the introduction of the new cargo system in the second half of 2024, some customers reported unfamiliarity with the new system interface, resulting in a slight decline in the satisfaction score compared to 2023. The Cargo Sales, Marketing & Services Division will continue to instruct all stations to enhance customer training and support to improve users’ familiarity and experience with the new system.

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Maintenance and Repairs Customer Satisfaction

The Maintenance Division distributes customer satisfaction surveys semi-annually to customers of airframe, engine, and component services, encouraging them to provide feedback on areas such as maintenance quality, maintenance time, parts and materials supply, service, and responsiveness. In 2024, a total of 27 questionnaires were collected over the course of the year, and the annual customer satisfaction score was 9.0.

Customer Satisfaction Category	2021	2022	2023	2024	2024 Objectives	2024 Attainment	2025 Objectives
Passenger Net Promoter Score (NPS)	74.5	65.7	62.7	72.5	62	100%	69
Cargo Service Customer Satisfaction (point)	88.3	89.5	91.6	89.8	88.5	100%	89
Maintenance and Repairs Customer Satisfaction (point)	8.57	8.24	8.8	9.0	8.4	100%	8.4 (Note)

Note. The maintenance and repairs customer satisfaction is calculated based on a ten-point system.

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. In terms of the operation and maintenance of the official accounts on social media, CAL uses suitable online language in line with contemporary issues to engage fans. We also held online activities with fans from time to time to expand CAL’s online sales channels. We support green energy initiatives for sustainability with the aim of taking real actions instead of adopting slogans to encourage other companies to fulfill their responsibilities for sustainable development.

Communication Channels

- 1. Service Hotline
- 2. Regular Mail
- 3. Facebook Page

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.

- 4. Customer Service E-mail
Instead of calling, customers can simply send e-mails to change reservations or confirm their itineraries.
- 5. Customer Feedback – Online Feedback System
- 6. Online Customer Satisfaction Survey

CAL continues to discuss to optimize website functions from passenger perspective, which include upgrading reservations and ticketing process, designing a new user interface, integrating service pages, and optimizing the self-service function for online changes. These efforts are aimed at optimizing service on an ongoing basis. In addition, CAL introduces real-time fare function, which provides passengers with dynamic references of fare and real-time flight information, enabling passengers to stay informed. The proportion of ticketing through CAL website significantly increased in 2024. The ratio of sales on CAL website increased to 35.3% for the year, with a sales amount of USD 1,035 million, which accounted for 37.4%.

Refer to the appendix: Online Sales Channels and Sales Amount Table

2.1.5 Information Security Management

Information Security Strategy

CAL’s Information Security and Personal Information Management Division, led by the Data Protection Officer (DPO) and Chief Information Security Officer (CISO), oversees information security and data protection. They lead independent teams to implement management measures aligned with international standards. CAL’s Information Security and Personal Data Management Committee, chaired by the President, meets at least annually to review and ensure effective system implementation and reports to the Board yearly. Board Director Chien-Hung Wei, an expert in Intelligent Transportation Systems (ITS) and AI, has relevant background in IT engaged on the cybersecurity strategy process, enabling him to provide independent and timely oversight to support information security.

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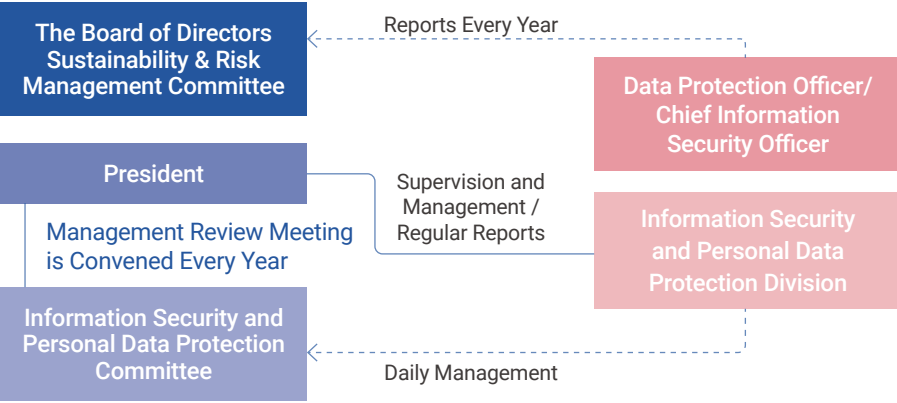
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Information Security and Personal Data Management Framework



Information Security Management

1. Information Security Management System

CAL's Information Security & Personal Data Protection Division oversees information security policies and governance to ensure regulatory compliance. The Information Management Division handles daily cybersecurity operations, while the Chief Information Security Officer works independently to maintain security management integrity.

2. Cyber Security Education and Training

In 2024, CAL conducted two rounds of mandatory security training for all employees (totaling three hours), along with a dedicated seminar for management. To enhance phishing awareness, three simulated email exercises were carried out; employees who clicked on links were given retraining. Additionally, four newsletters were issued to reinforce key messages on information security and data protection. CAL constantly reiterates to colleagues the importance of information security and personal data protection. For violations of regulations of information security or personal data, CAL shall impose penalties in accordance with reward and penalty regulations. If such violation incurs legal liabilities, employees shall be held accountable in accordance with related regulations.

Number of Trainees in Cyber Security Education and Training

CAL organized information security training for all personnel in June, and November 2024 to increase the information security awareness of all employees. A total of 21,648 attendances completed the training.

	2022	2023	2024
	43,992	34,104	21,648
	attendances	attendances	attendances

Information Security Technologies

1. Regular Evaluations and Exercises

The objective is to promptly restore information services and minimize losses due to business interruption. CAL conducts annual risk assessments of information systems, evaluating confidentiality, integrity, availability, and compliance, and develops business continuity plans for core information systems. In 2024, two disaster recovery exercises ensured readiness to restore critical systems quickly and minimize business interruptions.

CAL completed the annual information security inspections in October and November 2024 to strengthen the Company's overall information security protection. We reviewed information security matters (e.g., network architecture design logic and regional network allocation) and used the judgments of professionals to provide recommendations for improving information security and effectively reduce information security risks. CAL conducts monthly vulnerability scans on internal and external application systems, analyzes the results, and defines standardized remediation procedures. In addition, annual penetration tests are performed by independent third parties to further strengthen cybersecurity. The main target is the information system that the Company provides external services. The penetration tests were completed in December 2024, which includes information probing and error handling tests for meeting the requirements in the TOP 20 Critical Security Controls of the SANS Institute, the OWASP Top Ten Vulnerabilities announced by the Open Web Application Security Project (OWASP) and other standards for tests. The operations included preliminary tests and repeated tests to confirm that the vulnerabilities have been addressed.

2. Information Security Incident Response and Reporting

CAL has an incident response procedure that applies to all employees and provides clear steps for reporting security incidents through the company's internal messaging system. When an incident occurs, response actions are promptly taken to contain the impact and restore operations. CAL reports incidents to authorities as required by law. Annual simulation exercises help teams practice response protocols, improving readiness and incident management.



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Reporting Information Security Threats and Vulnerabilities

CAL's instant messaging system was used to send emails to all employees with reports on information security threats and vulnerabilities. A total of four reports were sent in 2024, continuously reminding all employees to stay alert to information security threats.

2022	2023	2024
Nine reports	Eight reports	Four reports

Information Security Certification and Audit

To strengthen CAL's information security, the Information Security and Personal Data Protection Department was established in March 2022 to lead the implementation of ISO 27001 certification, covering core passenger service systems and ICT infrastructure. All departments continuously improve security practices and conduct regular internal audits to ensure effective controls.

Audited by SGS, CAL obtained the ISO 27001:2013 Information Security Management System (ISMS) certificate in October 2022 and completed the annual recertification in October 2024, maintaining compliance with international standards and operational requirements. CAL also achieved Payment Card Industry Data Security Standard (PCI DSS) compliance certification issued by external security Qualified Security Assessors (QSA) in November 2024, ensuring secure credit card transactions and regulatory compliance.

In response to growing cybersecurity challenges, proactive monitoring and protection mechanisms were implemented. In 2024, there were no information security incidents, including data breaches, that resulted in regulatory penalties, and systems remained virus-free, stable, and fully operational.

2.1.6 Privacy Management

GRI 418-1

Personal Data and Privacy Protection

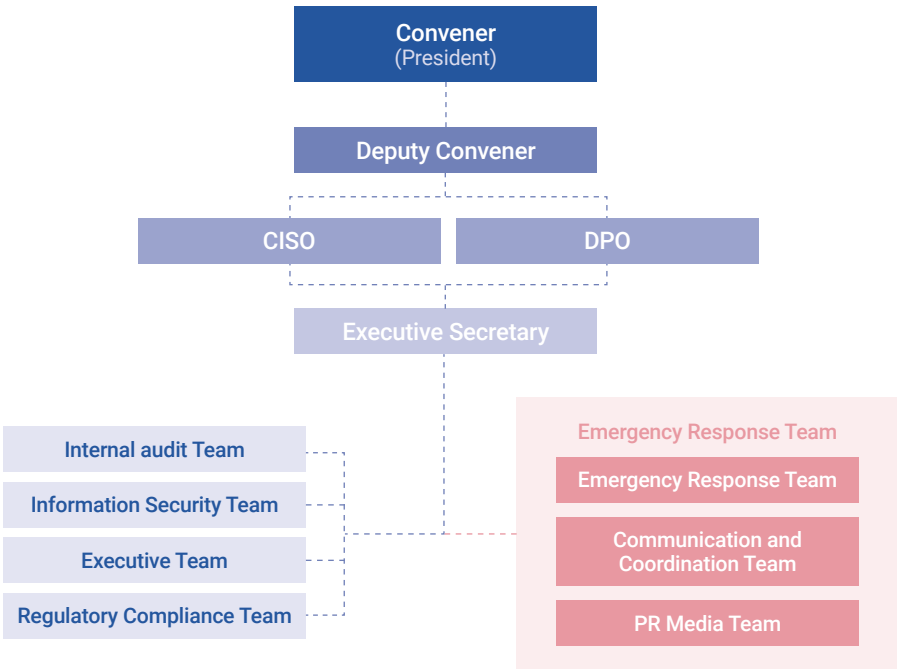
To ensure trustworthy personal data protection, CAL fully complies with relevant laws including Taiwan's Personal Data Protection Act, civil aviation regulations, and the EU's GDPR. CAL informs consumers about data protection and collects personal data only with their consent, detailed in the Company's "Privacy Protection Policy" and "Cookie Policy" on its website. The policy applies to all employees and subcontractors, who must also comply. CAL includes data protection clauses in supplier contracts, establishes management procedures, and regularly evaluates and audits subcontractors' data practices.



Privacy Protection
Policy and Statement

Personal Data Management Framework

The Information Security and Personal Data Management Division oversees the Company's information security and data protection efforts. Led by the Data Protection Officer (DPO) and Chief Information Security Officer (CISO), the division implements management measures aligned with international standards. The Information Security and Personal Data Management Committee, chaired by the President, meets at least annually to review and ensure effective system implementation and reports to the Board of Directors. Unit responsibilities are defined in the organizational procedure document.



Inquiry Channels for Personal Data Rights

CAL's official website has a page of "privacy protection," and the "Privacy Protection Policy and Statement" on the page outlining how personal data is securely collected, processed, and used only within authorized purposes. Data subjects may exercise their rights, including inquiry, correction, deletion, restriction, and withdrawal of consent, through the "Enquiry and Request for Personal Data" link on the CAL website or by contacting the Data Protection Officer at DPO@china-airlines.com. CAL will respond within the statutory timeframe. Since 2024, no privacy complaints have led to penalties.

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Personal Data Risk Assessment Mechanisms

CAL has established procedures to classify personal data and identify risks in data processing. The Information Security and Personal Data Protection Committee leads annual inventories, impact assessments, self-inspections, and risk evaluations across business units. If risks exceed acceptable levels, mitigation plans must be proposed and implemented to ensure effective operation of the PDCA (Plan-Do-Check-Act) management system.

Personal Data Internal Audit and Training

To review personal data management goals and meet privacy information management system requirements, CAL establishes internal audit procedures, plans annual audits in Q4, and conducts audits as scheduled. Results are reviewed by the President during the Information Security and Personal Data Management Committee meetings to ensure system effectiveness.

CAL provides regular training to promote personal data protection and codes of conduct among all staff. Specialized lectures are held for senior management, expatriates, and internal auditors based on their roles. Additionally, quarterly e-newsletters share real-case studies, regulatory updates, and key management highlights to raise awareness.

The results of personal data protection seminars and training programs in 2024 are shown in the table below:

Training Title	Frequency	Target	Number of people
Information Security and Personal Data Protection Training	20	New Employees	485
First Information Security and Personal Data Protection Awareness Training of 2024	1	All Staff	10,118
Second Information Security and Personal Data Protection Awareness Training of 2024	1	All Staff	11,530
Information Security and Personal Data Protection Management Guidelines	1	All supervisors of Level 2 and below in the Company	608
Executive Management Seminars	1	Senior Management	94
Information Security and Personal Data For Your Information E-newsletter	4	All Staff	All Staff

Personal Data Breach Response Mechanisms

CAL has established “Personal Data Breach Response Management Procedures” and a contingency plan to address unauthorized access, disclosure, or misuse of personal data. Annual response exercises ensure staff readiness. Contracts with subcontractors require timely breach notification and evidence preservation.

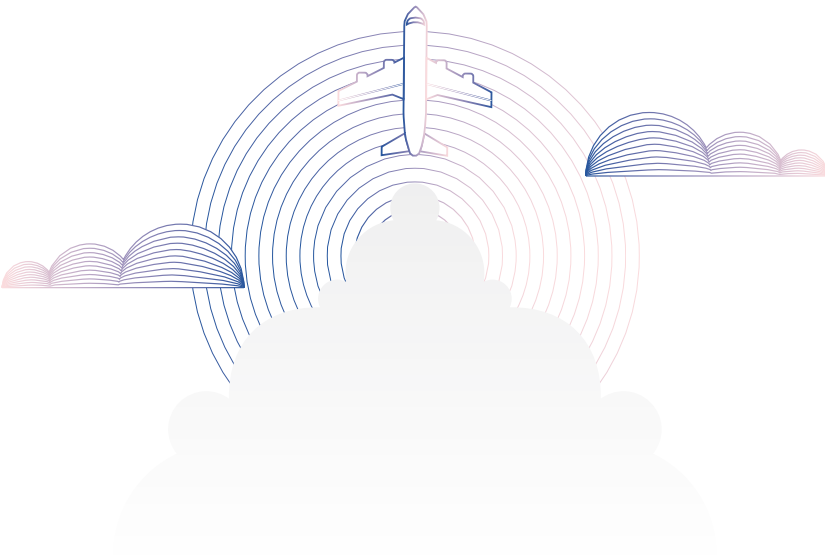


Personal Data Breach Contingency Flow



CAL's Personal Data Protection Milestones in 2024

- 1 Completed personal data inventories, internal audit, and risk assessment across unit in Taiwan and oversea branch offices.
- 2 Issued quarterly Information Security and Personal Data For Your Information E-newsletters as personal data protection awareness promotion for all employees.
- 3 Organized annual response exercises on personal data breaches.
- 4 Held the annual information security and personal data review meeting.



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Future Plans

Flight Safety



1 Renewing Flight Safety Certifications

Since first obtaining IATA Operational Safety Audit (IOSA) certification in 2005, CAL has undergone biennial renewals to uphold high flight safety standards. In preparation for the more rigorous Risk-Based IOSA framework, CAL actively aligns daily operations with the latest international standards, participates in global forums and training, and remains committed to the highest levels of aviation safety.



2 Regular Emergency Response Drills and Continuous Improvement of Procedures

Establishing a comprehensive emergency response mechanism is a critical component to ensuring business continuity. Therefore, China Airlines continually enhances the capabilities of its control personnel in handling aircraft and weather-related anomalies, while strengthening its monitoring and forecasting capabilities for extreme weather events arising from climate change. In 2024, the Company regularly conducts emergency response drills and reviews the response procedures to ensure that personnel can swiftly and accurately address unforeseen events in accordance with Standard Operating Procedures (SOP). Issues identified during the drills are analyzed and addressed to improve overall operational efficiency and response capabilities. Through continuous improvement, the organization maintains its competitive edge in a rapidly changing environment, ensuring operational stability and safety.



3 Digitalization of Flight Planning

CAL has digitized cockpit flight documents to improve pilot efficiency and flight safety. With real-time access via iPad apps to flight plans, weather data, airport information, and notices, pilots operate with enhanced situational awareness. The transition to digital systems also eliminates printed flight plans and delivery costs at airports, supporting sustainability goals.

Passenger Service



1 Enhancing Mobile Devices and Official Website Services

CAL redesigned its website with a new user interface, simplified structure, and improved system functions. Integrated itinerary management for both website and app makes trip planning easier. Personalized features like interactive marketing, countdown timers for promotions, and real-time dynamic fares on the homepage enable faster and more convenient booking. The app will expand to 12 languages with a refreshed design to enhance user experience.



2 Enhancement of In-Flight Wi-Fi Service

To meet passenger demand, CAL plans to offer free Wi-Fi for all passengers across all aircraft, including free text messaging. Premium cabin passengers and Gold members will enjoy unlimited free internet access. Collaborations with global network providers aim to optimize connection speed, stability, and simplify login and redemption processes, ensuring a smooth and quality online experience onboard.



3 Friendly Environment and Ecological Coexistence

Amid rising concerns over global warming and climate change, CAL is advancing paperless operations at airports to protect forests and reduce carbon emissions. For boarding passes and other printed materials, CAL prioritizes suppliers with international eco-certifications, sourcing forest-friendly paper products. Promoting digital and self-service check-in through online and mobile apps encourages passengers to reduce paper use and support carbon reduction efforts.

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Cargo Service



1 Responsive Evaluation and Optimization of the Flight Network to Market Demand Changes

In addition to handling Taiwan’s import/export cargo, CAL leverages Taiwan’s geographic advantage as a cargo transshipment hub, especially via Taichung, strengthening its position. CAL maintains a dense and flexible passenger-cargo network, adapting to regional market needs:

1. From February 2025, CAL will add Toronto (YYZ) to expand North American coverage beyond the U.S. and increase operational flexibility.
2. Focusing on Japanese cargo (machinery and vehicle parts), CAL maintains intermediate stops in Osaka (KIX) and Nagoya (NGO) on transpacific flights to Chicago (ORD) and adjusts LAX-NRT flights to optimize capacity.
3. To expand Asia-Europe cargo, CAL plans intermediate stops in Delhi (DEL), Mumbai (BOM), and Dubai (DWC), creating multi-leg revenue and strengthening Middle East and India markets.
4. The fuel-efficient 777F is prioritized on long-haul routes like LAX, SFO, JFK, ATL, MIA, FRA, and AMS to meet cargo demand and optimize capacity.
5. With manufacturing shifting from China to Southeast Asia, CAL strengthens connections between Taiwan, Southeast Asia, North America, and Europe, enhancing intra-Asia cargo and exploring Oceania, Middle East, and India markets. Passenger belly cargo and freighters are flexibly deployed based on local market and yield, with rolling reviews to optimize capacity and load factor.



2 Fleet Renewal for Enhanced Fuel Efficiency

In 2024, CAL retired five 744F freighters, operating eight 744Fs and added two 777Fs mid-year. By Q2 2025, the fleet totals 18 freighters: eight 744Fs and ten 777Fs. The 777F offers competitive payload, 20-25% fuel savings over 744F, better reliability, lower fuel and maintenance costs, and shared crew and engine types with 777 passenger aircraft, improving operational efficiency. The 777F is mainly deployed on long-haul routes to North America and Europe, enhancing cost efficiency and revenue. CAL also ordered four new 777-8Fs expected from 2031, promising further fuel and emission reductions for environmentally friendly operations.



3 Synergistic Multi-Dimensional Operational Strategy: Leveraging Passenger and Cargo Aircraft Capacity

As Taiwan’s only airline operating both 744F and 777F freighters, CAL flexibly matches aircraft types to market demand and cargo types. The 744F’s large payload and nose-loading capabilities suit oversized, high-value cargo like semiconductor equipment and engines, mainly on Japan and Southeast Asia routes, boosting regional consolidation and transshipment. Combining passenger belly cargo with freighter capacity aligns fleet operations with market trends and cargo demand. Beyond scheduled flights, CAL expands customized charters and additional flights, integrates express and interline partnerships to seize cargo growth opportunities. CAL’s cargo team has rich expertise handling high-value, precision cargo such as semiconductors, biotech cold chain products, and aircraft parts, ensuring quality and reliability as a strong competitive advantage.

In addition, by leveraging the extensive network of passenger flights, the Company maximizes synergy by utilizing both passenger aircraft bellyhold and cargo aircraft capacity. This ensures that the overall fleet operations align with market trends and cargo business demands. Apart from scheduled flights, the Company also caters to specific customer needs by expanding customized chartered flights, dedicated freighter services, and supplementary flights. This further strengthens integrated express and code-sharing partnerships, capturing opportunities for cargo growth. China Airlines has gained strong trust from customers due to its expertise in air cargo, particularly in transporting high-value or delicate items. This includes semiconductor wafers and equipment, pharmaceutical and biotech cold-chain products, as well as aviation parts. With rich and skilled operational experience in handling such cargo, the cargo team works diligently at every stage to ensure the quality of shipments, providing a strong foundation for securing cargo contracts.



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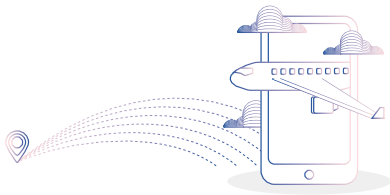
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Customer Relations Management



Passenger Service Customer Satisfaction

In 2024, the Net Promoter Score (NPS) for passengers reached 72.5, exceeding the target and showing an improvement from the 62.7 performance in 2023. Through innovation and a commitment to excellence, China Airlines continuously enhances the passenger service experience, aiming to maintain a competitive edge in the highly competitive aviation market.



Information Security



Information Security Management Certification

In 2024, CAL completed recertification and passed the ISO 27001:2013 Information Security Management System (ISMS) audit, ensuring operational information security meets international standards. CAL will maintain the certificate and aims to certify to the ISO 27001:2022 version in 2025, further strengthening information security and expanding the certification scope.



2 PCI DSS Compliance

CAL obtained the PCI DSS compliance certification in November 2024, which ensures the effectiveness of the Company's credit card transactions security and safeguards the rights and interests of passengers. This certification is conducted every two years, with the next certification scheduled for the end of 2026.

Privacy Information Management



1 Personal Data Management System

CAL's passenger reservations, ticketing and marketing service business processes have been officially issued with the ISO27701:2019 Privacy Information Management System (PIMS) certificate in 2023, with all personal data protection regulations within the scope of verification complying with regulatory requirements and international standards. We will continue to maintain the validity of the certificate in the future, and expand the scope of verification year by year.



2 Personal Data Protection Audit

CAL will continue to execute the personal data audit plan for overseas branch offices in 2025. By implementing onsite audits, we confirm that the personal data protection operations of overseas branch offices meet requirements in the Company's regulations and local laws.



AI Applications and Development

CAL continuously applies innovative technologies in system development to enhance technological capabilities and reduce operational costs. Through data analytics, CAL extracts deep insights to drive precise decision-making and optimize resource allocation, embedding innovation as a core driver for long-term competitiveness and sustainable growth. The 2025 AI strategy focuses on three key directions:

- 1. Joining advanced industry ecosystems to connect with diverse sectors.
- 2. Partnering with leading institutions to accelerate AI business development.
- 3. Implementing an in-house large language model (LLM) to accumulate and train domain knowledge across company units.

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2.2 Cooperation

★ Highlights



100% signing rate for Supplier Code of Conduct

Supplier Code of Conduct Signing Rate of Critical Tier-1 Suppliers 100%.



Awarded for Green Procurement

CAL Park, Maintenance Division, and Mandarin Airlines support green procurement and have been awarded related accolades by local government.



1st Taiwanese airline to conduct and continuously enhance supplier sustainability assessments

1st Taiwanese airline to perform and continuously enhance supplier sustainability assessments.

Management Approach

 Material Issues	⑥ Sustainable Supply Chain Management CAL's vision of "Leading Asia-Pacific, Flying Worldwide" has firmly established its reputation in Taiwan and around the world, and is committed to the operational objectives of corporate sustainable development. We deeply understand that only by cooperating with business partners can we truly implement corporate sustainable development and create sustainable value. Thus, we have formulated the CAL 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 applies 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 
 Importance of Material Issues	
 Commitment and Long-term Goals	Commitment To achieve supply chain sustainability ▪ 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 economically feasible products and services by considering their environmental and social effects. 3. Adhere to business ethics and morality and eradicate leakages, illegal benefits, and all forms of corruption.

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Commitment and Long-term Goals



- 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, rejecting 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

- 2025
 - 1. SAQ for critical tier-1 suppliers has achieved a risk assessment ratio of 100%. All tier-1 suppliers have reached 20%.
 - 2. Before making a purchase, the purchasing unit should establish a selection plan that takes into account the specific case. The plan should include ESG-related issues as at least 5% of the evaluation criteria.
 - 3. Both new suppliers signing contracts and existing suppliers renewing contracts should be obligated to comply with the commitments of the "Forest and Biodiversity Conservation Commitment".
 - 4. Optimize the risk management for sustainable supply chain, audit 100% of critical tier-1 suppliers and high-risk suppliers, and create a list of critical non-tier-1 suppliers.
 - 5. Develop a comprehensive supply chain improvement measures and capacity building programs, aiming to implement 50% of improvement measures and 50% of capacity building programs.
- 2030
 - 1. All critical tier-1 suppliers and SAQ for critical tier-1 suppliers have achieved a risk assessment ratio of 40%. Critical non-tier-1 suppliers have reached a risk assessment ratio of 30%.
 - 2. Include at least 5% ESG performance in procurement evaluation criteria for 40% of purchasing units.
 - 3. 40% of suppliers signing contracts should be obligated to comply with the commitments of the "Forest and Biodiversity Conservation Commitment".
 - 4. Continue to optimize risk management for sustainable supply chain, audit 100% of critical tier-1 suppliers and high-risk suppliers, and assess 30% of critical non-tier-1 suppliers.
 - 5. Develop a comprehensive supply chain improvement measures and capacity building plan, aiming to implement 100% of improvement measures and 100% of capacity building programs.
- 2040
 - 1. Perform 100% SAQ risk assessment for both critical tier-1 suppliers and critical non-tier-1 suppliers.
 - 2. Include at least 5% ESG performance in procurement evaluation criteria for 100% of purchasing units.
 - 3. 100% of suppliers signing contracts should be obligated to comply with the commitments of the "Forest and Biodiversity Conservation Commitment".
 - 4. Audit 100% of both critical tier-1 suppliers and critical non-tier-1 suppliers.
 - 5. 100% implementation of improvement measures for high-risk suppliers to ensure regulatory compliance.

Note: "Critical non-tier-1 suppliers" refers to suppliers who provide products and services to CAL through tier-1 suppliers, and meet the current definition of critical suppliers as defined by CAL.

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 Unit in Charge	Corporate Sustainability Committee – Cooperation 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 the Corporate Sustainability Committee, at least twice a year ▪ Cooperation Task Force reports to Corporate Sustainability Committee, every quarter	▪ The President is the highest-ranking decision-maker for the Supplier Sustainability Management Plan ▪ Perform supplier risk management through supplier risk assessment and supplier risk audit

Objectives and Plans

KPI	2024		
	Objectives	Performance	Achievement
Convene Annual Supplier Conference	One session	Held at the Novotel Taipei Taoyuan International Airport on November 29	100%
Conduct SAQ	Response rate at least 75%	Recycling Rate: 69%	92%
Critical Supplier SAQ Score	89	94.38	100%
ESG Training for Procurement Staff	Three sessions each year	Participated in three sessions of internal / external ESG online sustainability seminars	100%
Commitments to forest and biodiversity conservation	New(existing) suppliers signing contracts (renewing contracts) have reached 100% compliance rate	Both new suppliers signing contracts and existing suppliers renewing contracts are obligated to comply with the commitments of the "Forest and Biodiversity Conservation Commitment"	100%
Establishment of Supply Chain Corrective Action Plans and Capability Building Programs	▪ The implemented corrective action plans have reached 25% ▪ The implemented capacity building measures have reached 25%	▪ Implement corrective action plans for four high-risk suppliers ▪ Capacity building initiatives for 16 suppliers	▪ The implemented corrective action plans have reached 100% ▪ Capacity building measures have reached 33%
2024 Annual high-risk suppliers review	Coverage rate 100%	100% review completion	100%

Note: In order to continue the objectives and plans outlined in the 2023 Sustainability Report, the 2024 Sustainability Report will maintain the annual supplier conference, conduct supplier sustainability risk assessments, and evaluate the sustainability performance of critical suppliers, establishment of supply chain corrective action plans and capacity building programs, and continuous review coverage rate for high-risk suppliers.

 Grievance Mechanism

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

Stakeholder
Contact



Item	Department	E-mail
General Products	Administration Division	tpeuo@china-airlines.com
Aviation Parts	Engineering Division	AOG_DESK@email.china-airlines.com
E-shopping /Duty free	In-flight Service Supply Division	eShopping@china-airlines.com

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2.2.1 CAL Value Chain

GRI 2-6

The aviation industry supply chain is highly unique compared to other industries.As of the end of 2024, the CAL Group had established 28 joint ventures in business sectors including air transport, ground handling service, tourism, aerospace technology, air transport support, and logistics and warehousing. By integrating their strengths, the Group will optimize its overall quality of service, competitiveness, and value chain.



Definition of Material Procurement Types and Suppliers

Category (No. of Tier-1 Suppliers / Critical Tier-1 Suppliers)	Aviation Materials Aircraft Parts (8/26)	Aviation Fuel Fuel Required for Flight (27/ 5)	In-Flight Catering In-Flight Meals Offered to Passengers (21/3)	Ground Handling Service Airport Manpower (27/1)	General Products Goods Required for Overall Operations (163/14)
Importance	Aviation materials are critical for 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
Definitions of Critical Suppliers	- Irreplaceable suppliers - Cumulative annual procurement amount in the top 80%	- Irreplaceable suppliers - The procurement amount is accounted for over certain jet fuel cost in whole year	Suppliers offer long-haul service to provide return meals for a minimum of 4 stations (including the China Pacific Catering Services at Taipei Station)	- Irreplaceable suppliers. - Exclusive ground handling agent which is not affiliated with airlines - Yearly flights handling by the suppliers are accounted for over certain total flights of CAL	- Irreplaceable suppliers - Annual procurement amount in the top 15
Definitions of Tier-1 Suppliers	Annual procurement amount exceeds USD 1 million	Suppliers that supplied and produced fuel in the current year	Suppliers that offer meals for flights with passenger services in the current year	Ground handling agents that processed scheduled flights in the current year	All suppliers with transactions in the current year
Definitions of High-Risk Suppliers	Based on the result of SAQ, tier-1 suppliers with an SAQ score below 80 points are categorized as "high-risk suppliers". In cases where there are no suppliers with a score below 80 points, the lowest 1% of suppliers in the five major categories will be selected. Critical non-tier-1 suppliers who have an SAQ score below 80 points are classified as "high-risk suppliers"				
Definitions of Critical Non-tier-1 Suppliers	Suppliers who provide products and services to CAL through tier-1 suppliers, and meet the current definition of critical suppliers as defined by CAL.				
Definitions of Significant Suppliers	Critical Suppliers and High-Risk Suppliers				

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

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Upstream



Aircraft
Manufacturing



Aircraft Engine
Manufacturing



Ground Handling
Service Equipment
Manufacturing



Aircraft Leasing

Midstream



Ground Handling Service

- Taoyuan International Airport Service Co., Ltd.
- Taiwan Airport Service Co., Ltd.
- Dynasty Aerotech International Corp.



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. (Note 2)
- Eastern United International Logistics (Holdings) 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



Air Transport Support

- Sabre Travel Network Taiwan Ltd.
- Everest Investment Holdings Ltd.
- China Pacific Laundry Services Ltd.
- Delica International Co., Ltd. (Note 1)
- China Pacific Catering Services Ltd.
- Kaohsiung Airport Catering Services 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.



Airlines

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

Downstream



Tourism and Leisure

- CAL Hotel Co., Ltd.
- Dynasty Hotel of Hawaii, Inc.



Customer



Express Delivery

- CHUNG-HWA Express Co., Ltd.

Note 1: Delica International was dissolved in March 2024, and the liquidation process was completed in August 2024.

Note 2: Global Sky Express (Taiwan) convened an extraordinary shareholders' meeting in September 2024, during which a resolution was passed to dissolve the company.

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2.2.2 Sustainable Supply Chain Management

GRI 204-1.308-2.407-1.414-2

CAL has been promoting sustainable supply chain management since the beginning of 2014. Subsequently, we established a Cooperation Task Force Team for important procurement categories, including “aviation materials, aviation fuel, in-flight meals, service procurement, and general business affairs”; formulated long-term sustainability goals based on the United Nations’ Sustainable Development Goals (SDGs); and established [China Airlines’ Sustainable Supply Chain Management Policy Statement](#) and [Supplier Code of Conduct](#) with reference to the Global Reporting Initiative (GRI), ISO 26000, United Nations Global Compact (UNGC), International Labour Organization (ILO), and other international standards. CAL has also established a risk investigation mechanism and performed audit operations. Each year, CAL continuously reviews its procurement procedures and existing sustainable supply chain management mechanisms to ensure that suppliers comply with the CAL Supplier Code of Conduct, thereby preventing any violations of ESG requirements by suppliers. If a supplier violates the terms of the Supplier Code of Conduct, CAL may terminate the partnership. We also organize annual supplier conferences to improve suppliers’ sustainability risk awareness and regularly report the management results to the Corporate Sustainability Committee for follow-up inspection on a quarterly basis. The President is the highest-ranking decision-maker of the Corporate Sustainability Committee.

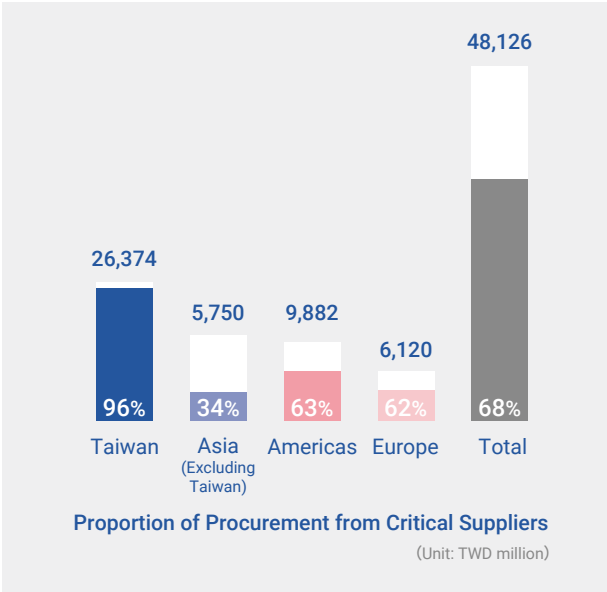
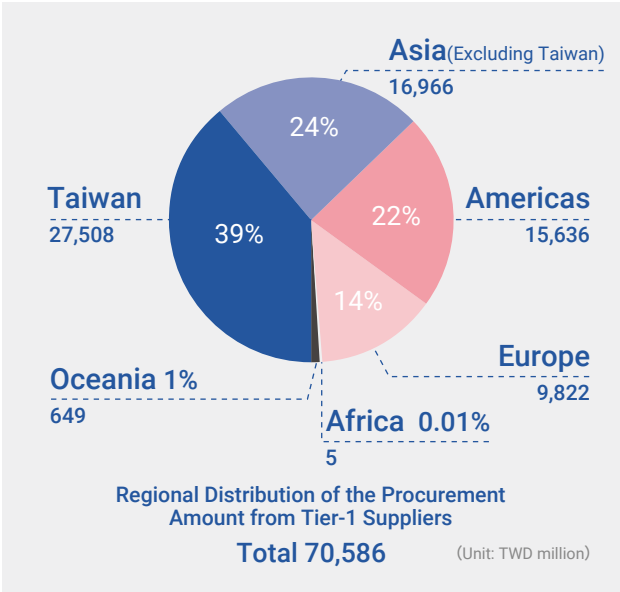
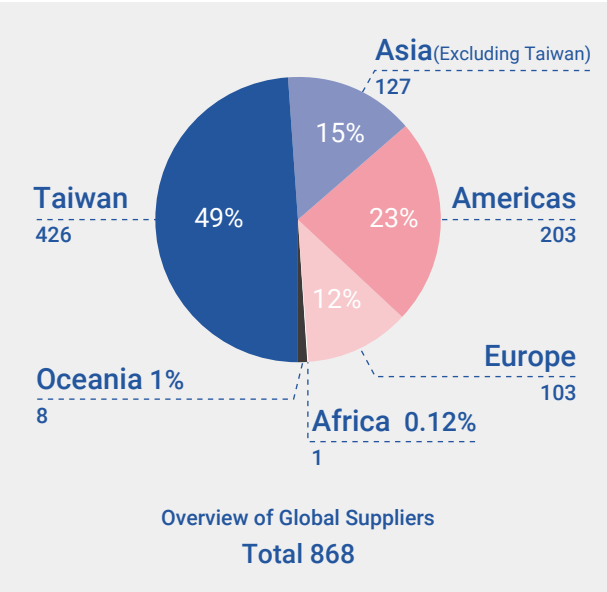


Supplier Code of Conduct

Supply Chain Management Objectives and Exit Mechanism

CAL’s primary operations and supply chain are based in Taiwan, where 49% of all suppliers are located, accounting for 39% of the total procurement amount, the highest proportion globally. This is followed by the Americas, Asia, Europe, Oceania, and Africa. Furthermore, CAL’s operational bases and suppliers have not violated workers’ rights to freedom of association or collective bargaining. CAL continues to monitor whether its partner suppliers engage in any illegal practices related to forced labor and other human rights issues. Additionally, it prioritizes collaboration with suppliers that demonstrate strong performance in Environmental, Social, and Governance (ESG) criteria to ensure the stability of the supply chain. CAL also uses the SAQ for sustainability risk assessments each year to track the identified actual social impact in the supply chain and observe whether there is potential negative social impact and regional political and economic risks. The contracts between CAL and suppliers include provisions that require the completion of improvement operations within a specified timeframe (e.g.180 days) if there is a violation of the CAL Supplier Code of Conduct. Failure to meet the improvement requirements will lead to the termination of the partnership. Additionally, ongoing monitoring will be conducted to further enhance the overall sustainability performance of the supply chain.

Regional Distribution of Suppliers (incl. Tier-1)



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2024 Supplier ESG Program Achievements

01.Sustainable Supply Chain Procurement Practices

Best Practices

CAL Expands Application of SAF, Pioneering Low-Carbon Aviation

CAL is actively promoting the use of Sustainable Aviation Fuels (SAF) and once again participated in The Aviation Challenge (TAC) of the SkyTeam Alliance in 2024. The airline operated the CI100/CI101 demonstration flight from Taoyuan to Tokyo Narita using the A350-900, a new generation of fuel-efficient aircraft, to demonstrate its commitment to sustainable development. This flight utilized 20% SAF, representing a pioneering collaboration within the domestic aviation industry regarding the value chain of a single passenger flight. This initiative was supported by China Trust Bank, the issuing institution of the joint card with China Airlines, as part of a concerted effort to promote low-carbon flying.

CAL has been utilizing SAF since 2017, putting it to use on passenger flights for the first time in 2023. This year, this has been further expanded on through collaboration with its long-term aviation fuel supplier, Japan's ENEOS, to implement SAF operations and execute voluntary carbon offsets, achieving full carbon neutrality for flights CI100 and CI101, thereby realizing net-zero carbon flight. According to information from the International Air Transport Association (IATA), SAF has the potential to reduce carbon emissions by approximately 80%. This initiative will not only provide environmental benefits to CAL but also help foster energy transition and the advancement of low-carbon transportation within the aviation industry.

CAL continues its commitment to environmental sustainability by integrating carbon reduction practices into daily operations. We prioritize using paper boarding passes made from materials certified by forest verification standards and promote online check-in and electronic boarding pass services to reduce paper usage in the boarding process. In-flight services encourage passengers to choose the low-carbon Michelin Green Star Yang Ming Spring vegetarian meals and offer electronic menu services. Economy class has switched to eco-friendly, recycled stainless steel cutlery, which is being gradually implemented across all routes. We provide eco-friendly materials for pillowcases, headrest covers, tray covers, plastic cups, dental floss picks, and restroom product containers. Additionally, we continue to promote a paperless cloud-based library, encouraging the use of personal devices to read digital newspapers and magazines, reducing the load of physical publications. Since its launch, this initiative has reduced weight by over 2,000 metric tons.

Unit : TWD thousand						
item	Scope	2020	2021	2022	2023	2024
 Environmental Management	O&M of environmental protection equipment and management systems, and investment in research projects. (Note 1)	23,390	29,811	27,081	25,357	25,960
 Green Procurement	Category I, II, and III products prescribed in the Regulations for Priority Procurement of Eco-Products (dated January 15, 2001)	10,199	6,455	9,221	46,844	79,894
 Waste Management	Waste disposal fees	3,854	4,107	4,261	5,980	6,307
 Noise Prevention	Noise control fees	136,812	136,136	129,674	151,005	153,881
 Air Pollution Prevention	Air Pollution prevention fees	819	589	615	384	461
Total Investment Amount		175,074	177,098	170,852	229,570	266,503

Note 1: Depreciation, renewal, operation and maintenance, of pollution prevention equipment; environmental testing; implementation of the environmental management system; and investment in research projects

Note 2: Annual special investments and promotional projects are not included in this table. (Please refer to the financial yearbook for more detailed information.)

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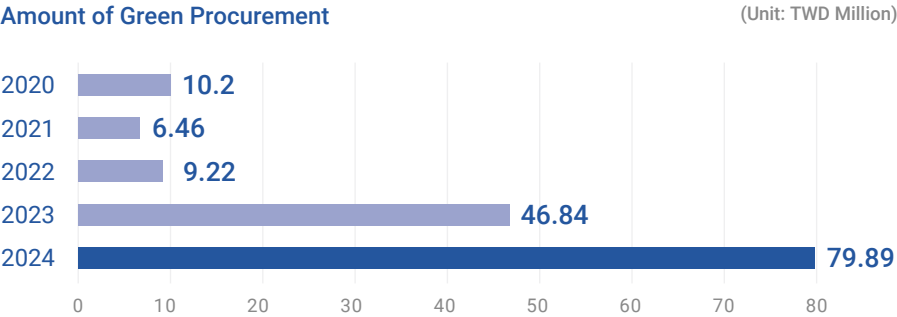
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Green Procurement

As CAL enhances its operations, it continues to implement its green procurement policy. In 2024, green procurement spending increased by 71% compared to 2023, earning CAL recognition from the Taoyuan City Government as an outstanding enterprise. In addition to selecting environmentally certified products for daily use—such as stationery, office equipment, and high-efficiency air conditioning and appliances—CAL allocates annual budgets to electrify outdated vehicles and equipment, balancing operational efficiency with air pollution and carbon emission reductions. Sustainability certifications are also a key consideration in selecting passenger service items. CAL uses FSC/PEFC-certified products, including paper boarding passes, menus, napkins, luggage tags, and eco-friendly hand towels, demonstrating its commitment to forest and biodiversity conservation. Additionally, we continue to promote systematic, digital, and mobile operations to raise awareness of green consumption and reduce environmental impact at the source.



Note: Green procurement includes Category I, II, and III products prescribed in the Regulations for Priority Procurement of Eco-Products.

CAL Group's Mandarin Airlines is committed to implementing environmental and energy management principles to ensure sustainable development. The company has also focused on procurement to practice green consumption, contributing to environmental sustainability. On May 15, 2024, Mandarin Airlines was recognized by the Taipei City Environmental Protection Bureau as an outstanding private enterprise in green procurement.



Director Huang of the Public Relations Office at Mandarin Airlines received recognition for outstanding performance in green procurement from Taipei City.



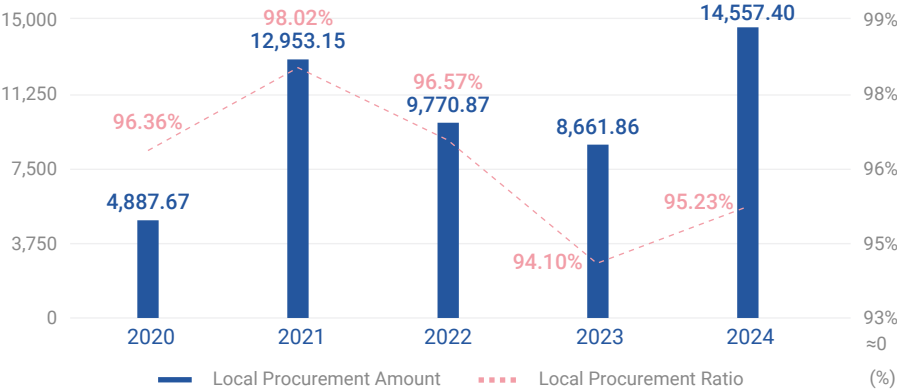
The Deputy Manager of the Maintenance Division represented CAL in receiving recognition as an Outstanding Enterprise for Green Procurement from Taoyuan City.

Local Procurement

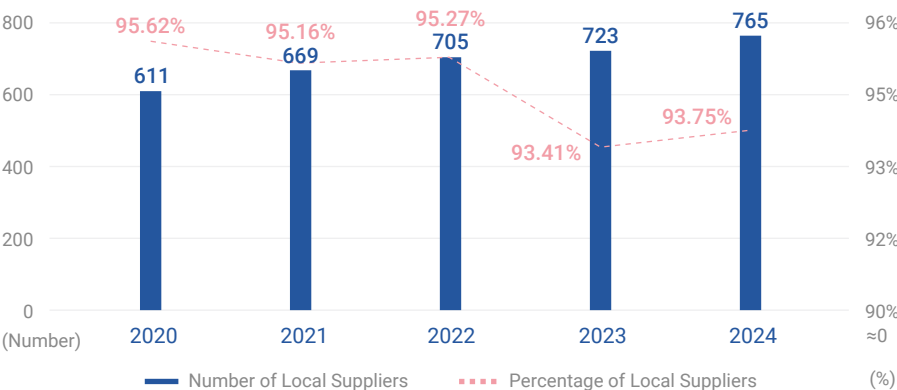
From 2020 to 2024, CAL has continuously refined its procurement strategy to increase local sourcing and reduce its carbon footprint. In 2024, the proportion of local procurement rose by 1.13% compared to 2023, with a 68% increase in total procurement spending. The share of local suppliers grew by 0.34%, and their total number increased by 6% year-over-year.

CAL actively promotes local procurement at its operational bases and destinations served by CAL flights. Through strategic adjustments, CAL has steadily increased both the volume of local procurement and the number of local suppliers. These efforts have enhanced supply chain resilience, improved operational efficiency, and supported environmental goals—demonstrating CAL's commitment to corporate social responsibility.

Amount of Local Procurement



Number of Local Suppliers



Note: The statistics include the Administration Division and the maintenance park.

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02. Risk Assessment of Supply Chain Sustainability
(Supplier Screening)

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, ensuring that CAL fully identifies high-risk suppliers and implements review procedures to mitigate sustainability risks in the supply chain.

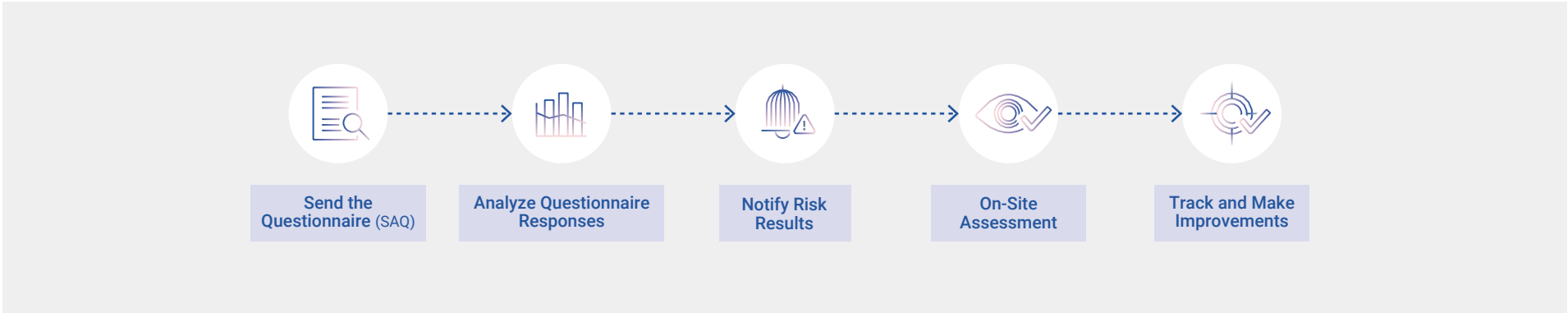
In the SAQ section, CAL conducted a survey of 49 critical tier-1 suppliers for 2024, achieving a response rate of 69%. Analysis of the survey results shows that the total number of valid questionnaires for 2024 reached 58, an increase of 10 compared to 2023. The average score was 94.38. Upon further examination of the four survey dimensions, the average scores ranged from 90 to 97, indicating that key suppliers possess a sustainable concept in all four areas.

Note: "Governance" includes ethics and regulatory compliance. "Environment" refers to energy and resource management and conservation "Society" includes human rights and labor conditions, and occupational safety and health. "General" includes quality and safety and information security.

Dimensions of Consideration and Risks in Supplier Screening

Dimension / Risk	Explanation
 Environmental Criterion (E)	This includes but is not limited to waste management, energy management, and biodiversity
 Society Criterion (S)	This includes but is not limited to human rights and labor rights
 Governance Criterion (G)	This includes but is not limited to anti-corruption and bribery
 Country-specific Risks	Appropriate management mechanisms and monitoring measures, such as audits, should be implemented to ensure that the company's procurement does not originate from countries known for high levels of corruption, instability, political conflict, or weak regulatory capacity
 Sector-specific Risk	Identify suppliers that are more likely to have negative environmental, social, and corporate governance risks based on the attributes of the procurement category and strengthen management
 Commodity-specific Risk	This includes, but is not limited to, the acceptance of regular inspections of oil products, operations, or equipment; compliance with food safety control systems; and the provision of airworthiness certificates or quality assurance documents for each transaction related to aviation materials

Procedures of Identifying Risk of Supply Chain Sustainability



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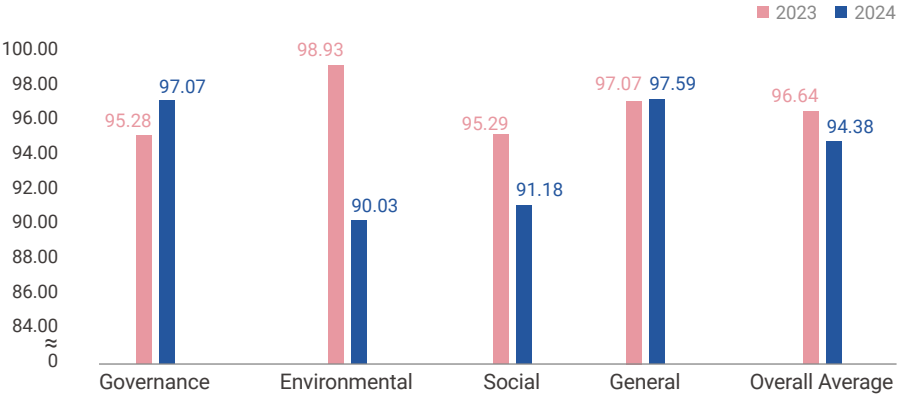
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Supply Chain Sustainability Risk Assessment
Implementation Status

Suppliers	2023	2024
Tier-1 Suppliers	838	246
Critical Tier-1 Suppliers (Share of Total Procurement Spent %)	50 (59%)	49 (68%)
Non-tier-1 Suppliers	1	0
Tier-1 Significant Suppliers	50	53
Proportion of Procurement from Tier-1 Significant Suppliers	59%	72%
Non-Tier-1 Significant Suppliers	1	0
Risk Assessment of Supply Chain Sustainability (Supplier Screening)		
Tier-1 Suppliers Assessed Annually	48	58
Significant Suppliers Assessed Annually	49	38
High-Risk Suppliers		
Tier-1 Suppliers Classified as High-risk (Share of Total Procurement Spent %)	5 (9%)	4 (4%)
Number of Non-tier 1 Suppliers Classified as High-risk	0	0

Note: Significant suppliers include both critical suppliers and high-risk suppliers. When calculating the quantity, if a supplier is classified as both a key supplier and a high-risk supplier, it will not be counted more than once.

2024 Risk Survey of Supply Chain Sustainability



Overall Performance of Supply Chain Sustainability

Overall Average

In 2024, the score of supply chain sustainability risk assessment was 94.38 points.



Governance

The score of 97.07 represents an improvement over last year's score of 95.28, indicating that suppliers have made progress in regulatory compliance and governance structures. However, ongoing attention and enhancement of governance mechanisms remain essential.



Environmental

The score of 90.03 represents a decrease from last year's score of 98.93, indicating a decline in supplier performance concerning environmental issues. In response to this trend, we will revise our approach to enhance requirements for suppliers to focus on environmental considerations and propose relevant environmental policies.



Social

The score has decreased to 91.18 from 95.29 last year, indicating that occupational safety and social responsibility within the supply chain continue to require ongoing attention. We will continue to require suppliers to strengthen their management of occupational injuries, ensuring compliance with safety standards and reducing the incidence of workplace accidents.



General

The score of 97.59 shows a slight improvement compared to last year's score of 97.07, marking the best performance across all aspects. Moving forward, we will continue to monitor the implementation of privacy management and the overall operational standards upheld by our suppliers.

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03. Sustainable Supply Chain Assessment

The results of the 2024 China Airlines Supply Chain SAQ analysis indicate that there are four high-risk suppliers for the year. Audit investigations have revealed that some suppliers still need to improve their performance in environmental and social aspects. In the areas of establishing an environmental management system, waste classification and recycling, and monitoring suppliers' environmental performance, some suppliers still need improvement. Additionally, the management of human rights and labor conditions has not met the standards.

To enhance supply chain management efficiency, CAL will continue to monitor and guide suppliers, requiring improvements to elevate their sustainability management capabilities. This year, we selected one high-risk supplier for in-depth analysis. Using a radar chart, we compared its scores with the category average to identify areas with significant gaps and provided benchmark cases and improvement suggestions.

To ensure the sustainable development management of supply chain partners, CAL continues to promote audit programs at various stages to monitor the actual implementation of environmental and social practices by its suppliers.

No critical tier-1 suppliers have terminated the partnership in 2024. In the future, CAL will enhance guidance and supervision for suppliers that have room for improvement in environmental and social aspects. We will also strengthen their awareness of and compliance with regulations to ensure that supply chain partners can achieve higher sustainability standards.

04. Assisting Suppliers Reduce Risks

Corrective Action Plans and Capacity Building

In 2024, one high-risk supplier was supported in completing corrective actions through the SAQ and audit process. In terms of capacity building, the supplier identified through the SAQ analysis was Taiwan Airport Service Co., Ltd. (TASCO).

This training program marks CAL's inaugural sustainability education course tailored specifically for suppliers, with a particular emphasis on the group's subsidiaries, thereby enhancing its overall purpose. The headquarters of TASCO has demonstrated strong support for this event by actively participating in discussions

Supply Chain Sustainability Assessment Implementation Status

Suppliers	2022	2023	2024
Critical Tier-One Suppliers Assessed for the Year (Percentage of Total Critical Suppliers)	9 (20.45%)	13 (26%)	22 (45%)
Assessed in the Past 3 Years (Percentage of Total Critical Suppliers)	79.55%	90%	98%
High-Risk Suppliers			
High-risk Suppliers Assessed in the Current Year (Percentage of Total High-Risk Suppliers)	0 / 0% (No high-risk suppliers in the current year)	1 / 20%	0 / 0%
High-risk Suppliers Assessed At Least Once Every 3 Years (Percentage of Total High-Risk Suppliers)	0%	0%	25%
High-risk Suppliers with Corrective Action Plans and Completed Improvements	0% (No high-risk suppliers in the current year)	0% (The implementation of Corrective Action Plans is planned to begin in 2024)	0%
Significant Suppliers			
Assessed in the Current Year (Percentage of Total Significant Suppliers)	Beginning in 2023, we conduct inventories of our significant suppliers	25%	42%
On-site Assessments		3	10
Desk Assessments		10	59

and enthusiastically sharing their experiences and challenges. Through this guidance, the supplier has strengthened their understanding and practical application of sustainable management, laying a solid foundation for the sustainable development of future supply chain partners.



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Capacity Building	Project of Capacity Building	2024 Achievements / Results
 Deepening Environmental and Sustainable Governance	To enhance the integrity and performance of CAL Group's environmental and sustainability governance, a Group Sustainability Governance Communication Meeting was scheduled for November 7, 2024. General managers from all Group companies gathered to understand international trends in sustainability and environmental governance, market competitive pressures, and development opportunities, and to build consensus on the Group's environmental and sustainability governance.	During the meeting, subsidiaries were invited to establish environmental or ESG committees, as well as other cross-unit promotional organizations, to continuously enhance environmental and energy performance and objectives. Additionally, CAL Group is committed to implementing and expanding the environmental management system in phases, taking into account factors such as company size, environmental risks, and competitive advantages.
 Enhancing Environmental and Carbon Management Performance	- CAL conducts regular surveys to monitor resource use and identify environmental risks and opportunities. It also engages external consultants to help group partners build ISO 14064-1 GHG inventory capabilities, covering requirements analysis, data collection, and internal verification. - Under the Corporate Environmental Committee and ISO 14001 framework, we manage suppliers, conduct audits, and promote environmental and energy-saving measures.	- Assisted 12 Group partners in setting 24 energy and resource management targets with 100% attainment for 19 targets. Implemented environmental protection and energy conservation measures to reduce electricity consumption by 654,000 kWh and reduce diesel consumption by 374 liters. - Assisted 14 Group partners in achieving 100% completion of carbon inventory; in 2023, total emissions for Categories 1 and 2 were 504,926 tons CO₂e, and for Categories 3 to 6 were 114,669 tons CO₂e, with all verified by a third party in 2024.
 Fostering Consensus on Environmental Sustainability	In alignment with international trends and practical operational requirements, thematic workshops, courses, communication meetings, and lectures will be conducted periodically, inviting Group partners to participate.	In 2024, CAL conducted seven training sessions on environmental sustainability topics, including "Environmental Energy Management Systems," "TCFD Climate Risk Disclosures," "CORSIA," and the "Corporate SAF Collaboration Program." Additionally, one Group Sustainable Governance and Environmental Management Communication Meeting was held, along with an environmental lecture featuring a section chief from the Ministry of Agriculture's Forestry and Nature Conservation Agency, who shared insights on ecotourism management.

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

In 2024, CAL continued to promote sustainability education and training for procurement personnel to deepen their understanding of sustainable practices. The training focused on the development, core concepts, and operational impacts of the EU Corporate Sustainability Due Diligence Directive (CSDDD), along with corresponding measures in Taiwan, such as the Guidelines for Taiwanese Supply Chain Enterprises to Respect Human Rights.

CAL also invited external experts to deliver practical training on sustainability audits, ensuring procurement practices aligned with the Company's sustainable supply chain policies and systems. Through its supplier conference platform, CAL actively engaged supplier partners, reiterating its sustainability policies, principles, and commitments. CAL also shared its environmental initiatives, including sustainable aviation fuel practices and biodiversity conservation, to reinforce ESG values throughout the supply chain.

2.2.3 Sustainable Supply Chain Engagement

Convene Annual CAL's Sustainable Supplier Conference

CAL convened the 9th Annual Sustainable Supplier Conference on November 29, 2024, at Novotel Taipei Taoyuan International Airport, with 28 domestic suppliers (42 partners) in attendance. Sam Lin, Executive Vice President of KPMG Taiwan, delivered a presentation on global sustainability trends to help suppliers understand the urgency of environmental sustainability and the circular economy, while raising awareness of carbon reduction and biodiversity conservation.

Mr. James Chung, Chief Sustainability Officer of CAL's Sustainable Development Center, shared insights on the aviation industry's approach to sustainability, covering governance and disclosure trends both in Taiwan and globally, as well as CAL's sustainable operations. He also addressed key topics such as carbon reduction and the use of SAF. From 2022 to 2024, CAL participated in the SkyTeam The Aviation Challenge, integrating innovation and service to realize sustainable flight. In 2024, CAL led the Taiwanese aviation industry in advancing sustainability across the value chain.

During the meeting, a workshop was held to present CAL's sustainable supply chain strategy, risk assessment, and procurement outcomes, emphasizing the creation of sustainable value with partners. CAL aims to strengthen its procurement mechanisms and reduce workplace safety risks through effective supply chain management and training, enhancing sustainability across the value chain. We also outlined our future goals and plans for a sustainable supply chain.

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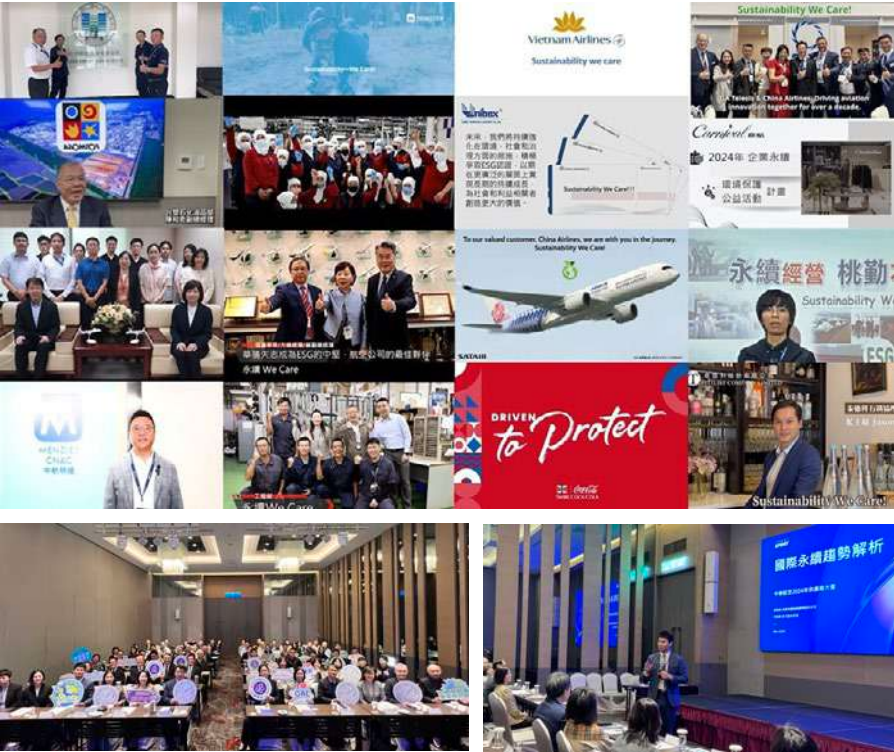
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CAL regularly shares sustainable practices and benchmark cases to help suppliers adapt to emerging trends. This support focuses on: (1) promoting sustainable strategies and encouraging supplier commitment, and (2) addressing key risks—such as high injury rates—based on assessments and audit findings, to improve supplier safety and operational stability. To further deepen supplier understanding of global best practices, CAL invited dnata, one of its suppliers, to share its international experience and successful cases in sustainable operations, offering valuable insights and references.



Future Plans



CAL will continuously survey supply chain partners on their sustainability practices and advance sustainable supply chain management by completing 100% SAQ for critical tier-1 suppliers and 40% for all tier-1 suppliers by 2030, implementing corrective action plans and capacity-building programs, establishing evaluation criteria for purchasing units, and incorporating at least 5% ESG performance into procurement evaluations.



CAL continues to provide sustainability training for its personnel through internal courses and external programs. It also offers all domestic suppliers sustainability training—both written and in-person—to enhance their procurement teams' knowledge.



CAL is intensifying its sustainable development strategy by advancing low-carbon transition, optimizing environmental management, and minimizing environmental impacts. Collaborating with supply chain partners, CAL strengthens carbon reduction efforts, promotes green procurement, resource reuse, and environmentally friendly technologies to boost value chain sustainability and competitiveness, aiming for long-term carbon reduction and net-zero targets.



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★ Highlights



First Transportation Company in Taiwan to Pass SBTi Validation

In June 2024, CAL became the first transportation service provider in Taiwan to officially pass the review of the Science Based Targets initiative (SBTi), setting a 1.5°C-aligned emissions reduction pathway. This target aligns with the global climate goals under the UN Paris Agreement and demonstrates CAL's commitment to science-based climate action and the transition to net-zero emissions.



CDP SER A List Recognition

CAL has responded to the CDP climate change questionnaire for 12 consecutive years since 2012, and actively promotes and implements supply chain/value chain management. After receiving a Leadership-level A- rating for five straight years, CAL was named to the CDP SER A List in 2024 for its active efforts in climate action and supply/value chain management.



11th Time Receiving TCSA Climate Leadership Award

CAL has received the Climate Leadership Award for eleven consecutive years since 2014, an unrivaled feat in Taiwan's transportation service industry.



Co-create Carbon Reduction Value with Customer Partners through Sustainable Aviation Fuel (SAF)

CAL is the first in the Taiwanese aviation industry to introduce a SAF procurement cooperation model, providing traceable and verifiable carbon reduction reports. Leading the way in collaborating with passenger and cargo enterprises to use SAF, collectively reducing aviation carbon emissions and the carbon footprint of customer employees traveling by air and transporting goods, driving cooperation with industry supply chains to promote the aviation industry's energy transition.



Conducting Cabin Waste Investigation to Explore the Possibilities of Innovative Circular Economy

Through ongoing communication among cabin service, in-flight supply operations, and ground handling teams at CAL, we continuously optimize our operational processes to create opportunities for recyclable materials to re-enter the circular economy.



Supporting Reforestation Initiatives to Foster a Shared Journey Toward Ecological Sustainability

CAL hosted the "Exploration of the Mountains' Beauty" Event, bringing corporate resources to Indigenous tribal communities, with the aim of setting an example for others and inviting business partners to join in experiencing eco-friendly journeys together.

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Best Practices

To reduce cabin waste, China Airlines partnered with its ground handling agent in December 2019 to collect and analyze waste from selected short- and long-haul flights. In August 2024, CAL further optimized waste audit procedures and task allocation, referencing Aviation Sustainability Forum (ASF) practices to strengthen pre-flight data collection, post-flight analysis, and strategic feedback.

The 2024 Cabin Waste Weighing Project found per-passenger waste averaged 0.5 kg on short-haul and 0.81 kg on long-haul flights—both lower than 2019 levels and ASF benchmarks. Analysis identified future focus areas including flight duration, passenger schedules, and packaging design to balance customer experience with waste reduction.



2024 Cabin Waste Weighing Project: Figure A - Weighing of Cabin Cleaning Waste; Figure B - Weighing of Cabin Catering Waste.

Management Approach

 Material Issues	E Climate Change Mitigation and Adaptation E Energy Management E Environmental Operational Efficiency and Resource Management E Green Services and Sustainable Catering E Biodiversity
 Importance of Material Issues	According to the latest Global Risks Report 2025 published by the World Economic Forum, various industries, including the aviation sector, have faced diverse and rapidly changing operational challenges over the past two years. These challenges include extreme weather events, geopolitical shifts, and cyber espionage activities. In addition to addressing short-term risks, as time goes on, high concentrations of greenhouse gases will exacerbate the intensity of extreme weather events, disrupt biodiversity, and lead to ecosystem collapse, resulting in the irreversible degradation of living conditions such as shortages of natural resources. As a sustainability leader in the aviation industry, China Airlines recognizes that achieving long-term sustainability goes beyond continuously improving internal management practices and optimizing operational processes. It also requires integrating both internal and external resources, building collaborative models, and fostering a shared sustainability vision across the value chain. This is a key strategy that demands ongoing attention and investment, aiming to deepen sustainability and environmental awareness. Through collective collaboration, we can unlock even greater possibilities.
 Commitment and Long-term Goals	Commitment CAL is committed to abiding by relevant regulations in civil aviation, environmental protection, and energy strengthen risk management mechanisms, actively participating in environmental sustainability-related organizations and initiatives both domestically and abroad, and implementation of the Company's environment and energy policies. CAL continues to strengthen and optimize its own environmental sustainability as its momentum, reducing environmental impact and cherishing the limited resources on the planet. With its own role, CAL will lead the Group and the aviation industry to jointly protect our planet for the sustainable development of future generations.

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Commitment and Long-term Goals



Long-term Goals

2025

- Improving annual aviation fuel efficiency by 1.5% and achieving carbon-neutral growth (ICAO CORSIA CNG2020)
- Use 0.5% SAF
- Reducing carbon emissions in ground operations by 5% compared to 2023

2030

- Improving annual aviation fuel efficiency by 1.5% and achieving carbon-neutral growth (ICAO CORSIA CNG2020) (An additional SBTi target is set to improve fuel efficiency by 26% compared to the 2019 baseline.)
- Use 5% SAF
- Reducing carbon emissions in ground operations by 15% compared to 2023
- With renewable energy installed capacity reaching 10%(Note 1) of the contract capacity

2040

- Improving annual aviation fuel efficiency by 1.5% and achieving carbon-neutral growth (ICAO CORSIA CNG2020) (net-zero emissions by 2050)
- Used 40% SAF
- Reducing carbon emissions in ground operations by 60% compared to 2023 (net-zero emissions by 2050)
- With renewable energy installed capacity reaching 15% of the contract capacity (Note 1)



Reducing tap water withdrawal by 7% compared to 2018

Reducing tap water withdrawal by 10% compared to 2018

Reducing tap water withdrawal by 12% compared to 2018



- Reducing general waste (non-recyclable) by 7% compared with 2018
- Increasing industrial waste recycling ratio to 45%
- Reducing paper consumption by 30% compared to 2018
- Use a 10% of sustainably certified paper/wood items for air/ground service needs
- Reducing total in-flight waste by 50% compared to 2018
- Reducing use of single use plastics items and packaging for in-flight services by 90%

- Reducing general waste (non-recyclable) by 12% compared with 2018
- Increasing industrial waste recycling ratio to 50%
- Reducing paper consumption by 50% compared to 2018
- Use a 50% of sustainably certified paper/wood items for air/ground service needs
- Reducing total in-flight waste by 65% compared to 2018
- Reducing use of single use plastic items and packaging for in-flight services by 100%

- Reducing general waste (non-recyclable) by 15% compared with 2018
- Increasing industrial waste recycling ratio to 58%
- Reducing paper consumption by 52% compared to 2018
- Use 80% of sustainably certified paper/wood items for air/ground service needs
- Reducing total in-flight waste by 70% compared to 2018
- Reducing use of single use plastic items and packaging for in-flight services by 100%



- Embargoing transport of illegal wildlife and prohibiting use of illegal species as food ingredients
- A total of 2 biodiversity conservation-related activities or initiatives have been participated in and implemented since 2023

- Embargoing transport of illegal wildlife and prohibiting use of illegal species as food ingredients
- A total of 4 biodiversity conservation-related activities or initiatives have been participated in and implemented since 2023

- Embargoing transport of illegal wildlife and prohibiting use of illegal species as food ingredients
- A total of 10 biodiversity conservation-related activities or initiatives have been participated in and implemented since 2023

Note 1: This is not the proportion of electricity use. This is an additional target beside the Taiwan national power grid target (https://www.ndc.gov.tw/en/Content_List.aspx?n=2D918002A913582A). China Airlines expects to use 40% renewable energy by 2030 if Taiwan National Grid target is included

Note 2: The target for reducing average food waste produced per person for in-flight services has been incorporated into the overall in-flight waste reduction goal, and “over-catering rate” is used as a performance indicator for monitoring and evaluation purposes.

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 Unit in Charge	Corporate Sustainability Committee - Environmental Task Force (Corporate Environmental Committee)				
 Management Mechanisms	▪ The meeting of the Board of Directors and Sustainability and Risk Management Committee, every quarter ▪ The meeting of the Corporate Sustainability Committee, at least twice a year ▪ The meeting of Corporate Environmental Committee and Environmental Management Committees, every quarter on a regular basis ▪ Environmental/energy/risk issues are included into routine executive reports ▪ Yearly execution of ISO 14001, ISO 50001, and ISO 14064-1 third-party verification ▪ Regularly response and review of important international sustainability and environmental protection questionnaires				
 Grievance Mechanism	Corporate Sustainable Development: Corporate Sustainability Center ✉ csr@china-airlines.com		 Stakeholder Contact		

Objectives and Plans

Issue	KPI	2024			2025
		Objectives	Performance	Achievement Rate	Objectives
Climate Action and Renewable Energy	Enhancing Aviation Fuel Efficiency	Increase by 1.5%	Increased by 3.7%	>100%	Increase by 1.5%
	Using SAF	Use 0.001%	0.0011%	100%	Use 0.5% (Note)
	Reducing Carbon Emissions from Ground Operations	Decrease by 3% compared to 2023	Reduced by 2%	Not achieved	Decrease by 5% compared to 2023
Water Resource Conservation	Reducing tap water withdrawal	Decrease by 6% compared to 2018	Reduced by 23%	>100%	Decrease by 7% compared to 2018
	Reducing general waste	Decrease by 6% compared to 2018	Increase by 5%	Not achieved	Decrease by 7% compared to 2018
	Reducing in-flight waste	Decrease by 33% compared to 2018	Reduced by 20%	Not achieved	Decrease by 50% compared to 2018
Responsible Consumption and Waste Management	Reducing the use of paper	Decrease by 22% compared to 2018	Reduced by 30%	>100%	Decrease by 30% compared to 2018
	Reducing use of single use plastic items and packaging for in-flight services	An 80% reduction compared to the baseline scenario.	Reduced by 81%	>100%	An 90% reduction compared to the baseline scenario
	Increasing industrial waste recycling ratio	44%	61%	>100%	45%
	Increasing the proportion of sustainably certified paper and wood products	5%	20.9%	>100%	10%
Ecological Conservation Action	Participate in biodiversity conservation activities/initiatives	A cumulative total of one event since 2023	A total of three events	>100%	A cumulative total of two events since 2023

Note: Due to early-stage global SAF supply and cost challenges, China Airlines adjusts its phased SAF usage target to 0.5% while maintaining its long-term commitment to SAF development and net-zero carbon goals.

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2.3.1 Governance of Environmental Sustainability

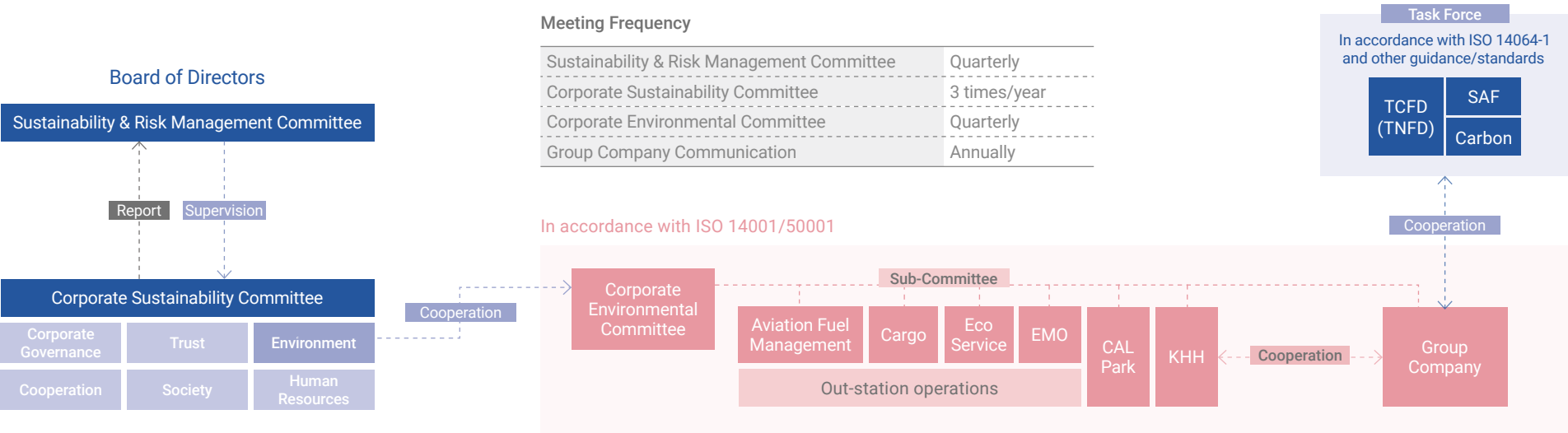
Achieving “Net-zero carbon emissions by 2050” has become a global priority. In line with Taiwan’s proposed 2030 target of a 28±2% reduction from 2005 levels, China Airlines is transforming its service models, operations, and corporate values to reduce raw material consumption and carbon emissions. China Airlines also committed to enhancing ecological benefits in its operations and promoting a circular economy to minimize environmental impact and foster ecological harmony in a collective effort to combat climate change.

Policy and Structure of Environmental Governance

China Airlines, guided by the “Sustainable Environmental Development” principles outlined in its Board-approved “Sustainable Development Best Practice Principles,” has established the “Environmental and Energy Management Principles,” committing to legal compliance, resource conservation, eco-efficiency, and social responsibility. CAL has developed and updated its “Environmental and Energy Policy Statement” and “Forest and Biodiversity Conservation Commitment,” extending their scope beyond internal operations to include suppliers, joint ventures, and business partners. With a focus on minimizing resource use and environmental impact across the value chain, CAL seeks to give back to nature while providing quality services. Through a Circular Economy Management Approach, it aims to achieve a fair, just, and net-zero (or near-zero) business model that fosters ecological prosperity.

To implement these commitments, CAL adheres to ISO 14001, ISO 50001, and ISO 14064-1 standards. Led by the President, the Corporate Environmental Committee regularly identifies and manages environmental, energy, and climate-related risks across all operations—including headquarters, branches, maintenance, passenger and cargo services, and the supply/value chain—enabling the implementation of appropriate environmental and energy-saving measures. Internal audits and third-party validations ensure continuous improvement in areas such as energy, water, and waste management.

In August 2024, CAL established the “Sustainable Development Center” and appointed a Chief Sustainability Officer (CSO) to oversee group-wide sustainability governance. Acting as Executive Secretary of the Corporate Environmental Committee, the Center coordinates with five business-function-based Environmental Management Committees and the Aviation Fuel Management Team. The Center also regularly reports environmental and sustainability risks and corresponding actions to the Board’s Sustainability and Risk Committee, reinforcing the effectiveness of the CAL Group’s environmental governance and risk management.



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CAL Environmental and Energy Policy

CAL commits to achieve the 2050 net-zero, No Gross Deforestation and net positive impact (NPI) on biodiversity targets, also continues to optimize environmental and energy management system, incorporates the life-cycle concept to examine our corporate context, including but not limited to global operations, air transport, passenger/cargo services, upstream and downstream distribution and logistics

activities. Furthermore, we will endeavor to understand the needs and expectations of interested parties, assess related environmental risks and opportunities, establishes and reviews performance indicators and allocates sufficient resources to the implementation and ongoing improvement of the following environmental and energy policies as well as management measures.

Environmental and Energy Policy	Policy Framework
Enforcing compliance obligations to fulfill the Company's responsibilities in environmental protection and energy conservation	- Through regular and irregular compliance review and internal and external auditing mechanisms to perform a zero-penalty target - Acted as a member of the IATA SEAC, monitoring global environmental trends to effectively implement risk and opportunity management
Improving environmental and energy management systems, setting and achieving management objectives to verify compliance with established policies	- Continuously optimized the environmental and energy management systems - Set and tracked environmental sustainability targets and commitments, driving ongoing performance improvement - Held the 2024 "Excellent Environmental Management Committee Competition," with awards personally presented by the President and supported by incentives
Promoting environmental and energy conservation education to foster employees' eco-awareness	- Encouraged employees to submit suggestions through platforms such as "Employee Proposals" and "Fuel-Saving Proposals" and offered corresponding monetary rewards - Provided diverse training channels to raise awareness of the environmental impacts of job functions
Supporting green design and procurement to increase overall eco-efficiency	- Implemented green design, sustainable/local procurement, and due diligence in mergers and acquisitions, investment, vendor selection, and procurement operations - Invested in R&D activities focused on environmentally sustainable services and products - Promoted and fostered awareness and culture of green consumption
Fostering a low-carbon operating environment to establish continual improvement of environmental and energy efficiency performance	- Implemented environmental and energy-saving measures according to business activities (including products, services, transport, and administrative support) to reduce environmental impact - Increased use of low-carbon and renewable energy in facilities and transportation across the value chain
Practicing waste management and circular economy to minimize resource consumption and negative environmental impacts	- Minimized energy and resource consumption while maximizing their efficiency and effectiveness - Adopt circular economy principles to realize waste-to-resource conversion by increasing the recycling rate, reducing packaging materials and food waste, phasing out single-use plastic, and promoting the use of recycled materials. - Inventorying energy and resource consumption and environmental impact hotspots, and devised corresponding strategies and mitigation measures
Strengthening suppliers and partners engagement to optimize green supply chain management	- Managed and audited environmental risks in the supply chain via the Supplier and Group Code of Conduct - Promoted environmental initiatives and enhanced stakeholder awareness through communication, consultation, and collaboration

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Management Tools, Objectives, and Management Organization for the Environmental Task Force

Topic	Management Tools*	Objectives	Management Authority/Organization
Climate Change	ISO 14001, ISO 50001, ISO 14064-1, TCFD, CDP, SBTi	Attain net-zero emissions by 2050 and increase resilience for responding to climate change	Corporate Environmental Committee, each Environmental Management Committees, Carbon Management Task Force, TCFD Task Force
Aviation Fuel (Including SAF)	ISO 14001, ISO 50001, ISO 14064-1	Increase aviation fuel efficiency and establish efficient fleets and networks	Aviation Fuel Management Team, Sustainable Aviation Fuel Task Force
Environmental Issues	ISO 14001, ISO 50001, DJSI, TNFD, and domestic and international sustainability evaluation indicators	- Improve business eco efficiency, create an environmental sustainability brand - Enhance the sustainable value of the supply chain and value chain, including business partners	Corporate Environmental Committee, Five Environmental Management Committees

Note 1: With coverage based on group revenue—including stations and group operations—100% of entities successfully passed external verification under the ISO 14001 environmental management system. For certification details, please visit the Corporate Sustainability website: <https://calec.china-airlines.com/csr/en/index.html>

Note 2: TCFD refers to Task Force on Climate-related Financial Disclosures

Identification of Environmental Risks and Opportunities

GRI 201-2

CAL provides passenger and cargo services as well as aircraft maintenance services, involving issues such as climate change mitigation and adaptation, resource consumption, pollution prevention, waste and food waste management, toxic and chemical substances, reduction to single-use plastic products, and biodiversity conservation. By actively engaging with stakeholders both domestically and internationally and staying abreast of environmental trends, CAL has identified six major environmental issues relevant to its operations. These have been integrated into key points of the Company’s environmental risk and opportunity management, with proactive measures put in place to address them. Additionally, other issues are continuously being improved through the operation of the Company’s environmental management system.

2024 Ranking			
1	Aviation carbon emission management (3)	11	New technology and energy development (1)
2	Climate change adaptation (3)	12	Control of toxic and chemical substances (2)
3	Green supply chain management (2)	13	In-flight drinking water management (3)
4	Aircraft energy efficiency improvement (2)	14	Control of waste and sewage (3)
5	Single Use Plastic (SUP) (2)	15	Ground operation waste management (2)
6	Ground operations energy (carbon) management (3)	16	Ground water resources management (3)
7	Biodiversity conservation (2)	17	Aircraft takeoff and landing noise control (3)
8	Circular economy and innovation model (2)	18	Ground operation air pollution control (3)
9	Cabin waste and food waste management (3)	19	Aircraft air pollution control (2)
10	Environmental Awareness (2)		

Note: The numbers in parentheses represent adaptivity, i.e., the size of the circles in the following diagram.

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Environmental Issues	Risk	Opportunity	Management Method
Aviation Carbon Emission Management	International carbon emission regulations and public awareness are increasingly stringent, adding pressure on carbon reduction actions and compliance costs.	By reducing carbon emissions and creating carbon credits, costs can be saved and revenue increased.	China Airlines has established a "Net Zero Carbon Reduction Pathway" along with corresponding strategies, which include enhancing fuel efficiency in flight operations, fleet renewal, and the promotion of sustainable aviation fuel.
Climate Change Adaptation	Increasing frequency of extreme weather events such as heat waves and heavy rainfall will impact the Company's daily operations.	Proper response will strengthen corporate resilience, reduce impact costs, and maintain reputation.	China Airlines has partnered with supply chain manufacturers and cargo corporate clients to participate in the Sustainable Aviation Fuel (SAF) collaboration project to jointly reduce the carbon footprint, as SAF emits over 90% less carbon compared to conventional jet fuel. For detailed information, please refer to Section 2.3.3 regarding Net Zero Carbon Emissions
Green Supply Chain Management	The international financial system is highly focused on sustainability issues, continuously enhancing governance and disclosure requirements to promote sustainable investment, resulting in increased regulatory risks and operating costs.	It enhances the sustainability competitiveness in terms of the value chain of the industry and promotes green business opportunities and new business models.	- Continuously promote the Supplier Code of Conduct, strengthen sustainable risk management, and enhance collaboration and project cooperation to improve the achievements in environmental sustainability of suppliers and value chain partners. - To enhance the integrity and performance of environmental and sustainable governance within the CAL Group, CAL convened the "Group Sustainability Governance Communication Conference" in 2024, bringing together the general managers of various group companies to build consensus across the Group. - CAL has supported its group companies in building capabilities for greenhouse gas inventory, including inventory tools, internal verification, and management mechanisms.
Aircraft Energy Efficiency Improvement	Accelerate the introduction of new generation energy-efficient aircraft and fuel-saving technologies as well as expand the proportion of sustainable aviation fuel utilized, which will increase operational costs.	Improve aircraft fuel efficiency while reducing fuel consumption and carbon emissions intensity, which will reduce operational and regulatory costs.	Implementing fleet renewal, introducing fuel-saving technologies and sustainable aviation fuels, enhancing passenger load factors, and optimizing flight routes and air traffic management operations. For further details, please refer to sections 2.1.2 Passenger Service and 2.1.3 Cargo Service
Single Use Plastic (SUP)	Restrictions on the use of the Single Use Plastic products have been expanded from Europe to other countries/routes, and there is also a focus on packaging reduction, leading to increased regulatory costs.	Systematically inventorying and planning alternatives, considering performance in fuel consumption, waste and plastic reduction, etc., to reduce compliance risks and regulatory costs, thus adding value to sustainable services.	- Monitoring regulatory trends and the market development of alternatives, integrating with supply chain and cross-industry collaborations, devising alternative solutions and setting reduction targets, continuously reviewing and improving with consideration of both the Company's operations and supply chain conditions. - Economy class tableware has been fully upgraded to 100% certified recycled stainless steel, reducing the use of plastic products.
Ground Operations Energy (Carbon) Management	The domestic carbon fee mechanism is currently being implemented, while the Financial Supervisory Commission (FSC) is expanding the scope of GHG inventory and verification requirements. It is anticipated that there will be increased regulatory efforts on carbon emissions control in the future, leading to higher operating costs.	Early deployment of renewable energy facilities and related resilient infrastructure in line with international trends can help save on electricity costs and alleviate long-term regulatory costs.	In addition to implementing an energy efficiency monitoring system that exceeds regulatory requirements, CAL continues to expand its renewable energy installations and EV charging infrastructure. As of December 2024, three solar power facilities with a total installed capacity of 469 kW have been established across the CAL Park and EMO Park. EV charging stations have also been installed in employee parking lots, accompanied by preferential parking programs to encourage their use. The EMO Park is gradually advancing the electrification of operational equipment and vehicles, in conjunction with the utilization of charging facilities at both the airport and EMO Park, to progressively establish an electrified operational environment at the airport.

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Best Practices



2024 Group Sustainability Governance Communication Conference

During the meeting, the China Airlines Group reaffirmed its commitment to continuously improving its environmental and energy performance and objectives. The Group will implement and expand its environmental management system in phases, considering factors such as corporate scale, environmental risks, and competitive advantages, to build Group’s consensus on sustainability and enhance the value.



Economy Class 100% Recycled Stainless Steel Tableware Set

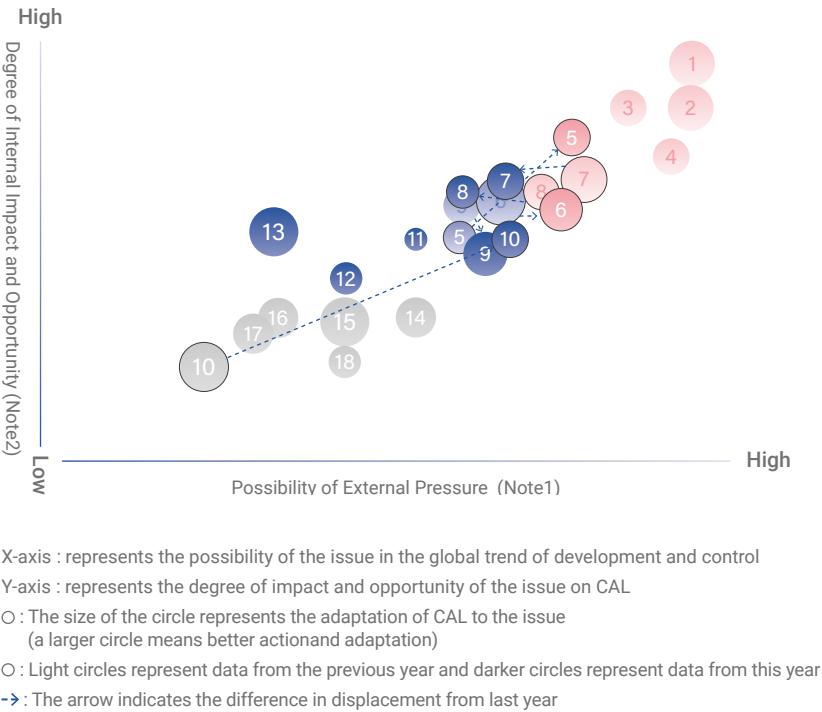
China Airlines’ economy class tableware embodies the concept of green design, by upgrading the original plastic cutlery set (a set of three pieces: knife, fork and spoon) to 100% certified recycled stainless steel. The innovative “spork” design combines the functions of a spoon, fork, and teaspoon, used alongside the dinner knife, effectively reducing the weight on board.



Dedicated charging area in the EMO Park

China Airlines continues to expand infrastructure such as renewable energy power generation capacity and charging stations to support the electrification of vehicles/equipment operations.

CAL Environmental Risk and Opportunity Matrix



2.3.2 Natural and Climate Change Mitigation and Adaptation

GRI 304-1.304-2.
304-3.304-4

Management Mechanisms for Natural and Climate Change

CAL became the first airline in Taiwan to adopt the Task Force on Climate-Related Financial Disclosures (TCFD), and has published the independent “Climate-Related Financial Disclosure Report” on an annual basis. In 2024, CAL further integrated the principles recommended by the “Task Force on Nature-related Financial Disclosures (TNFD)” with the existing TCFD operational mechanisms, enhancing the scope of management for issues related to nature and climate change, resonating with the “Kunming-Montreal Global Biodiversity Framework”.



Governance Framework and Risk Management Processes for Nature and Climate Change

CAL established a TCFD Task Force composed of multiple units in 2019 and the [Corporate Sustainability Committee and Environmental Committee](#) have monitored climate-related risks and opportunities. In 2024, further integration of nature and climate-related issues has been undertaken, incorporating considerations within the TNFD scope. Key achievements will also be reported annually to the Board of Directors for supervision and management.

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The Nature and Climate Governance Framework



Caption: CAL has integrated the topics of nature and climate change into the Company's management mechanisms by adopting the operational processes of TCFD and TNFD. It has established internal operating procedures and devised specific execution measures for governance, strategy, risk management, and metrics and targets. With a spirit of continuous improvement, the Company aims to enhance overall management of nature and climate-related risks and opportunities.

Analysis of the Impact of Climate Scenarios on Business Operations

CAL TCFD Task Force evaluates the impact of various factors on its global operations and destinations, company assets (including aircraft, offices, and facilities), upstream supply chain, and downstream customers, with reference to reports such as the IPCC Sixth Assessment Report (AR6) SSP1-1.9, SSP2-4.5, and SSP5-8.5, IEA B2DS and B2DS, and national NDCs, etc. Scenarios at 1.5°C, 2°C, and 4°C are considered, taking into account factors such as regulatory requirements, market demands and changes, technological developments and trends, market competition, and natural environmental factors. This analysis helps assess the short, medium, and long-term impacts on the Company's global operations, financial situation, resources, and reputation. The process and results of the analysis on the impact of climate scenarios are as follows:

Best Practices

Aviation Support for Ecological Conservation

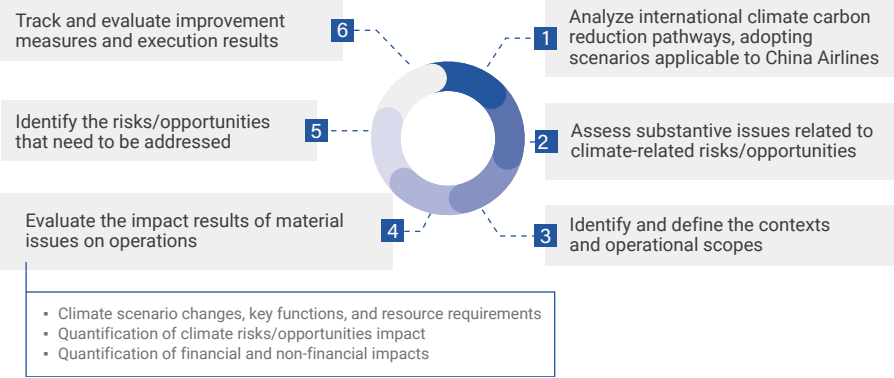
Mandarin Airlines is dedicated to support conservation through its flight operations and has been a long-term participant in the Taipei Zoo's Blue-tailed Bee-eater Conservation Program. In 2024, research teams collected abandoned Blue-tailed Bee-eater eggs from their natural habitat in Kinmen. Mandarin Airlines carefully and safely transported the eggs from Kinmen to Taipei, where they were subsequently incubated and cared for by the Taipei Zoo. Mandarin Airlines has been actively and consistently involved in wildlife conservation efforts, contributing to the preservation of nature. Through cross-departmental collaboration and corporate support, the program has gradually achieved remarkable results—successfully incubating and raising 12 adult Blue-tailed Bee-eaters, which now thrive and fly freely within the Taipei Zoo Pangolin Dome.



Mandarin Airlines assisted in the transportation of abandoned eggs of the Blue-tailed Bee-eater.



Mandarin Airlines customized special incubator boxes for the transportation of these delicate passengers, equipped with insulation bags and shock-absorbing materials.



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Issue	Risk Type	Scenario Analysis	Impact Timelines (Severity)	Impact Level	Risks and Financial Impacts	Opportunities and Financial Benefits	Response Management Methods
International Environmental Protection, Energy Conservation, and Carbon Management Regulations	Transition Risk — Current Legal Risk		Short, medium and long term (High/Impact on EBITDA approximately 1.9~3.7 %)		Tighter international carbon regulations (e.g., ICAO CORSIA, EU ETS, etc.), leading to increased compliance costs	- Enhance fuel efficiency to reduce the Company's energy procurement, carbon offset trading, and regulatory compliance costs - Revenue derived from carbon credit sales	- Continue to enhance MRV capacity for CORSIA and EUETS mechanisms - Research and implementation of carbon credit/quota trading mechanisms - Planning and implementation of various carbon reduction measures
		IEA 2DS (Aligning with the Paris Agreement Goals to Limit Global Warming to Below 2°C)	Short, medium and long term (High/Impact on EBITDA approximately 5.6 %)		The EU ReFuelEU Aviation regulation mandates that EU airports gradually increase the share of Sustainable Aviation Fuel (SAF) from 2% in 2025 to 70% by 2050, impacting the Company's fuel procurement strategy and costs	- Using more fuel-efficient aircraft effectively reduces operational costs - Using SAF to meet ICAO requirements and respond to carbon reduction policies of various countries - Opportunities to generate carbon assets through renewable energy investments	- Establish SAF procurement and partnership agreements to ensure fuel supply and price stability - Promote domestic collaboration on SAF initiatives by engaging with the government and suppliers to facilitate the development of the SAF and mitigate supply risks - Invite corporate clients to participate in the SAF collaboration project
	Transition Risk — Emerging Legal Risk	- IEA B2DS (Aligning with the Paris Agreement Goals to Limit Global Warming to Close to 1.5°C) - NDCs (According to the Paris Agreement, Taiwan's nationally determined contribution includes the goal of achieving net-zero carbon emissions by 2050)	Medium and long-term (Low/Impact on EBITDA < 0.1%)		- Countries continue to adopt environmental/ energy and carbon fees or taxes, resulting in increased operating costs - The environmental protection authority has implemented carbon emission reporting and regulations for the transportation sector, leading to increased administrative costs	- Increasing passenger load factor as part of the Company's operational strategy, creating opportunities to increase revenue - Implementing digitized operations in response to carbon emissions reporting can improve operational efficiency and reduce administrative costs	- Implement environmental and energy management system, set annual goals for environmental protection, energy conservation, and energy efficiency - Promote the greenhouse gas inventory and management within the Group companies
			Medium and long-term (Medium/Impact on EBITDA < 1%)		Large electricity users are required to use renewable energy for 10% of their consumption, along with rising supplier costs	Opportunities to generate carbon assets through renewable energy investments	Continuously plan to expand renewable energy facilities
Energy Transition	Transition Risk Technology Risk		Medium and long-term (Medium/Impact on EBITDA < 1%)	 (Passenger Service, Cargo Service, Flight Safety) 	- Limited SAF supply and high prices - Hydrogen and electric aircraft technologies are still under development	- Participate in the development of technologies aimed at enhancing flight efficiency - Invest in Sustainable Aviation Fuel (SAF) and innovative energy-saving technologies	- Continuously evaluate the effectiveness of SAF, new technologies (new energy-saving aircraft, fuel-saving technologies) - Accelerate the procurement of more efficient, low-carbon aircraft models; engage in technology research and development; and reduce fuel consumption and carbon emissions through optimized flight planning and operations

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Issue	RiskType	Scenario Analysis	Impact Timelines (Severity)	Impact Level	Risks and Financial Impacts	Opportunities and Financial Benefits	Response Management Methods
Corporate Reputation and Low-Carbon Environmental Image	Transition Risk — Legal Risk	IEA 2DS (Aligning with the Paris Agreement Goals to Limit Global Warming to Below 2°C)	Short and medium-term (Low/Impact on EBITDA < 0.1%)		- Environmental penalties in various countries have become stricter, increasing financial risks - Increasing pressure from environmental groups over greenwashing, leading to potential greenwashing lawsuit risks	Provide transparent ESG information to establish credibility and attract ESG investors and customers	Implement a robust third-party carbon emission verification mechanism to ensure the transparency and credibility of ESG communications
	Transition Risk — Market Risk	- IEA B2DS (Aligning with the Paris Agreement Goals to Limit Global Warming to Close to 1.5°C) - NDCs (According to the Paris Agreement, Taiwan's nationally determined contribution includes the goal of achieving net-zero carbon emissions by 2050)	Medium and long-term (Medium/Impact on EBITDA < 1%)	 (Passenger Service, Cargo Service) 	- High carbon emission flights may face additional costs and restrictions - Increasing market demand for low-carbon transportation, such as replacing short-haul flights with land transportation	- Shifting consumer preferences, with low-carbon travel becoming a trend - Offer customers carbon offset options, allowing travelers to select their preferred carbon reduction solutions	- Develop various new products and innovative service models (such as direct flights) to enhance service efficiency and meet market demand - Offering customers carbon offset options and SAF partnership programs to reduce customers' Scope 3 Greenhouse Gas Emissions
	Transition Risk — Reputational Risk		Short and medium-term (Low/Impact on EBITDA < 0.1%)	 (Passenger Service, Cargo Safety)	- Growing consumer emphasis on low-carbon and eco-friendly practices affects brand trust and may reduce revenue - Regulatory violations may result in penalties	- Strengthen communication with stakeholders to build recognition and support for environmental actions, enhancing reputation and brand value - Align with government environmental policies to foster industry collaboration and boost competitiveness	- Support scientific research, engage with external stakeholders, and participate in ESG rankings to elevate corporate image - Collaborate with domestic and international low-carbon product suppliers to improve supply chain sustainability
Increased Frequency of Extreme Weather Events Leading to Aviation Safety Risks	Physical Risk — Acute Physical Risk	- Referring to the IPCC Sixth Assessment Report Scenarios, such as: RCP 1.9 / SSP1 1.9 (Global Temperature Increase ≤ 1.5°C by 2100) - RCP 4.5 / SSP2 4.5 (Global Temperature Increase of 2.4-2.6°C by 2100) - RCP 8.5 / SSP5 8.5 (Global Temperature Increase of 4.3-4.8°C by 2100)	Short and medium term (Medium/Impact on EBITDA < 1%)	 (Business Development, Passenger Service, Cargo Service, Flight Safety) 	- Impacts of extreme weather events such as flooding, strong winds, heavy rain, and fog can lead to flight disruptions or cancellations, hinder passenger connections, and cause delays in cargo transport, resulting in increased operational costs (diversion, passenger arrangements) - Extreme weather disrupts raw material supply, impacts market cycles, and reduces load factor and revenue	- Enhance risk forecasting and emergency response capabilities to effectively address customer needs and travel arrangements, improving service quality and reputation - Manage customer needs effectively during disruptions to boost loyalty, retention, and revenue - Enhance integration and scheduling of passenger and cargo operations to improve efficiency and revenue	- Expand operational procedures and emergency mechanisms, enhance staff training, and improve cross-department coordination - Introduce a professional meteorological team to improve weather forecast accuracy and to facilitate timely aircraft scheduling operations - Enhance the coordination of supply chain and partnership collaboration to ensure the safety and smooth flow of cargo and personnel transportation

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Climate Change Targets, Mitigation and Adaptation, Strategy and Actions

	Item	Objective	Actions in 2024
Governance	Strengthen climate governance	Continue to submit climate governance reports to the Board of Directors	1. Submitted climate governance reports—covering natural resources and biodiversity issues—to the Board Risk Management Committee (renamed the Sustainability and Risk Management Committee in 2025) 2. Reported quarterly to the Board on the progress and performance of corporate and group greenhouse gas management
	Enhance management supervision and cross-departmental operations	Meet corporate governance and green finance requirements	1. Implemented the promotion of TCFD and the introduction of related standards and guidelines such as SASB, IFRS S2, and TNFD 2. Implemented continuous management of short, medium, and long-term ESG performance
Strategy	Enhance TCFD capabilities	Increase the comprehensiveness and depth of quantified financial information	1. Implemented standard operating procedures (SOP) 2. Continued to implement the cross-unit information platform
	Climate response strategies and management	Increase resilience for responding to climate change risks	1. Incorporated issues of climate risks and opportunities into the Company's overall strategies and plans and executed related response actions 2. Integrated climate change impact issues into route planning, operational performance review, and other operations to develop timely contingency strategies and adjust operational planning accordingly 3. Formulated policies and management measures on the Forest and Biodiversity Conservation, integrating them into supply chain management
	Participate in important engagements	Increase the understanding of international climate change issues and regulatory requirements	1. Participated in key international and domestic climate policy platforms to monitor regulatory trends and enhance influence 2. Advanced domestic SAF strategy by promoting industry-government-academia collaboration and engaging in the national SAF pilot program 3. Continued active involvement in the IAGOS-PGGM international scientific research program on climate change 4. Participated in and implemented forest and biodiversity conservation initiatives
Risk Management	Strengthen the risk management mechanisms for the corporate value chain	Increase resilience for responding to climate change risks	1. Integrated environmental risk management across the value chain by expanding GHG inventories and environmental (including natural resources) and energy risk assessments of key suppliers, strengthening climate risk and opportunity detection and management, and enhancing business continuity in response to extreme weather 2. Complied with Financial Supervisory Commission requirements by extending GHG inventories to overseas branches and supporting subsidiaries in the Consolidated Financial Statements to gradually build GHG management capabilities
	Strengthen the existing enterprise risk management mechanism	Implement risk management and strengthen emergency response mechanisms	1. Integrated climate factors into the enterprise risk management system to enhance climate risk and opportunity detection, response, and control across all units 2. Combined IAGOS-PGGM project data with outputs from the 777F turbulence detection algorithm to contribute to UN climate research and IATA's global turbulence studies, while strengthening climate resilience in route management and operations

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	Item	Objective	Actions in 2024	
Risk Management	Respond to international carbon transition risks	Comply with ICAO, EU, and other international regulations for carbon reduction	1. Participated in the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) mechanism 2. Continued to enhance MRV capacity for EU ETS, UK ETS, and CORSIA mechanisms 3. Studied and performed carbon allowance /credit transactions	
	Implement carbon reduction and energy transformation	Net zero emissions in operating activities by 2050	1. Enhanced monitoring of electricity consumption and installed dedicated electricity meters on equipment/processes with high energy consumption 2. Continued to perform replacement and retrofitting of high-energy-consuming facilities 3. Installed renewable energy facilities such as solar PV, set and implemented installed capacity targets	4. Enhanced energy management systems and improvement of their effectiveness 5. Collaborated with international oil companies on Sustainable Aviation Fuel (SAF) promotion initiatives
Metrics and Targets	Continuously optimize GHG inventory	Expand the scope of the inventory and increase the quality of the data	1. Continued to conduct energy resource surveys at global operational sites, implemented GHG inventory and verification processes in accordance with ISO 14064:2018 Categories 1–6, and enhanced the quality of greenhouse gas emissions data 2. Deepened and expanded GHG inventory and verification operations for group companies and overseas branches	
	Implement carbon emission reduction targets and KPIs	Attain short, medium, and long term GHG reduction targets and net zero emission target for 2050 and pass SBTi certification	1. Achieved Science Based Targets initiative (SBTi) approval: By 2030, improve fuel efficiency by 26% compared to the 2019 baseline. The targeted emissions include Scope 1 (Category 1) and Scope 3 emissions related to fuel and energy-related activities (Category 4) 2. Established approximately 89 KPIs in environmental protection and carbon emission reduction, which are reviewed quarterly by the Environmental Committee chaired by the President	
	Attain flight carbon reduction targets	Attain short, medium, and long term GHG reduction targets and net zero emission target for 2050	1. Continued to promote fleet renewal, aircraft weight reduction, flight optimization, and O&M improvement plans 2. Implemented fleet plans in accordance with medium and long-term business growth and carbon reduction trends 3. Continued to improve aviation fuel efficiency, increased load factor, and focused on the development of new technologies and new low carbon aircraft for purchase at an appropriate time 4. Continuously promoted SAF usage and invited corporate customers to support and participate	
	Increase fuel efficiency	Increase the efficiency of corporate operations and energy usage	1. Continued to promote aviation fuel-saving operations, thereby increasing fuel efficiency year by year 2. Optimized route planning and developed the most suitable passenger/cargo fleet in response to the epidemic and market development trends	

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Strategies and Risk Management Related to Natural Impact Mitigation

China Airlines (CAL) recognizes that humanity shares the Earth with wildlife, plants, and other species, and that we are only one part of this interconnected ecosystem. In fulfilling its "Forest and Biodiversity Commitment," CAL has adopted the TNFD framework and LEAP approach, using biodiversity databases and risk analysis tools to assess spatial risks across its own stations and outstations, directly managed Group companies, the top 10% of Tier-1 suppliers by procurement value, and downstream partners such as airport hotels.

With reference to tools like the Natural Capital Protocol and Science Based Targets Network, CAL has identified high-impact commodities across its operations and supply chain. The Company evaluates biodiversity impacts and dependencies under different scenarios, identifies related risks and opportunities, and sets corresponding strategies, indicators, and objectives.

To manage high-risk upstream products and services, CAL enforces its "Supplier Code of Conduct" and implements sustainable procurement mechanisms. Looking ahead, CAL will further refine its biodiversity risk assessment through tools such as ENCORE, IBAT, and Aqueduct to determine the most suitable application scenarios or tool combinations. These efforts aim to align with the latest trends, tools, and industry practices, and to explore collaborative solutions with partners.



All findings are reported through CAL's climate risk reporting mechanism, submitted to the Corporate Sustainability Committee and the Environmental Committee for control and oversight, and summarized for the Board of Directors for governance and supervision.

1. Identification Results of Areas, Supplier Products and Services with Significant Impacts

CAL uses the Biodiversity Risk Filter (BRF), developed by WWF, alongside mapping tools from Taiwan's Forestry and Nature Conservation Agency to assess biodiversity risks. These tools overlay biodiversity hotspots, wildlife habitats, protected and conservation areas, and state-owned forests for validation. Findings show that none of CAL's operational sites in Taiwan fall within or near these sensitive areas. However, about 3% of overseas outstations are located in areas classified as high biodiversity risk.

It is important to note that the BRF currently groups the aviation industry under the broader "transport services" sector, which may not fully reflect the specific nature of airline operations. CAL's detailed assessment confirms that high-risk overseas locations operate within tightly regulated airport zones subject to government oversight. Most operational activities are within airport boundaries, while sales offices are located in urban commercial areas with minimal impact on local ecosystems—leading to a low overall biodiversity impact.

In line with the Science Based Targets Network (SBTN) guidance, CAL has identified high-impact commodities in its supply chain. Paper, wood products, and coffee beans have been prioritized for initial monitoring and response. CAL continues to engage with key suppliers to reduce ecological disturbance from their operations and is investing in enhanced risk identification and mitigation measures, including avoidance, minimization, restoration, and compensation strategies.

2. Impact/Dependency and Risk/Opportunity Assessment Results

CAL has selected its headquarters located in the Taoyuan Airport Zone as the target site for identifying and assessing its overall transportation service processes, including planning, procurement, supply of materials, flight, maintenance, and other upstream and downstream business processes. Using ISO 14001 life cycle perspective and environmental considerations, taking into account the scenario setting of the TNFD framework, LEAP analysis tools, and ecological realms classification, CAL distinguishes between short-term and medium- to long-term scenarios, with a division set for 2035. This approach involves considering the changes in natural ecosystems, national policies and regulations, the scale of actions, and customer awareness as scenario conditions. This includes Scenario 1 - "Ahead of the game" and Scenario 2 - "Go fast or go home," analyzing direct drivers and potential impacts and dependencies on ecosystem services, identifying and assessing resulting risks and opportunities, and their significance. Summary of Material Short-term and Medium- to Long-term Risks/Opportunities is as follows.

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Short-term				
Material Issues	Impact/Dependency	Risk/Opportunity	Response Strategies	Targets
Aircraft technology enhancement can reduce greenhouse gas and air pollutant emissions	Impact	Transition Opportunity	1. Participating in international collaborative platforms to enhance dialogue 2. Considering fuel efficiency and ESG performance when purchasing aircraft 3. Engaging in ESG-related dialogues and collaborations with aircraft and equipment manufacturers	
Utilizing Single Use Plastic products or packaging materials	Impact	Transition Risk	1. Inviting suppliers to sign the Supplier Code of Conduct 2. Packaging reduction, single-use plastic alternatives, recycling and reuse, usage of recycled materials	
Illegal transport of wild animals and plants	Impact	Transition Risk	Implement the Buckingham Palace Declaration and action plan	
Emissions of greenhouse gases, air pollutants (GHG/SOx/NOx) and noise during aircraft takeoff, landing, and flight processes	Impact	Physical Risk	1. Continue to promote fuel-saving and noise-reduction operations 2. Using SAF 3. Continue to promote fleet renewal 4. Promote eco-friendly carbon offsetting projects 5. Support for bird conservation and restoration initiatives	
Medium to Long-Term				
Material Issues	Impact/Dependency	Risk/Opportunity	Response Strategies	Targets
Damage to stations due to loss of ecosystem protection, leading to impact on operations	Depen-dency	Physical Risk	1. Implementation of climate change mitigation and adaptation measures 2. Appropriately promote TCFD and TNFD operations 3. Monitor changes in operational conditions at the stations and implement appropriate response measures	
Deterioration of ecosystems affecting the demand for passenger/cargo services	Depen-dency	Transition Risk	1. Implementation of climate change mitigation and adaptation measures 2. Appropriately promote TCFD and TNFD operations 3. Monitor trends in passenger/cargo volume changes and implement appropriate response measures	
Domestic and international ecosystem changes have led to the emergence of new ecotourism destinations and demands	Depen-dency	Transition Opportunity	1. Monitor changes in passenger travel intent and implement appropriate response measures 2. Strengthening supplier/industry chain collaboration 3. Enhance awareness of ecotourism and implement supportive maintenance measures	
Passenger/cargo operations mistakenly purchasing high biodiversity risk ingredients, products, or packaging that contribute to deforestation or ecosystem destruction	Impact	Physical Risk	1. Request suppliers to adhere to the Supplier Code of Conduct 2. Strengthen traceability management and implement due diligence in procurement 3. Enhance the percentage of sustainable procurement 4. Increase the percentage of resource recycling and reuse, and the use of recycled materials 5. Strengthening supplier/industry chain collaboration	
Supply of agricultural products and packaging materials from ecosystems	Depen-dency	Physical Opportunity	1. Collaborating with local small-scale farmers to implement the Satoyama Initiative 2. Promoting sustainability certifications to implement local procurement practices 3. Strengthening collaboration with suppliers on eco-friendly design and product development	
Ecological degradation leading to large-scale outbreaks of infectious diseases, resulting in decreased demand for transportation	Depen-dency	Transition Risk	1. Improving cabin cleanliness 2. Improving the preparation and drills of epidemic prevention 3. Support ecological conservation, enhance diverse ecosystems, and strengthen ecological resilience	

Note: If it is a short-term material issue, it is not listed again in this table for response strategies and management targets and indicators.