2022

ANNUAL REPORT

Arab Air Carriers' Organization

55th Annual General Meeting

ETIHAD
AIRWAYS

Annual Report
Arab Air Carriers' Organization
55th Annual General Meeting

AACO's Mission

To serve the Arab airlines, represent their common interests and facilitate, in a manner consistent with all applicable competition and other laws their cooperation so as to improve their operational efficiencies and better serve the travelling public.

AACO's Vision

To stand out globally as THE association that serves with dedication the Arab airlines and to be instrumental in dealing with an evolving aviation industry.

Mission

Vision

Vision

Strategy

Strategy

Objectives

Mission

Objectives

Strategy

To initiate and implement Specific, Measurable, Attainable, Relevant, and Time-bound synergistic targets (SMART) that serve its objectives.

AACO's Objectives

- To support the Arab airlines' quest for highest safety and security standards.
- To support the Arab airlines' quest for developing their environmental policies for processes in harmony with the environment.
- To actively contribute in the development of human resources.
- To interact with the regulatory bodies to support and protect the interests of the Arab airlines.
- To launch joint projects between member airlines with the objective of achieving efficiencies that will lower their costs in a manner consistent with all applicable competition and other laws and that enhances the members' best practices.
- To provide forums for members and for industry partners to enhance the knowledge base.
- To reflect the positive image of The Arab Airlines Globally.

AACO Executive Committee

Mr. Tony Douglas
Chairman of the AGM

Mr. Mohamad A. El-Hout
Chairman of the Executive Committee

Mr. Mohamad A. El-Hout, Chairman - Director General, Middle East Airlines
Mr. Tony Douglas, Group Chief Executive Officer, Etihad Aviation Group
Capt. Amr Abuelenein, Chairman & CEO, EgyptAir Holding Company
Mr. Bander Al Mohanna, Chief Executive Officer & Managing Director, flynas
H.E. Mr. Akbar Al Baker, Group Chief Executive, Qatar Airways
Mr. Abdelhamid Addou, Chairman & Chief Executive Officer, Royal Air Maroc
Eng. Samer Majali, Vice Chairman & CEO, Royal Jordanian
H.E. Eng. Ibrahim Abdul Rahman Al Omar, Director General, Saudia
Mr. Khaled Chelly, Chairman and CEO, Tunisair

MATTERS THAT REQUIRE IMMEDIATE ATTENTION

Will governments apply lessons learned from COVID19 to avoid what happened in 2020-2021?

Can the industry achieve the 2050 long-term target of net zero emissions?

Governments need to work with WHO and ICAO to transform CART guidelines into standards and agree on harmonious application of measures in the future

Governments, technology partners, and SAF suppliers need to speed up the development & deployment of their solutions

Technology partners, airlines & stakeholders to decentralize processes & achieve full digitization & governments to embrace technology in their processes

Reasonable and logical baseline is a must, mutual recognition of SAF standards, accounting LCAF & SAF credits to users rather than suppliers

COVID19 showed us that customers are eager to embrace digitization

How can governments sustain the efficacy of CORSIA without hurting the already suffering airlines?

AACO'S **PRIORITIES**

OPERATIONAL SAFETY
To assist members in maintaining the safety of their operations through raising awareness on the latest safety regulatory requirements, advocating the adoption of safety culture, contributing to capacity building, and fostering collaboration among airlines in emergency response planning.

SECURITY
To maintain a platform to share information and risk assessments to improve the security culture, address emerging threats, contribute to capacity building, and promote and support collaboration among all stakeholders in aviation security.

CLIMATE CHANGE
To mitigate the impact of international aviation's emissions on climate change through supporting the efforts of ICAO to ensure successful implementation of its environmental short, medium and long-term goals, and to join efforts to improve operational performance, waste management and promote R&D in alternative fuel.

REGULATIONS
To advocate for policies and regulatory principles that are clear and balanced and that are adopted through transparent methods that include adequate consultations with the relevant stakeholders.

DIGITAL TRANSFORMATION
The COVID19 episode proved that the traveler is prepared to fully embrace technology and digitization. This trend will continue to prevail in the future, as more millennials become travelers. AACO strives to raise awareness about the significance of digital transformation in the travel sector, support airlines in developing technologies that can cater to consumers' aspirations and empower airlines to optimally manage their relationship with them.

AIRSPACE INFRASTRUCTURE
To promote and support infrastructure reform in air traffic management and airports in order to alleviate congestion in the airspace and at airports, improve operations, and contribute to carbon footprint reduction.

COST
To assist member airlines in optimizing their operational environment, promote best practices while rationalizing their cost through cooperative activities, within the boundaries of competition and anti-trust laws.

AWARENESS & CAPACITY BUILDING
To provide the highest quality and cost-effective training services to meet the training needs of member airlines and contribute to improving the performance of human capital in the region by organizing various training courses covering most fields of the air transport industry that are held in the branches of the regional training center or at member airlines' premises or through eLearning platforms in addition to organizing specialized forums to ensure continuous communication between all parties concerned in the air transport industry.

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Aviation's Recovery to Pre-Pandemic Levels (2019)

Estimates of Time for Recovery of Global Passengers Traffic from COVID-19 Crisis*
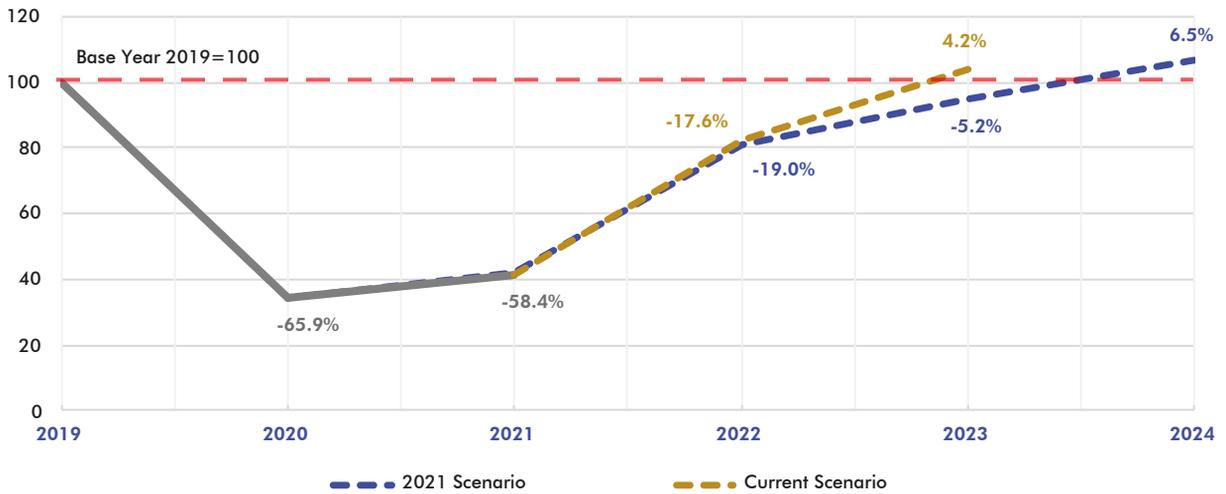
Base Year 2019=100

- -65.9%
- -58.4%
- -17.6%
- -19.0%
- 4.2%
- -5.2%
- 6.5%

Legend: 2021 Scenario · Current Scenario

*Data points compared to base year 2019
Dotted lines represent estimates

Source: AACO and Various Sources

Estimates of Time for Recovery of AACO Members' Passengers Traffic from COVID-19 Crisis*
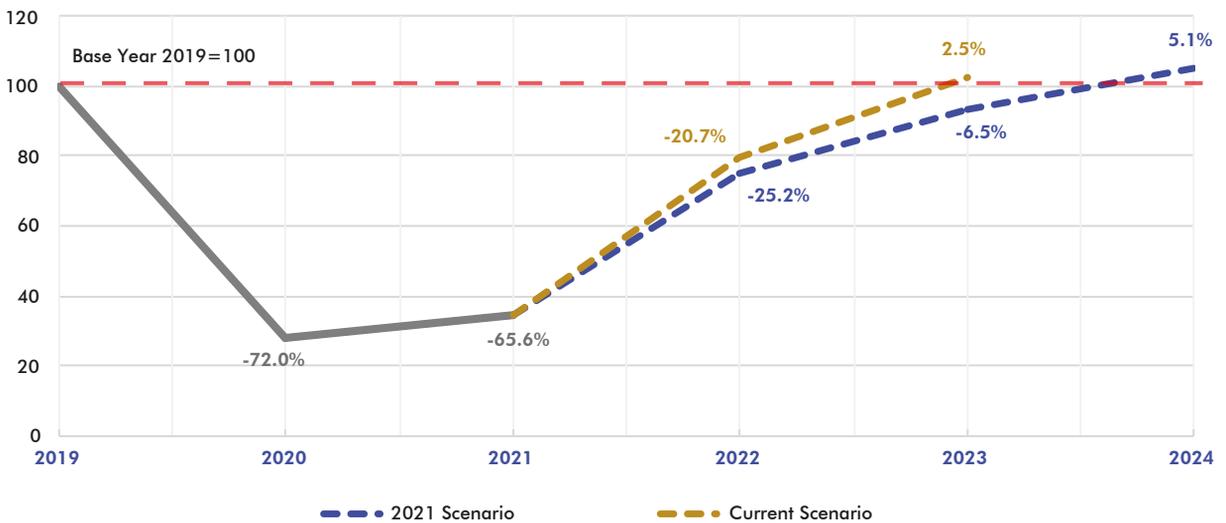
Base Year 2019=100

- -72.0%
- -65.6%
- -20.7%
- -25.2%
- 2.5%
- -6.5%
- 5.1%

Legend: 2021 Scenario · Current Scenario

*Data points compared to base year 2019
Dotted lines represent estimates

Source: AACO and Various Sources

Aviation's Recovery Tracker

Air Travel Industry's Recovery Tracker to Pre-pandemic Levels (2019)*

Revenue Passenger Kilometers (RPKs)

2020	2021	2022
-65.8%	-58.4%	-17.6%

Available Seat Kilometers (ASKs)

2020	2021	2022
-56.6%	-48.8%	-12.0%

Cargo Tonne Kilometers (CTKs)

2020	2021	2022
-9.8%	6.9%	11.8%

In-Service Fleet

2020	2021	2022
-21.7%	-10.6%	-5.7%

Employment

2020	2021	2022
-12.6%	-11.6%	-7.8%

Revenues

2020	2021	2022
-54.4%	-39.6%	-6.7%

Jet Fuel Price

2020	2021	2022
-41.5%	-2.4%	57.7%

International Tourist Arrivals

2020	2021	2022
-72.4%	-70.9%	-40.0%

Estimated Year for Recovery

2023
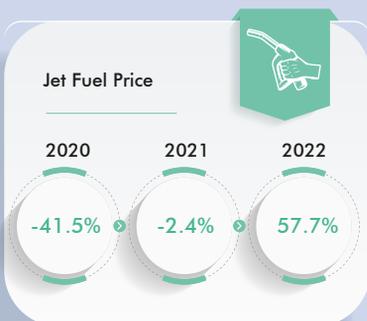
*2022 Forecast

Global Air Travel

Global Passenger and Cargo Operations

**Monthly Year-on-Year Change in Total Passenger Traffic (RPKs),
Seat Capacity (ASKs) for the Industry, and Monthly Passenger Load Factor (PLF)**

Change in RPKs (Left scale)   Change in ASKs (Left scale)   PLF (Right scale)

Labels in red represent change over 2019

Source: IATA, AACO
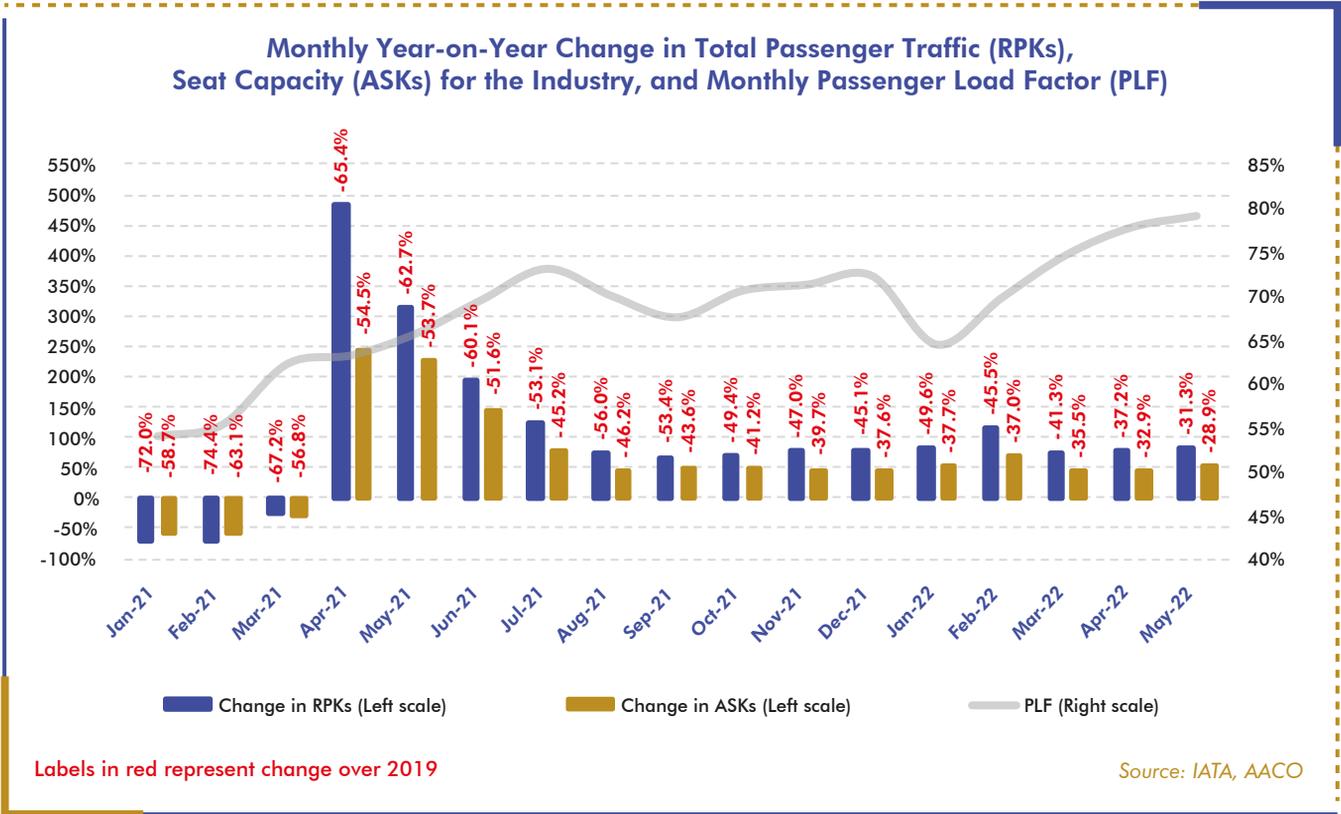
In 2021, with the easing of border restrictions coupled with an increase in the rate of vaccination, global air travel operations showed improvement when compared to the previous year. Passenger traffic (measured in RPKs) and seat capacity (measured in ASKs) increased by 21.6% and 17.7%, respectively, compared to 2020. Yet, RPKs and ASKs stayed 58.4% and 48.8% below 2019 levels, respectively.

In May 2022, RPKs and ASKs increased by 83.1% and 52.8% compared to 2021, respectively. Yet, passenger traffic and seat capacity remained 31.3% and 28.9% below 2019 levels.

Monthly Year-on-Year Change in Global Cargo Tonne Kilometers (CTKs)
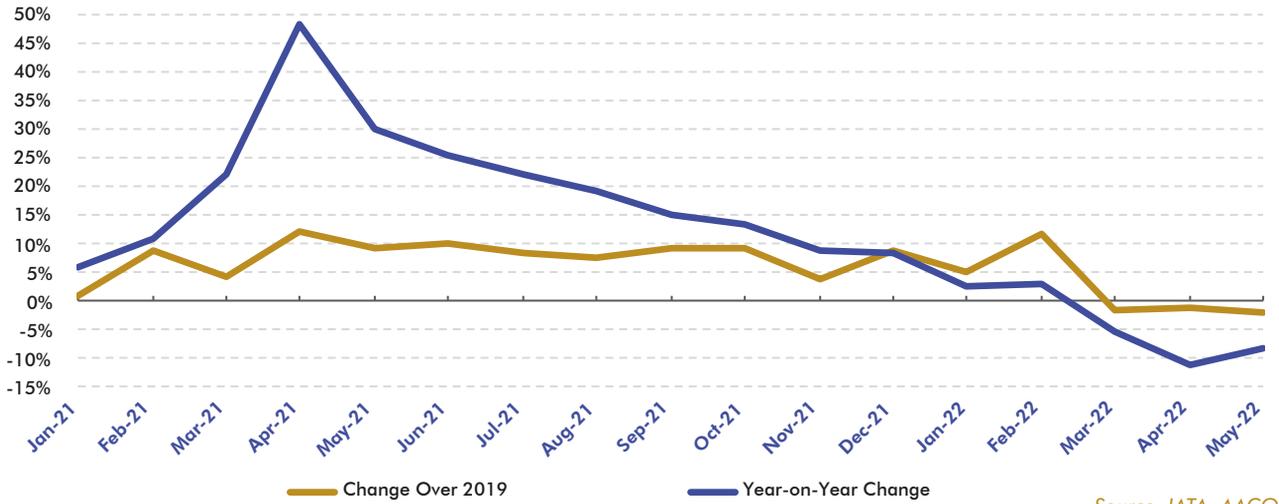
Source: IATA, AACO

Demand for air cargo (measured in CTKs) increased in 2021 by 6.9% and 19.6% compared to 2019 and 2020, respectively, as international trade picked up mainly due to the easing border restrictions and recovery in consumer demand.

However, air cargo declined as the war in Ukraine started in February 2022 coupled with the strict lockdowns imposed in China. In May 2022, CTKs dropped by 2.0% and 8.3% compared to 2019 and 2021, respectively.

Global Fleet Status

Global In-Service Fleet Status for Major Aircraft Types (As at June 30, 2022), and Comparison with 2019 ,2020 and 2021*
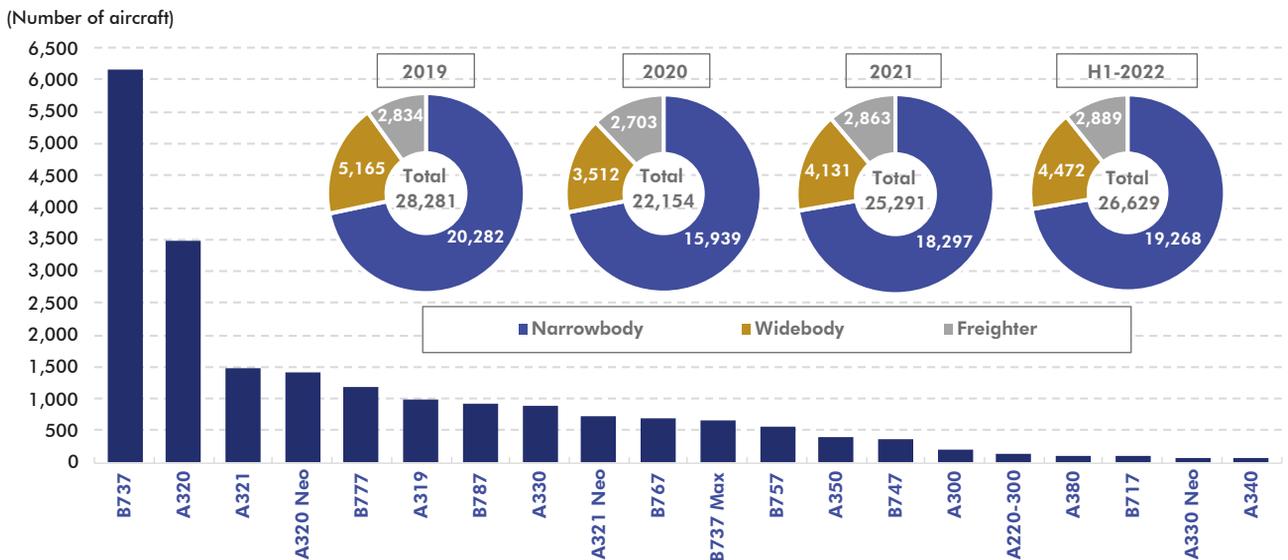
*Data has been recalculated to exclude aircraft having a maximum take-off mass of less than 9,000 Kg (20,000 lbs)

Source: Cirium Fleets Analyzer, AACO

In 2021, the total in-service fleet reached 25,291 aircraft, consisting of 18,297 narrow-body, 4,131 wide-body, and 2,863 freighters showing a total increase of 14.2% compared to 2020, while remaining 10.6% below 2019 levels.

As the air travel industry is moving toward recovery, during the first half of 2022, the number of in-service aircraft showed an increase of 20.2% and 5.3% when compared to 2020, and 2021 respectively, but was still 5.8% below 2019 levels.

The number of in-service aircraft is expected to reach 2019 levels by end of 2023.

Financial Performance of the Industry

Year-on-Year Change in Consumer Price Index (CPI) Globally and for the Arab World

* Forecast

Source: IMF, AACO

Monthly Change in the Price and the Crack Spread of Jet Fuel and Crude Oil

Begining of the war in Ukraine on 24 February

Source: EIA, AACO
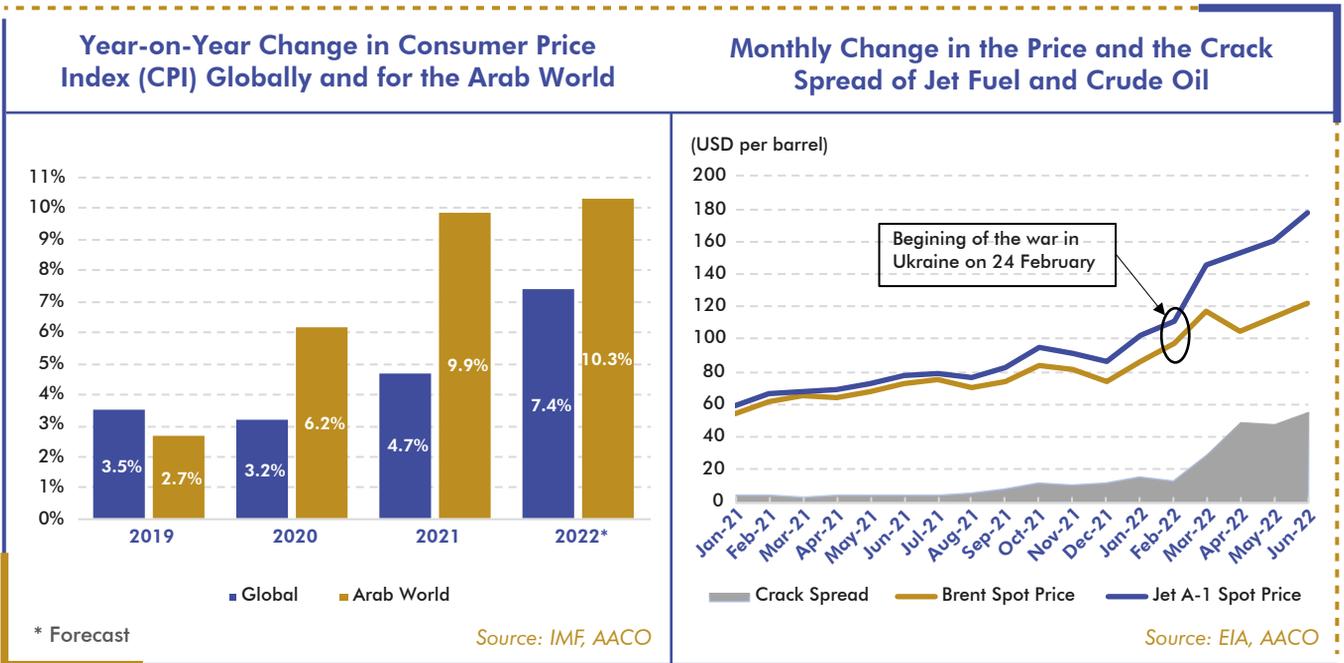
Inflation surged during 2021, mostly driven by an increase in consumer demand, leading to higher global food and energy prices. Inflationary pressures were expected to ease during 2022, however, the start of the war in Ukraine added more pressure on the global supply chains and pushed inflation rates to 40-year highs. In 2022, the inflation rate is expected to reach 7.4% globally and 10.3% in the Arab world.

This resulted in insecurity throughout the energy market, including jet fuel. By June 2022, the sharp increase in the price of crude oil and jet fuel, reached USD 122.7 per barrel and USD 177.2 per barrel, respectively, widening the crack spread from USD 12.4 in December 2021 to USD 54.5 in June 2022.

The air travel industry suffered from USD 45.2 billion operating loss in 2021, an improvement from the USD 110.8 billion operating loss incurred in 2020. Compared to the USD 43.2 billion operating profit recorded in 2019, the industry's revenue loss in 2021 reached USD 88.4 billion.

Change in the 2021 Cost Structure at Current Price of Jet Fuel (June 2022), and the Percentage of the Crack Spread From the Total Operating Cost

2021 Cost Structure

2021 Cost Structure at Current Jet Fuel Price

USD 103 billion
18.7%

USD 449 billion
81.3%

At USD 7 per barrel, the crack spread represents 1.7% (USD 9.36 billion) of the total operating cost

USD 449 billion
65.5%

USD 237 billion
34.5%

At USD 54.5 per barrel, the crack spread represents 10.6% (USD 72.9 billion) of the total operating cost

■Operating Cost (excluding fuel cost)   ■Fuel Cost

Source: IATA, AACO

In 2021, the industry's fuel cost represented 18.7% of the total operating cost. The crack spread between jet fuel and crude oil (USD 7) made up around 1.7% of the total operating cost. However, if we apply the current price of jet fuel (June 2022) which is USD 177.2 per barrel, the fuel cost will make up around 34.5% of the total operating cost, with the crack spread increasing to 10.6%.

AACO Member Airlines

AACO Members in 2021

Passenger Operations

Million Passengers

200 —
150 —
100 —
50 —
0 —

2019   2020   2021

■ Int'l Pax (including transit)   ■ Domestic Pax

Change in 2021 compared to 2019

RPKs   -70.0%

ASKs   -57.3%

PLF   -22.4 pp

Change in 2021 compared to 2020

RPKs   +3.0%

ASKs   +17.1%

PLF   -5.0 pp

Cargo Operations

Change in 2021 compared to 2019

RTKs   -43.4%

ATKs   -38.3%

Change in 2021 compared to 2020

+17.8%

+11.1%
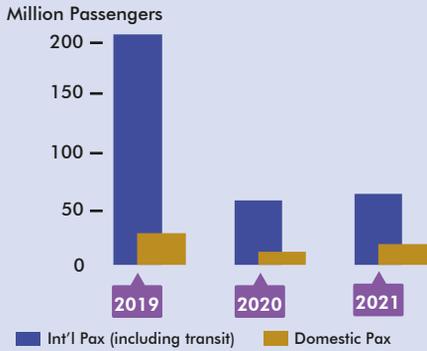
Change in 2021 compared to 2019

CTKs   +12.6%

Change in 2021 compared to 2020

+22.6%
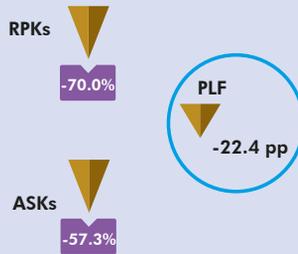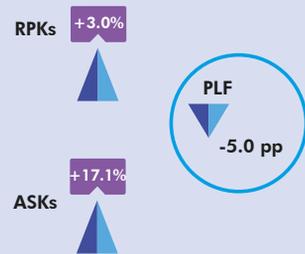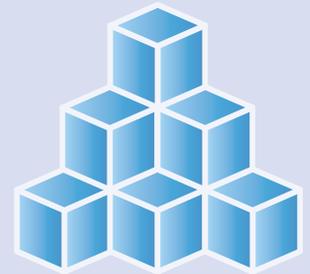
In Service Fleet Development

Change in 2021 compared to 2019

Wide-body   -20.7%

Freighter   -14.6%

Narrow-body   -7.4%

1,149 Aircraft in Fleet (as at Dec 31,2021) Average Age per Unit Aircraft 8.3 years in 2021

Change in 2021 compared to 2020

Wide-body   +23.3%

Freighter   -5.4%

Narrow-body   +13.0%
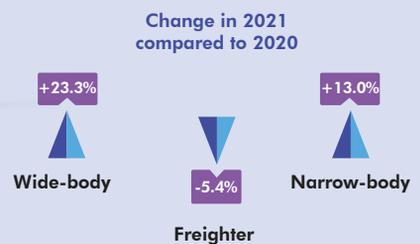
Financials and Productivity

Change in 2021 compared to 2019

Operating Revenue, -28.0%

Operating Cost, -26.8%

Operating Margin -1.7 pp

Change in 2021 compared to 2020

Operating Revenue, +77.0%

Operating Cost, +24.8%

Operating Margin, +44.2 pp
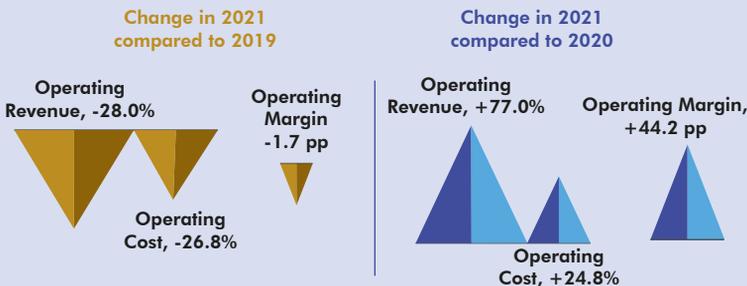
**2021 Figures: Operating Revenues USD 48.81 billion
Operating Expenses USD 50.81 billion
Operating Margin -4.1%**

Employment

AACO Members (reporting members*)

2021/2019   -29.6%

2021/2020   -14.4%

* 14 Reporting Members

AACO Members' Passenger and Cargo Operations

AACO Members' Monthly Year-on-Year Change in Total Passenger Traffic (RPKs), Seat Capacity (ASKs), and Monthly Passenger Load Factor (PLF)

Change in RPKs (Left scale)   Change in ASKs (Left scale)   PLF (Right scale)

Labels in red represent change over 2019

Source: AACO
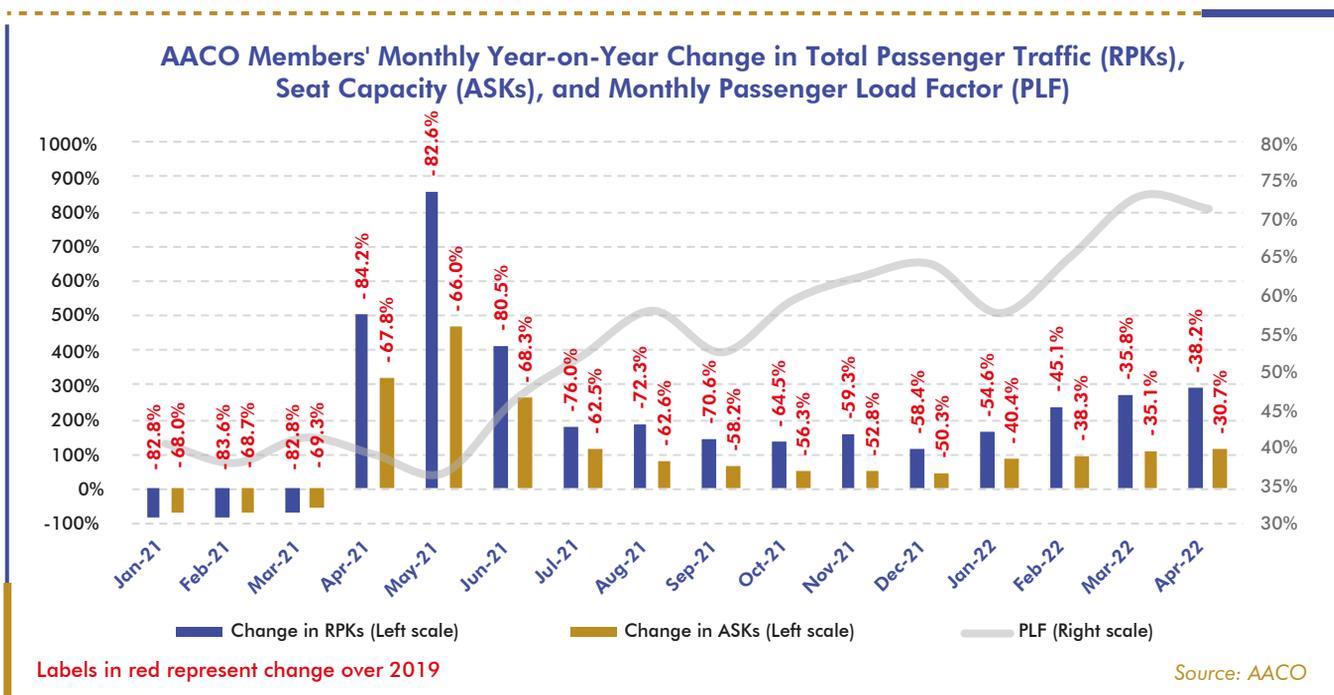
During the second half of 2021, AACO members' operations started to improve as more Arab markets reopened and the vaccination rate picked up. By December, RPKs and ASKs were 58.4% and 50.3% below 2019 levels, respectively.

The emergence of the Omicron variant by the end of 2021 and the war on Ukraine that started late February 2022 did not affect the pace of recovery of AACO members' operations. During the first four months, RPKs and ASKs increased by 239.3% and 407.6%, respectively, compared to the same period in 2021.

Monthly Year-on-Year Change in AACO Members' Cargo Tonne Kilometers (CTKs)

Change Over 2019   Year-on-Year Change

Source: IATA, AACO
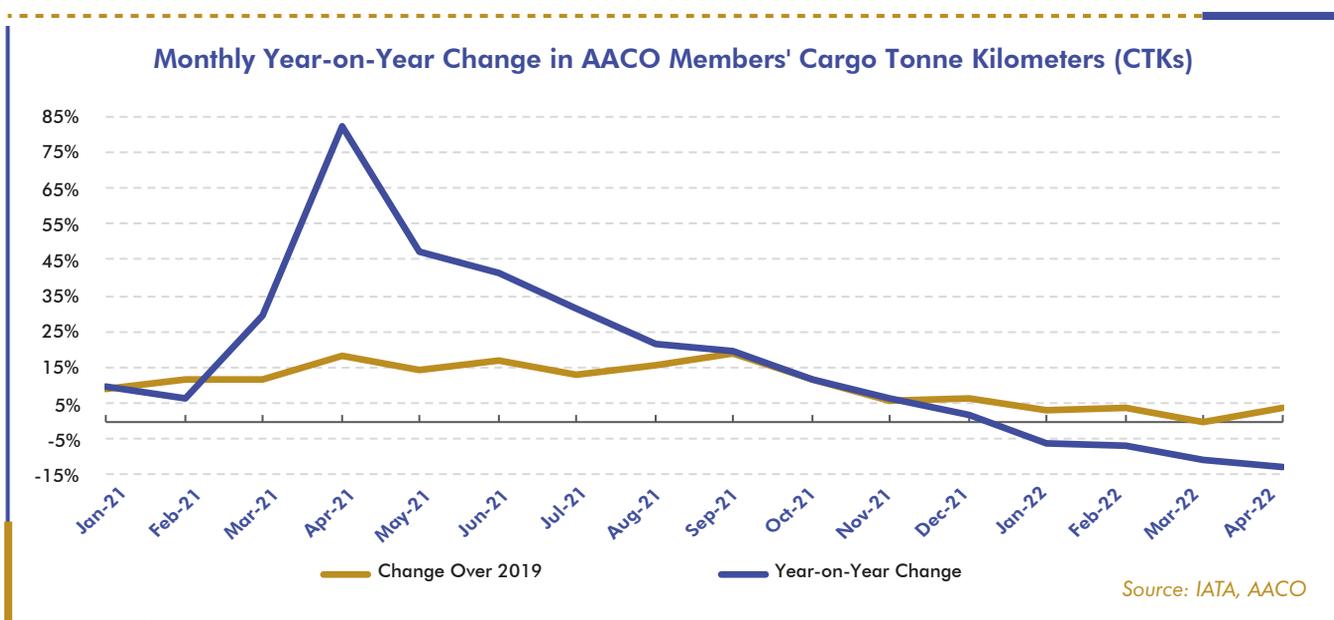
AACO members' cargo traffic (measured in CTKs) recovered in 2021, increasing by 22.6% and 12.6% compared to 2020 and 2019, respectively. As the demand for air cargo declined globally with the start of the war in Ukraine late February 2022, so did AACO members' cargo traffic. In April 2022, CTKs declined by 12.6% compared to 2020.

AACO Members' Fleet Status

AACO Members' In-Service Fleet Status for Major Aircraft Types (As at June 30, 2022), and Comparison with 2019, 2020 and 2021*

(Number of aircraft)

Chart data points (bars, left to right): B777, A320, B737, B787, A380, A330, A320 Neo, B737 Max, A321, A350, A321 Neo, ATR 72, B747, A319, A220-300, B767, A330 Neo, A340, A310, A318

Donut charts:
- **2019**: Total 1,345 — 582, 681, 82
- **2020**: Total 989 — 437, 478, 74
- **2021**: Total 1,149 — 539, 540, 70
- **H1-2022**: Total 1,238 — 576, 582, 80

Legend: ■ Narrowbody ■ Widebody ■ Freighter
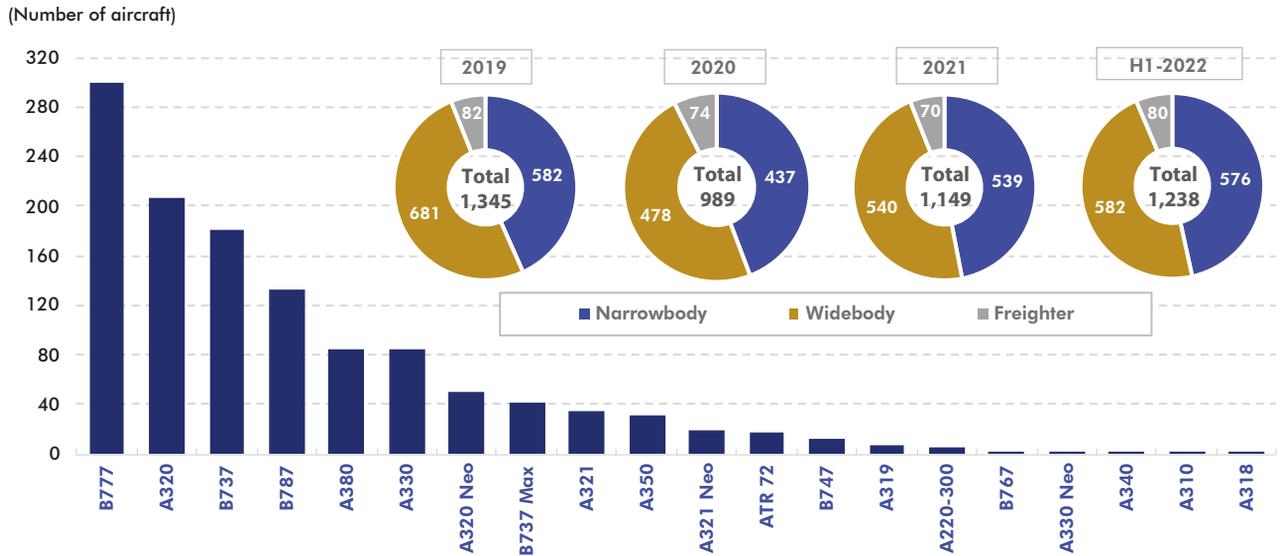
*Data has been recalculated to exclude aircraft having a maximum take-off mass of less than 9,000 Kg (20,000 lbs)

Source: Cirium Fleets Analyzer, AACO

AACO members' in-service fleet reached 1,149 aircraft by the end of 2021, increasing by 16.2% compared to 2020 while remaining 14.6% below 2019 levels.

During the first half of 2022, more markets reopened as border restrictions were eased. AACO members' in-service fleet increased by 7.7% compared to 2021, and 25.2% compared to 2020, in order to meet the Arab market's increasing demand for air travel, yet the number of in-service aircraft was still 8.0% below 2019 levels.

Financial Performance of AACO Members

In 2021, AACO members' operating loss reached USD 2 billion, an improvement from the USD 13.3 billion operating loss recorded in 2020. Operating revenues also improved by 77.7% compared to 2020, while remaining 28.0% below 2019 levels.

Change in AACO Members' 2021 Cost Structure at Current Price of Jet Fuel (June 2022), and the Percentage of the Crack Spread From the Total Operating Cost

2021 Cost Structure

USD 19.3 billion
37.9%

USD 11.3 billion
22.3%

USD 20.2 billion
39.8%

At USD 7 per barrel, the crack spread represents 2.0% (USD 1.03 billion) of the total operating cost

2021 Cost Structure at Current Jet Fuel Price

USD 19.3 billion
29.5%

USD 26.0 billion
39.7%

USD 20.2 billion
30.8%

At USD 54.5 per barrel, the crack spread represents 12.2% (USD 8.0 billion) of the total operating cost

■ Direct Operating Cost (excluding fuel cost)   ■ Indirect Operating Cost   ■ Fuel Cost

Direct Operating Cost includes: Rentals, Insurance, Maintenance, and Landing & Enroute charges
Indirect Operating Cost Includes: Station & ground, Administrative, Pax Services, and Promotion

Source: AACO

AACO members' fuel cost made up 22.3% of the total operating cost in 2021, with the crack spread between jet fuel and crude oil representing 2.0%. If the current price of jet fuel is applied to the cost structure of 2021, the fuel cost would represent around 40.0% of the total operating cost, and the crack spread would increase to reach 12.2% of the total operating cost.

Airports' Operations

Global Airports

Change in Global Airports' Passenger and Cargo Traffic Compared to the Same Period in the Previous Year

Millions

Passengers

2020	2021	Q1-2022
-63.0%	-49.7% / 35.9%	-39.2% / 86.9%

Millions

Cargo (Metric Tonnes)

2020	2021	Q1-2022
-6.7%	8.1% / 15.9%	3.5% / 0.6%

Labels inside bars represent year-on-year Change
Labels in red represent Change over 2019

Source: ACI, AACO
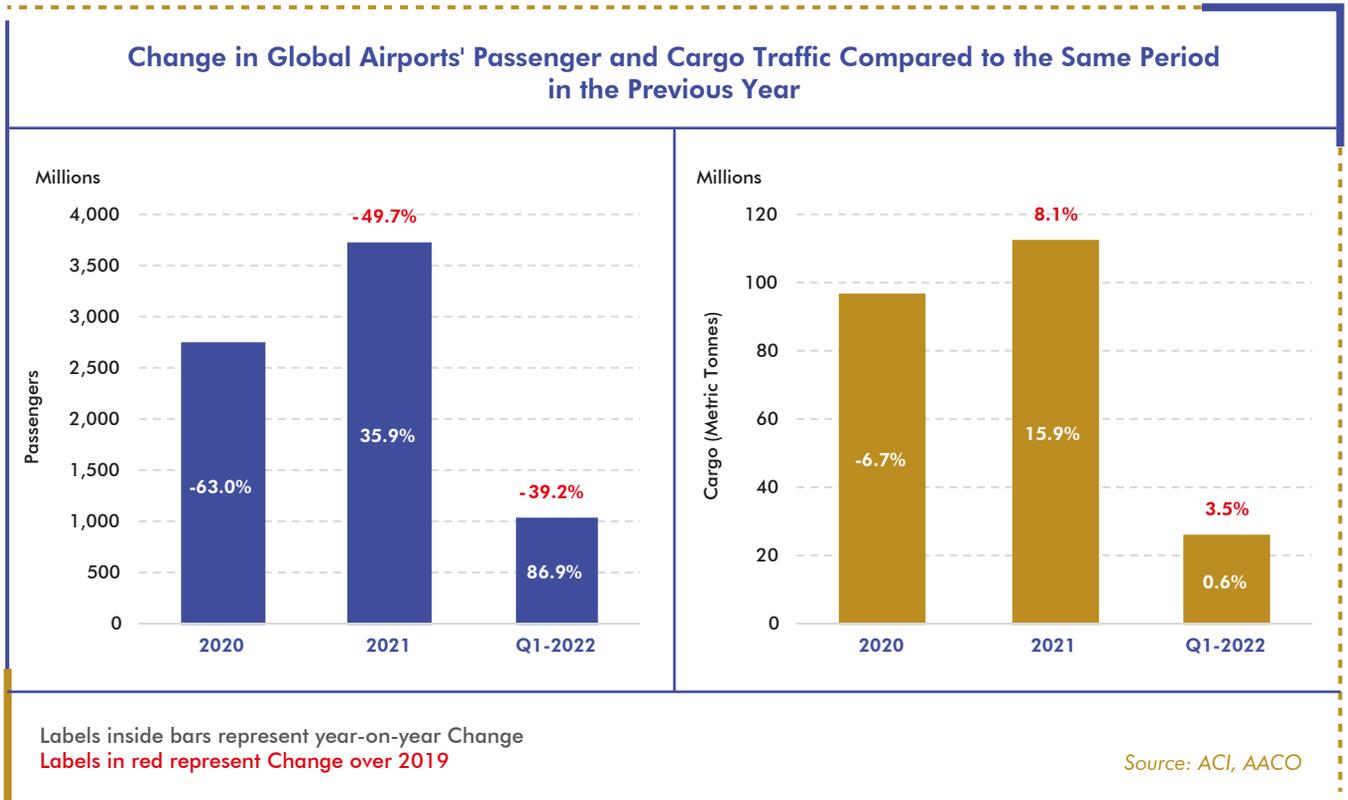
In 2021, global airports' passenger traffic increased by 35.9% compared to 2020 but remained 49.7% below 2019 levels, while cargo traffic increased by 15.9% compared to 2020 and 8.1% compared to 2019. In the first quarter of 2022, passenger traffic kept improving as air travel industry is heading toward recovery, registering an increase of 86.9% compared to Q1- 2021, while remaining 39.2% below Q1-2019. As for cargo traffic, the growth continued at a slower pace in the first quarter of 2022 marking an increase of 0.6% and 3.5% compared to Q1-2021 and Q1-2019, respectively.

According to Airports Council International (ACI), airports are expected to record an improvement in passenger traffic in 2022, reaching 77% of 2019 levels.

Arab Airports

Change in Arab Airports' Passenger and Cargo Traffic Compared to the Same Period in the Previous Year
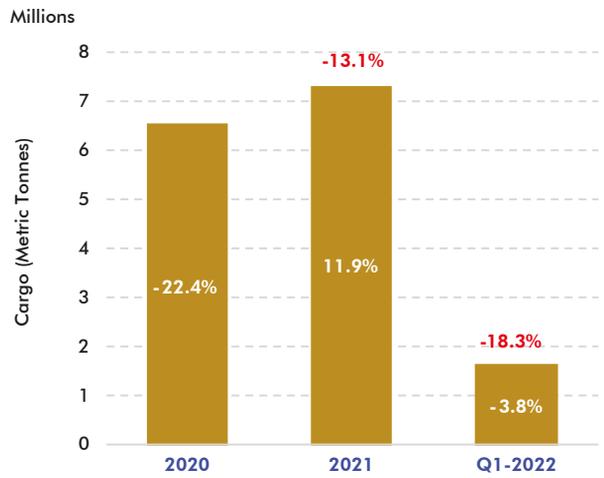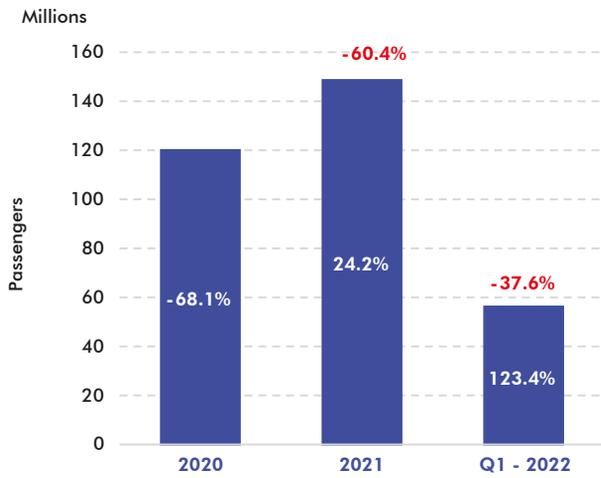
Millions

Passengers

Year	Value	Labels
2020	120	-68.1%
2021	150	24.2% / -60.4%
Q1 - 2022	57	-37.6% / 123.4%

Millions

Cargo (Metric Tonnes)

Year	Value	Labels
2020	6.5	-22.4%
2021	7.3	11.9% / -13.1%
Q1-2022	1.7	-18.3% / -3.8%

Labels inside bars represent year-on-year Change
Labels in red represent Change over 2019

Source: ACI, AACO

In 2021, passenger and cargo traffic in Arab airports increased by 24.2%, and 11.9% respectively, when compared to 2020. When compared to 2019, passenger traffic remained 60.4 % below 2019 levels, while cargo traffic remained 13.1% below 2019 levels.

In the first quarter of 2022, passenger traffic increased by 123.4% compared to the same period in 2021, yet it was still 37.6% below the same period in 2019. On the other hand, cargo traffic dropped by 3.8% compared to Q1-2021 and 18.3% compared to Q1-2019, due to the ongoing war in Ukraine and the global supply chain disruptions.

Travel & Tourism

Contribution of Travel & Tourism

Travel and Tourism Contibution to GDP and Employment in 2021

Global
$	5,812.0	289.0
	-39.6%	-13.2%
	21.7%	6.6%

Americas
$	1,780.7	34.6
	-32.9%	-23.6%
	23.1%	8.6%

Contibution to GDP (Billion USD)

Contibution to Employment (Millions)

Asia-Pacific
$	1,624.3	106.5
	-51.6%	-13.9%
	16.6%	6.2%

Europe
$	1,464.1	34.9
	-32.4%	-8.4%
	27.9%	4.7%

Arab World
$	169.2	8.3
	-43.9%	-13.6%
	12.5%	9.2%

Sub-Saharan Africa
$	76.4	17.0
	-34.0%	-17.8%
	21.9%	7.5%

Change over 2019
Change over 2020
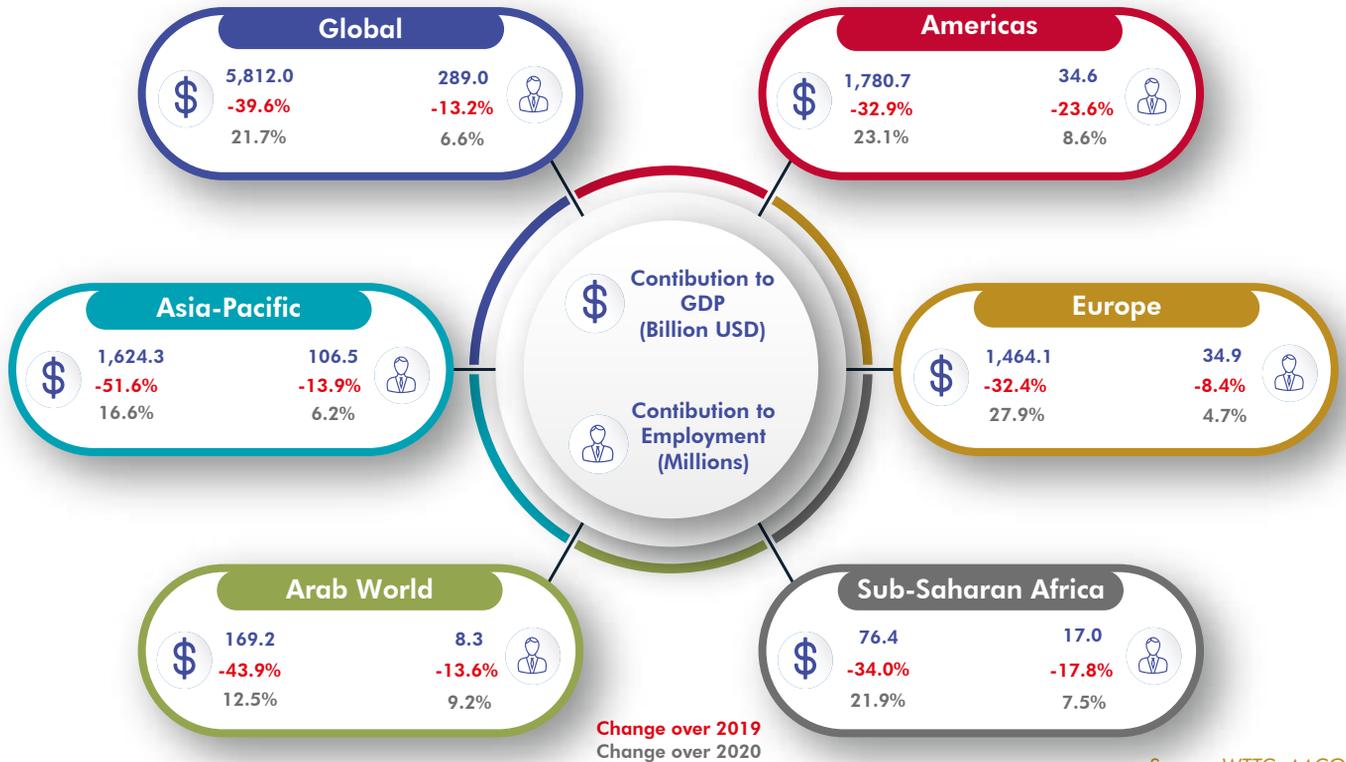
Source: WTTC, AACO

Tourism and the War in Ukraine

Top 5 Destinations of Russian Tourists in the First Half of 2022, and Comparison with the Same Period in 2021 and 2019
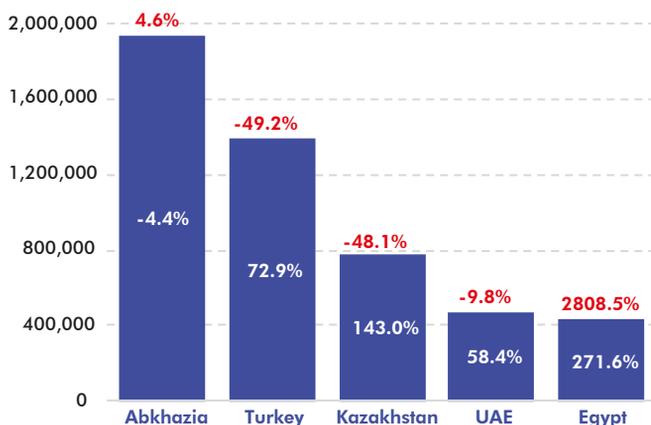
- Abkhazia: 4.6% / -4.4%
- Turkey: -49.2% / 72.9%
- Kazakhstan: -48.1% / 143.0%
- UAE: -9.8% / 58.4%
- Egypt: 2808.5% / 271.6%

Labels inside bars represent year-on-year Change
Labels in red represent Change over 2019

Source: ATOR, AACO

Data collected for the first half of 2022 reflected the impact that the war in Ukraine had on shifting Russian tourism towards different destinations. The top 5 destinations of Russian tourists during the first half of 2022 were Abkhazia, Turkey, Kazakhstan, UAE, and Egypt. During the same period in 2021, Turkey ranked in the same position, UAE ranked in the 5th position, while Egypt was in the 11th position. It is worth noting that the significant change in the number of Russian tourists visiting Egypt in the first half of 2022 compared to 2019 and 2021 is due to the resumption of direct commercial flights between Russia and Egypt in August 2021.

Safety

Aviation Safety Recap

- The full year 2021 demonstrates the lowest accident rate in the last 10 years.
- The five-year rolling average accident rate (2017-2021) of 1.23 was also the lowest when comparing the five-year averages going back to 2012.

Global Overview	Total Accidents	Fatal Accidents	Hull Losses (per 1 million flight)		Fatalities	Accident Rate / million sectors
			Jet	Turboprop		
Average 2017-2021	44.2	7.4	0.15	1.22	207	1.23
2019	52	8	0.15	0.69	240	1.11
2020	35	5	0.16	1.59	132	1.58
2021	26	7	0.13	1.77	121	1.01

Source: IATA 2021 Safety Report, AACO

In 2021, no runway/taxiway excursion and ground damage accidents were reported for the first time in at least 15 years. Before Covid-19, runway excursions comprised 24% of all accidents.

- Accident categories in 2021 are listed below in number of fatalities:
  - Loss of Control inflight: 3 accidents with 75 fatalities
  - Controlled flight into terrain: 2 accidents with 32 fatalities
  - Other end state: 2 accidents with 14 fatalities
- AACO members have had zero accidents for the past 5 years (2017-2021).
- Safety remains AACO member airlines' number one priority. Focus continues to be on continuously enhancing the safety of operations, despite the challenges introduced by the implications of the spread of COVID-19 since 2020.

With the restart of operations following the pandemic, new safety focus areas needed to be dealt with:

Ensuring proficiency and well-being of professional workforce.	Loss of many highly skilled individuals owing to retirement or redundancy.	Safely returning aircraft to service after parking for extended periods.

AACO continues to work with relevant organizations including ICAO, IATA, and Flight Safety Foundation to bring awareness to aviation stakeholders on the importance to mitigate these new safety risks through:

Awareness Sessions & Training	Encouraging Proper Safety Reporting	Developing Recommendations	Enhancing Aviation Safety Culture	Information Sharing

5G C-Band Interference Affecting Aircraft Radio Altimeters

While many 5G networks have been installed near airports around the world, mitigation measures have mostly been taken to ensure that the frequencies resulting from the 5G towers do not interfere with aircraft systems especially aircraft radio altimeters.

This year, the issue of 5G interference with radio altimeters has been under the spotlight in the United States with the rollout of c-Band 5G operations in January 2022 at some US airports which resulted in big disruptions to aviation operations as radio altimeters are key to aircraft landing and safety systems.

Where 5G Technology Has Been Deployed

Countries where 5G networks/technology have been deployed and where 5G investments have been made

- 5G networks launched
- 5G technology deployed
- Investment in 5G

As of June 2022
Source: GSA 5G Snapshot

AACO, along with IATA and other regional associations for airlines around the world, have engaged with the US FAA to advocate for implementing mitigation measures by the telecommunications companies.

The FAA has decided that airlines should retrofit their aircraft to remove the threat of 5G interference, with a July 2023 deadline for large commercial aircraft to do the retrofits.

AACO, IATA and the other regional associations continue to communicate with the FAA to work with airlines, airframe OEMs, Rad Alt manufacturers, telcos, and the Federal Communications Commission, to achieve a solution that more fairly and realistically allocates the responsibility to ensure that 5G and aviation can safely co-exist.

The civil aviation spectrum and aircraft safety systems should be protected and respected.

Aviation Safety Risks Resulting from Lithium Batteries

The carriage of lithium batteries on air transport continues to present a significant safety risk. To ensure the safe air transport of lithium batteries, standards and processes are in place by ICAO, IATA, and the United Nations, however, many loopholes exist, in implementation, that are resulting in increasing incidents that pose a safety hazard to air transport, most importantly the following loopholes exist:

US FAA: 354 aviation related incidents involving lithium batteries registered from 2006 to February 2022.

IATA: 13 reports in the last 2 years.

1. Applied regulations are confusing.
2. Enforcement of regulations by governments is mostly weak.
3. Detection of lithium batteries in luggage is not done automatically.
4. Incidents are not always being reported or shared.
5. No testing standard for fires involving lithium batteries.
6. Lack of awareness.
7. Un-declaration or mis-declaration of shipments containing lithium batteries.

It's important that governments, operators, screening equipment manufacturers and relevant technology providers work together to ensure the safe transport of lithium batteries without affecting aviation safety.

Governments	Operators	Screening Equipment Manufacturers	Technology Providers
Awareness and training of security staff	To continue risk assessment, monitoring and reporting of all incidents related to lithium batteries	To invest in technology solutions for enhanced security screening x-ray machines at airports' security checks to offer automated lithium battery detection	To help airlines in their pursue for fire containments tools such as fire-resistant containers, fire containment covers and bags, and in smoke displacement systems
Share data on incidents caused by lithium batteries			
Define accountabilities of all stakeholders in the supply chain			
Oversee & enforce measures			

Most importantly, governments need to work under ICAO to have a legal instrument which allows the prosecution of shippers and individuals who fail to declare carriage of lithium batteries.

Aviation Security

Airlines continue to face operational challenges due to increasing security concerns. Access to security information with wide-scale risk assessments has become an operational necessity.

The threats and challenges of aviation security continually evolve. The recovery phase of aviation from COVID-19 implications is no exception. Most notably, the pandemic had an impact on the Insider Threats and cyber-attacks. Meanwhile, wars and geo-political tensions continue to feed concerns over the security of civil aviation.

Prominent Security Threats

1	2	3	4	5
Conflict Zones	**Cyber-Attacks**	**Insider Threats**	**GNSS Jamming**	**Unruly Behavior**
25% of the world's revenue passengers overfly areas comprising 70% of the worlds' risks.	Aviation continues to be a target to cyber threats that could be as risky as interfering in aircraft systems to cause harm.	Rising economic struggles during the pandemic and thereafter, have given rise to insider threats.	Risks of harmful interference in Global Navigation Satellite Systems (GNSS) continue.	In 2021: 1 reported incident for every 1,340 flights. 49% of reported incidents included face-masks.

Overflying Conflict Zones

The continuing rise in conflict zones is leading to less available air routes and tightening of corridors.

- AACO Aviation Security Group continue to utilize the Information Sharing Mechanism which was established in 2014.

- AACO and EASA have established a cooperation mechanism between the two associations following the launch of the European Information Sharing and Cooperation Platform on Conflict Zones in April 2022.

- IATA's AVSEC Insights Platform was launched in August 2022 for security information-sharing among airlines, airports and air navigation service providers.

War in Ukraine

In 2022, the War in Ukraine showed the severe impact of conflict zones on aviation. Ukrainian and large parts of Russian airspace were declared no-fly zones. This led to significant operational and financial challenges for airlines.

Cyber-Attacks

Cybersecurity threats can result in significant operational and financial damage for aviation.

- No incidents have been reported to have affected the safety of a flight due to a cyber-attack, however, attacks on aviation systems continue to increase.
- There's a lack of visibility across the supply chain.
- There's a drive for broad-based international collaboration among public and private stakeholders in this domain.

Strengthening cyber-security culture

- Airlines continue to work on strengthening their cyber-security culture and systems.

- AACO continues to raise awareness on cyber threats and on the need for regional and global collaboration to address them.

Insider Threats

The rising economic struggles during the pandemic and thereafter, have given rise to insider threats which is documented to take many forms, including: the sharing of sensitive procedures, attacks on information systems, or smuggling goods or people into security restricted areas.

Insider threats are addressed under security management programs

Airlines mostly address this issue by developing insider threat risk identification and mitigation as part of their security program.

GPS/GNSS Jamming

GNSS serves several safety systems in aviation. The loss of GNSS could severely affect the safe operations of the airspace. ICAO has requested states to do the following

- Reinforce Communications, Navigation and Surveillance systems' resilience to interference & prevent use of illegal interfering devices.
- Reinforce civil-military coordination, and between aviation and radio regulatory authorities.
- Retain essential conventional navigation infrastructure for contingency support in case of GNSS outages.
- Develop mitigation techniques for loss of services.

It is essential to mitigate GNSS vulnerabilities adequately

AACO continues to raise awareness on the possible devastating impact of jamming GNSS.
Together with ICAO and IATA, AACO calls on states to report GNSS radio frequency interferences to ITU radio-communication bureau (ITU-BR).

Unruly Behavior

Unruly disruptive behavior by passengers onboard could result in threatening the safety and security of the flight. In addition to operational disruptions causing financial burdens on airlines and inconvenience to other passengers.

A survey by IATA in 2020 found that in 60% of incidents, jurisdictional issues were cited as the reason that prosecutions did not proceed. The Montreal Protocol 2014 gives mandatory jurisdiction to the State of intended landing, thus giving States powers to deal with unruly passengers that land in their territory, irrespective of where the aircraft is registered.

MP14 entered into force on 1 January 2020 and there are currently 38 States Parties.

Significant new guidance for States is also available in the form of Manual Doc. 10117 which provides model legislation relating to civil and administrative penalties to enhance enforcement.

Recent Best Practices to Address and Deter Unruly Behavior Onboard:

AACO continues to advocate governments to:

1. Conduct Public Awareness Campaigns so passengers know the consequences of their behavior.
2. Ratify Montreal Protocol 2014 to remove any jurisdictional gaps.
3. Implement a civil and administrative penalties regime as outlined in ICAO Manual Doc. 10117.

"One Too Many Campaign" in the UK, & development of a UK code of conduct of practice on disruptive passengers

EASA's "Not On My Flight" Campaign on zero tolerance for unruly passengers

"Zero Tolerance for Unruly and Dangerous Behavior" public awareness campaign in the United States

Aeropolitical Affairs

The year 2022 witnessed a strong wave of relaxation of biosafety air travel restrictions; this follows a slow pace of borders opening throughout 2021, with extensive biosafety travel requirements that airlines and passengers had to comply with. The responses to the Omicron wave end of November 2021 re-instated the need for harmonious, risk and evidence-based guidelines for responding to pandemics as many states again impulsively resorted to closing borders as a way to mitigate the risk of transmission of Omicron; which was eventually challenged by scientific research and data that showed that closing borders does not help in mitigating the risk of transmission.

Air Borders Status as at August 2022

Few countries still impose any form of travel ban, while the rest have opted to either remove restrictions fully or maintain light requirements such as screening.

Arab Countries

As at 08 August, 6 Arab countries have completely dropped all biosafety travel measures for entry, namely: Egypt, Yemen, Sudan, Oman, Kuwait, and Bahrain.

The remaining countries have their borders fully open and have relaxed their measures throughout the year and generally maintain certain pre-travel screening rules such as vaccination or negative PCR requirements.

EU / EEA

As at 08 August 2022, 27 EU / EEA countries dropped all their biosafety travel measures. Netherlands and Spain continue to keep their entry rules as at 08 August 2022 but are more relaxed than at the start of the year.

Australia, New Zealand

Australia and New Zealand have fully opened their borders, with Australia dropping all biosafety travel measures for entry, while New Zealand maintained some screening rules.

USA, Canada

Both USA and Canada have opened their borders while maintaining pre-flight screening.

Safeguarding Air Services Agreements During Crises

Throughout the pandemic, many states have established public health corridors or travel bubbles, or simply reacted in different ways to the pandemic in applying travel-related restrictions. This has shaken the international aviation system that is based on air services agreements which provide a legal framework and create guarantees for air services.

Even after return to normality in terms of opening borders for travel, many states did not directly resort back to their obligations in air services agreements with other states and that has created a delay in recovery in some markets.

> **AACO has been vocal since the start of the pandemic on the importance of protecting the air services agreements in any travel related biosafety measures or restrictions.**
>
> **AACO will continue to advocate for reaching a mechanism that would ensure that air services agreements continue to be the reference in air transport relations between states during times of crises.**

Liberalization of Air Travel will Play a Booster Role for a Sustainable Recovery

Many states have initiated efforts to ease travel this year in order to speed up recovery. Removing visa requirements, giving visas on arrivals, or prolonging the duration of visit visa have been implemented by some states. Most relevant to the region, are the current discussions on Schengen visa waivers for Arab GCC nationals.

Also, many airlines especially from the Arab world have entered into agreements with tourism authorities in touristic destinations around the world to promote travel and tourism in those destinations.

In addition, many liberalization enhancements to existing air services agreements have been seen to re-stimulate demand.

Studies by IATA and Intervistas have shown that after a year of liberalizing air travel:

On average, city-pairs would increase by 20% compared to 4% in normal cases. Airfares would decline by an average of 34%.

Passenger traffic growth typically average between 12% and 35%.

On average, liberalization is expected to generate USD 1.3 billion in tourism receipts and create around 155,510 new jobs.

Total effect of liberalization on GDP varies between USD 3.1 to 8.1 billion (including, aviation, tourism, and other related industries).

It is evident that with more liberalization of air services between countries, recovery of air transport can be achieved faster and be more sustainable.

Slots Alleviation Needs to Continue as Long as Air Travel Did Not Go Back to 100% 2019 Levels

The COVID-19 pandemic has introduced challenges to the airports' slot allocation system. AACO has joined efforts with IATA and other airline associations throughout the pandemic to advocate for full slot alleviation as long as needed. While most regulators around the world continued to give full slot alleviation through to northern summer 2022 (March to October 2022), the UK went back to 70% use rate while the European Union set the rate at 64%.

At the time of writing this report, the European Commission had proposed a return to 80/20 use rate of slots in the EU. AACO has joined efforts with IATA, A4A and ERA to argue against this proposal and reflect a more workable and realistic use rate of slots in the coming winter season, as the proposal of 80/20 rule means that traffic is back to 100% of 2019 which is not the case.

Operational Challenges emerged in Summer 2022

Operational challenges have emerged, especially in the European Union, during the summer 2022 season when we witnessed a surge in travel demand. Due to staff shortages at airports, without enough advance notice, airports (Schiphol and Heathrow) requested airlines to cut several flights, reduce capacity, and stop bookings, under a capacity cap implemented at the airports. This has resulted in massive cancellations and inconveniences to passengers, and in financial and reputational damages to airlines operating at the airports.

AACO communicated with government officials in both the Netherlands and the UK to ensure the following:
1. Such requests need pre-planning and airlines should be given enough time to accommodate.
2. Airlines should not be penalized for cancellations not under their control.
3. Slot use rules should not apply in these cases.

Governments need to study the impact of aviation taxes on economic growth versus the impact of contribution of aviation to economic growth. Some examples of recent tax implementation or proposals include:

- Hungary tax of EUR 10 per European destination and EUR 25 per third country destinations on all departing passengers from Hungary.
- Green/environmental taxation initiatives across Europe, including ones in Denmark, Norway, and the Netherlands.
- Enacting an environmental departure tax in Belgium.

At a time when air travel demand is starting to get back to normal and following the massive economic implications of COVID-19 on states, airlines, and people, taxation on air travel would hinder the recovery and growth of air travel.

EU Energy Taxation Directive is under review in the EU Fit for 55 Package. It removes jet fuel's current tax-free status. From 2023, the minimum tax rate for aviation fuel for intra-EU flights would start at zero and increase gradually over a 10-year period. SAF would be exempt, as would cargo-only flights. AACO continues to advocate that regulators should adopt incentive-based policies for the use of SAF rather than policies that penalize the use of jet fuel.

Regulators Should Not Hold Airlines Liable For What Falls Beyond Their Control

At the beginning of the pandemic, cancelled flights due to border closures triggered a massive backlog of tickets that required refunds and/or vouchers. Airlines did their best to accommodate for the millions of tickets that needed to be dealt with for reasons beyond their control. The situation triggered some regulators to revisit their air tickets refunds policies.

AACO continues to argue against unfair regulations that penalize airlines and hold them liable for delays and cancellations for reasons beyond their control.

The United States has recently proposed amendments to the scope and applicability of ticket refunds and introduced a new rule that simplifies the hearing procedures and facilitates the process for the aviation consumers who experience delays.

In Canada, new regulation was introduced that requires airlines to provide passengers with either a refund or rebooking, at the passenger's choice, when there is a flight cancellation, or a lengthy delay, due to a situation outside the airline's control.

Airlines Offer Disability-Inclusive Air Transport Services; Regulatory Loopholes Prevail

As persons with disabilities/reduced mobility form more than 15% of the world population, and while AACO member airlines remain true to their disability-inclusive air transport services, there remain loopholes in the regulatory environment. Regulations differ in requirements leading to airlines having to tailor their accessibility services depending on the origin and destination, which is proving to be challenging in connecting flights that have incompatible and sometimes contradictory accessibility requirements.

AACO continues to advocate for ensuring that accessibility to air transport is regulated in a harmonious way. The airlines' community continues to work with ICAO to take a leading role in filling regulatory loopholes in this domain.

The ICAO Council in 2022 amended Annex 9 – Facilitation, which elevates five recommended practices on the facilitation of the transport of persons with disabilities to international standards. The new provisions relate to the accessibility of flight service-related information for persons with hearing and vision impairments, the basic right to assistance for passengers with disabilities, and the establishment of designated parking and drop off areas for persons with disabilities at terminal buildings. The Amendment to Annex 9 became effective in July 2022.

Aviation and Climate Change

Two Major Issues Pertaining to Aviation and Climate Change

Against the backdrop of heightened pressure to reduce the impact of Climate Change, particularly in the last two years, two major issues pertaining to aviation's relationship with this topic are being addressed:

The first is the readjustment of CORSIA baseline calculation and the second is the long-term aspirational goal for aviation. These two issues, although face value, are not linked together but they are being addressed by various stakeholders, primarily by governments, technology providers, fuel, and alternative fuel suppliers, and of course airlines.

a- CORSIA Baseline

CORSIA baseline was set by ICAO resolution number A39-3 of 2016 with the following main parameters:

1 — CORSIA's baseline will be calculated using the average emissions from international flights captured by CORSIA in 2019-2020.

2 — Starting 2027, any airline in a country with an international RTKs above 0.5% will be required to offset emissions above the baseline.

3 — CORISA is applied for 15 years

CORSIA Main Design Elements

2021-2023 → 2024-2026 → 2027-2029 → 2030-2032 → 2033-2035

Voluntary Participation — Countries can volunteer to be included in CORSIA offsetting responsibility or not

Mandatory Participation — Countries with International RTKS above the 0.5%, when the baseline is calculated, are included in CORSIA offsetting responsibility

All airlines captured by CORSIA should offset the growth of the industry's emissions collectively

All airlines captured by CORSIA will have to offset 80% of their obligations collectively and 20% individually

All airlines captured by CORSIA will have to offset 30% of their obligations collectively and 70% individually

	Collective	Individual
2021-2026	100%	0%
2027-2032	80%	20%
2033-2035	30%	70%
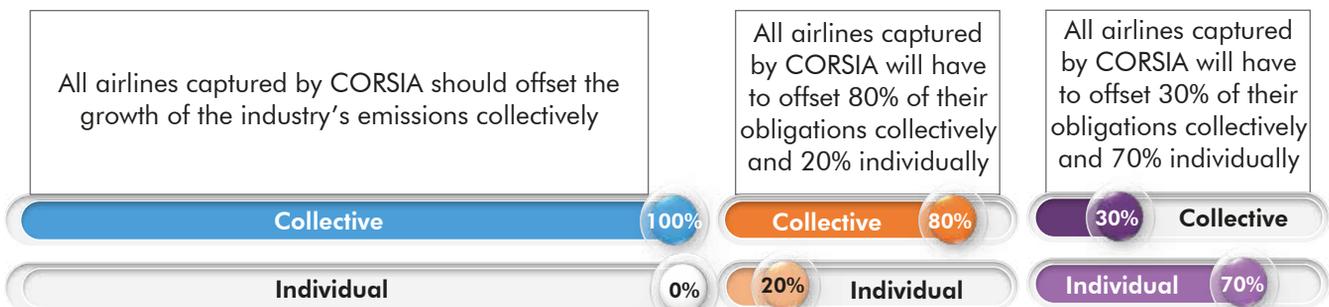
Impact of the Pandemic and Positions of Member States

- ICAO Council decided back in 2020 that since the industry witnessed a sharp drop in operations and hence in emissions, then the calculation of the baseline should be readjusted to be 2019-only to be used for the pilot period (2021 – 2023), leaving the decision to the ICAO Assembly which will meet between 27 September to 7 October 2022 to decide on what should be the baseline for the remaining years of CORSIA i.e: 2024 – 2035.
- The positions of member states on what should be the baseline year for the remaining period of CORSIA were divided between those who want to maintain 2019-only, including the airline industry and those who are pushing back for reaffirming the use of average emissions of 2019-2020, to push for greater offset requirements from airlines.
- There were other options that came out to try to bridge the two variant positions of member states such as adopting 2019 minus a certain percentage.
- Another concept that was being advocated for to be included in the review is the individual responsibility portion. The reason for that is the existing airlines in 2020 will gain more in their baseline emissions (because of the exits that happened during COVID19) and the burden will be higher on high growth airlines and new entrants.

Latest Developments

- On August 25th 2022, ICAO Council met in order to try to reach a compromise ahead of the ICAO Assembly, and in spite of the divergent views of states, the below was agreed upon as a compromise to be submitted to the ICAO Assembly:

Compromise Agreed at ICAO Council Meeting in August and Differences with the Original ICAO Resolution A-39 of 2016

	2021-2023	2024-2026	2027-2029	2030-2032	2033-2035
Offset Responsibility as adopted by ICAO's Assembly	100% Collective	100% Collective	100% Collective	20% Individual / 80% Collective	70% Individual / 30% Collective

CORSIA Baseline: 85% of 2019 emissions from 2024 to 2035

	2021-2023	2024-2026	2027-2029	2030-2032	2033-2035
The Compromise Scenario	100% Collective	100% Collective	100% Collective	100% Collective	15% Individual / 85% Collective

The review of Sector's Growth Factor and the Individual Growth Factor will only take place in 2028 at ICAO 43rd Assembly.

The compromise proposal will be the only option ICAO Council presents to 41st Assembly on CORSIA periodic review.

Both camps who were calling for the adoption of either 2019-only or average 2019-2020, except for China, accepted the compromise because the compromise was built as a package to include the proposed adjust of CORSIA baseline, the reduction of the individual responsibility element and was linked to the statement agreed upon at the High Level Meeting which included the issue of long-term aspirational goal and other elements as shown below in the LTAG update.

b- Long-Term Aspirational Goal

- The ICAO Assembly in 2019 requested the Council to explore the feasibility of a long-term global aspirational goal (LTAG) for international civil aviation, by conducting detailed studies assessing the attainability and impacts of any goals proposed, including the impact on growth as well as costs in all countries, especially developing countries, for the progress of the work to be presented to the 41st Session of the ICAO Assembly in 2022.
- ICAO published its LTAG report, which lays out the observations on the feasibility of adopting an aviation long term aspirational goal through in-sector measures namely: technology, operations, and fuels.
- The report concluded that none of the integrated scenarios would reach zero CO_2 emissions, due to various reasons. And in spite of the anticipated different contributions of the in-sector measures, there will still be a need for CO_2 emissions reductions (residual emissions) in 2050.
- The below three scenarios, as included in the ICAO LTAG report, identify under a high, medium and low contribution scenario what would be the quantity of residual emissions.

	Scenario 1	Scenario 2	Scenario 3
	High contribution of (SAF/LCAF)/Infrastructure	Medium contribution of (SAF/LCAF)/Infrastructure	Low contribution of (SAF/LCAF)/Infrastructure
Technology	21%	21%	20%
SAF/LCAF*	55%	41%	15%
Infrastructure	11%	6%	4%
Residual Emissions	203 MtCO2	495 MtCO2	954 MtCO2

(SAF/LCAF contributions are based on whether the supply will be enough for the industry to achieve those percentages)

- States' views and positions on identifying what could be a long-term aspirational goal for aviation were divergent. The following declarations, made by some countries, have been announced at a national level to attain net zero emissions, either individually or jointly, as below:

	2050	2060	2070
Net Zero Emissions	European Union States, USA and others	Saudi Arabia, Russia and China	India

- A High-Level Meeting was convened by the International Civil Aviation Organization (ICAO) at its Headquarters in Montréal from 19 to 22 July 2022, to discuss Member States' views on the feasibility of a Long-Term Aspirational Goal for international aviation's CO_2 emissions reductions (HLM-LTAG).
- The meeting was concluded with a statement issued by the ICAO, which was considered a compromise and a compilation of all positions presented by States. The HLM-LTAG agreed to use the statement as the foundation for further discussion at the subsequent Assembly. Except for China and Russia, all governments endorsed the statement, which was discussed further by the ICAO Council, that met in August 2022 and agreed on its proposal to the 41st session of the ICAO Assembly.

Statement Agreed During the High-Level Meeting of ICAO

To achieve a collective long-term aspirational goal for international aviation (LTAG) **of net zero carbon emissions by 2050.**

To work on the basket of measures namely: innovative technologies, new types of operations, and SAF, LCAF and other cleaner energy sources

Common But Differentiated Responsibilities

Non-discrimination and equal and fair opportunities

The establishment of a climate finance initiative or funding mechanism

Special circumstances and respective capabilities (SCRC)

No specific obligations in the form of emissions reduction goals to individual states

Capacity building and training

State Action Plans to include LTAG reductions

AACO's Position

AACO will continue to voice a preference for a baseline of 2019-only. And since the decision on climate change and aviation is a governmental one under the umbrella of ICAO, AACO notes that member states of ICAO may reach a compromise on CORSIA and LTAG that may not be optimal but hopefully will ensure that CORSIA will be the only market based measure (MBM) for achieving carbon neutral growth (CNG) in the world, will include a framework for SAF/LCAF that enables the airlines to have easy access to supplies and that airlines will have the facility of book and claim.

The above updates relate to the situation at the time of writing this report.

Sustainable Aviation Fuel

- Since 2011; more than 440 thousand flights operated using Sustainable Aviation Fuels.
- Using SAF results in a reduction in carbon emissions compared to the traditional jet fuel. It could give a reduction of up to 80% in carbon emissions over the lifecycle of the fuel compared to traditional jet fuel, depending on the sustainable feedstock used, production method and the supply chain to the airport.
- There are currently 7 types of SAF approved for jet engines, whereby the maximum blend limit for current SAF with jet fuel is 50%.

Jet fuel, Crude Oil, and SAF prices

Monthly Change in the Prices of Jet Fuel, Crude Oil and Sustainable Aviation Fuel (SAF), and the Crack Spread Between Jet Fuel and Crude Oil

SAF is 2.6 times the price of jet fuel

Legend: Crack Spread | Jet A-1 Spot Price | Brent Spot Price | SAF Spot Price

Source: EIA, AACO
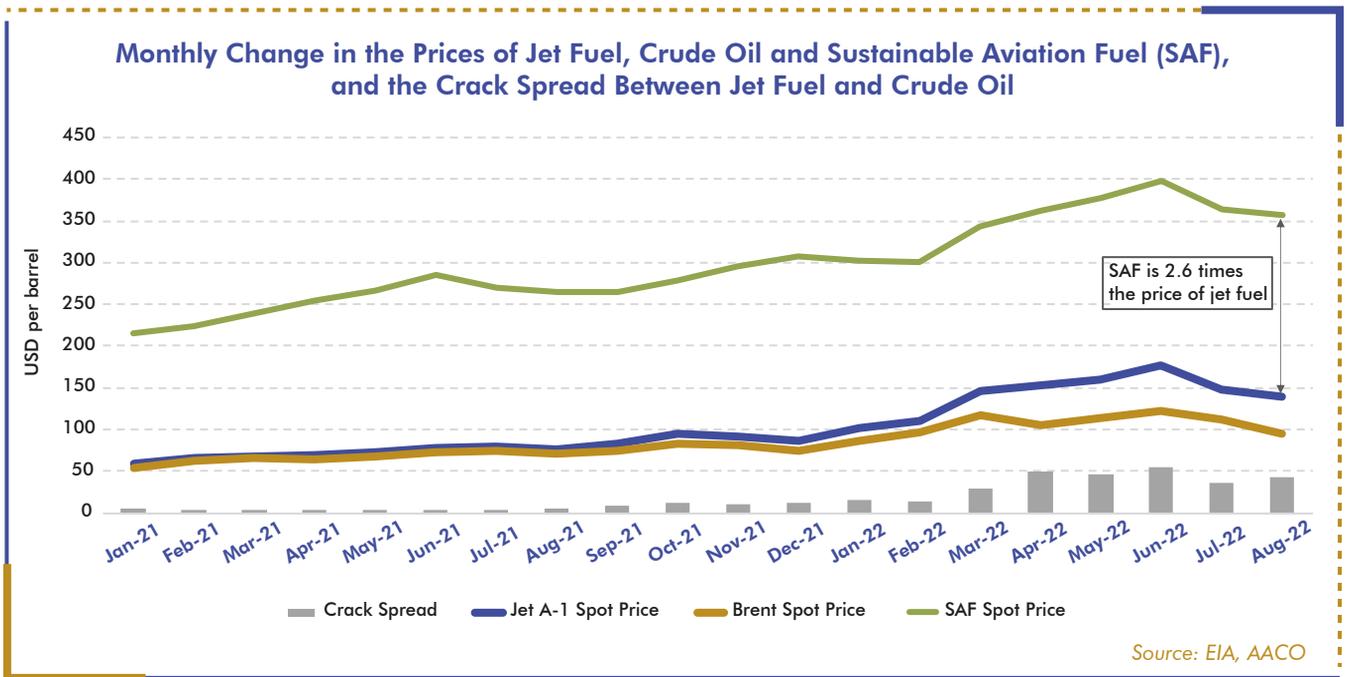
Latest Regulatory Developments

- **ICAO** (International): CORSIA allows airlines to reduce their offsetting requirements with the use of CORSIA eligible fuels, which include Sustainable Aviation Fuels and Lower Carbon Aviation Fuels.
- **Norway:** SAF blend 0,5% mandate started in 2020. Considering a 30% target for 2030.
- **Sweden:** 1% blending mandate is applicable for any aircraft refueling in its territories, and gradually increase to 27% by 2030. A carbon neutral country by 2045.
- **France:** Current SAF mandate of 1%, 2% in 2025 and 5% in 2030.
- **Indonesia:** Mandate of 5% SAF use by 2025.
- **Brazil:** Brazilian sustainable aviation fuel mandate that will take effect in January 2027 will target cutting Brazil's airline emissions by 1% of the sector's 2026's total emissions, with the possibility of raising that figure to 10%.
- **United Kingdom:** SAF mandate that will require at least 10% of jet fuel to be made from sustainable sources by 2030 and kickstarting a domestic SAF industry, supported by the new £165 million Advanced Fuels Fund.
- In the **United States:** Starting January 1, 2023, a credit of $1.25 will be available per gallon of SAF sold as part of a blend with a demonstrated lifecycle greenhouse gas (GHG) reduction of at least 50% compared to conventional jet-A. That credit will increase by 1% for each percentage point reduction in GHG above 50% to a maximum of $1.75 a gallon. That credit will be in effect through the end of 2024, when it will be supplanted by the Clean Fuel Production Credit, a similar plan which will apply to all transportation fuels and last through 2027 unless extended by Congress.

> **AACO Sustainable Aviation Fuel Task Force followed up on the SAF mandates and the regulatory environment for SAF in general, including developments at the EU, the US, and under ICAO. In addition to coordination with fuel supliers and producers to monitor the production and price developments of SAF.**

Mandates Under development are in Spain, Denmark, Netherlands, Germany, Finland, Turkey, and Canada.

In the **European Union**, aircraft refueling at EU airports will be obliged to use kerosene mixed with sustainable aviation fuel (SAF). The percentage of SAF in the mix will increase at roughly five-year intervals. Suppliers will be required to blend a minimum of 2% of sustainable aviation fuel (SAF) into their kerosene from 2025, rising to 85% in 2050.

Critical Issues

In the strive for airlines to reduce their carbon footprint, and for the industry to be able to meet its short and long-term environmental goals, SAF plays a very important role in reaching that goal, as one of the four pillars. For that to happen the following is needed:

Low Carbon Aviation Fuels must be included in the strive of airlines to reduce their emissions.

The facility of Book & Claim should be included in any reference to supporting the deployment of Sustainable Aviation Fuels.

There should be one framework for SAF/LCAF to incentivize deployment and usage and avoid fragmentation and proliferation of individual mandates.

Airlines should be able to claim the reductions in emissions when they uplift and use SAF for their flights.

Certification of SAF needs to be inter-recognized under the different programs/schemes even if the criterion followed for certification differs.

Digital Transformation

The airline industry is participating actively in digital innovation & transformation due to its cost structure, security, and competitive edge, to improve customer experience and financial performance.

The Optimum Objective in Air Travel

- The customer to be recognized by his/her digital identity
- Airlines can act as retailers through all distribution channels
- Airlines regain control over sales channels
- Interoperability across IT systems
- Secure payments and speedy settlements

Using innovative disruptive digital technologies to create new - or modify existing - business processes, culture, and customer experiences.

It can never happen overnight; a transitional roadmap is required.

Digital Transformation in Air Travel

The pandemic, and the spread of lockdowns around the world, made people rely on digital connectivity to cater for their needs and requirements. It was clear that people, across all age brackets and particularly the younger ones, embraced the virtual world that technology can provide them. Consumer behavior switched almost in totality to digital connectivity. That change in consumer behavior also applied to travel. Airlines were quick to change some of their processes to adapt to the biosafety requirements. Yet, they were limited by the technology they use, which is yet to reach the same level as other marketplaces. Therefore, meeting the customers' aspirations and indeed requirements, compels the airlines, as well as other stakeholders, to evolve into an eco-system that is fully seamless and hustle free to deliver an optimum customer experience in his or her journey. Accordingly, digital transformation is not an objective by itself. It is rather the roadmap to change how airlines conduct their business, internally through transforming the processes, and with customers and other stakeholders.

The Roadmap to Digitize Travel

Transforming travel into a digital one is a top priority for all stakeholders in the airline industry and in specific individual airlines. Airlines have been investing in the available state-of-the-art technologies to transition their interactions with passengers from physical to digital. In the old days, if customers wanted to book a flight, it would have taken 90 minutes to manually process the reservation. Once on the plane, beyond the inflight magazine, there was a lack of in-flight entertainment systems. That evolved to having the bookings confirmed in a split second and an entire trip can be planned with a few taps of the finger. Since 2008, airlines eliminated paper tickets, placed electronic kiosks at airports, and established digital portals to sell their products and facilitate consumer interaction with them.

Another big advantage of digitization is the ability to harvest data and analytics. Consumers want to feel special and expect personalization of service, offer and experience. By capturing personal data from customers and learning more about their behavioral patterns, airlines are increasingly optimizing services across the customer journey. However, there are still many technological constraints that dominate the aviation industry.

It is imperative that airlines operate in a digital environment that prioritizes decentralization and humanizing the passenger or shipper rather than considering them as reservation numbers. In today's world, the traveler will receive a ticket with a 13-digit number once the booking is complete and the ticket is issued. The first three digits are an airline code assigned by IATA that tells us which airline issued the ticket, and the remaining 10 numbers are merely serial numbers. In this field, IATA has developed an excellent vision under the name of "offer and order" that includes a fundamental transformation at various levels, which of course requires the reconfiguration of the digital infrastructure, not only for airlines but for all those involved in travel.

Current processes travelers would undergo at the journey

At Departure

- Health
- Check in
- Visa
- Security
- Immigration
- Boarding

If Transiting

- Visa
- Security
- Boarding

At Arrival

- Health
- Visa
- Immigration

DATA KEPT is ZERO
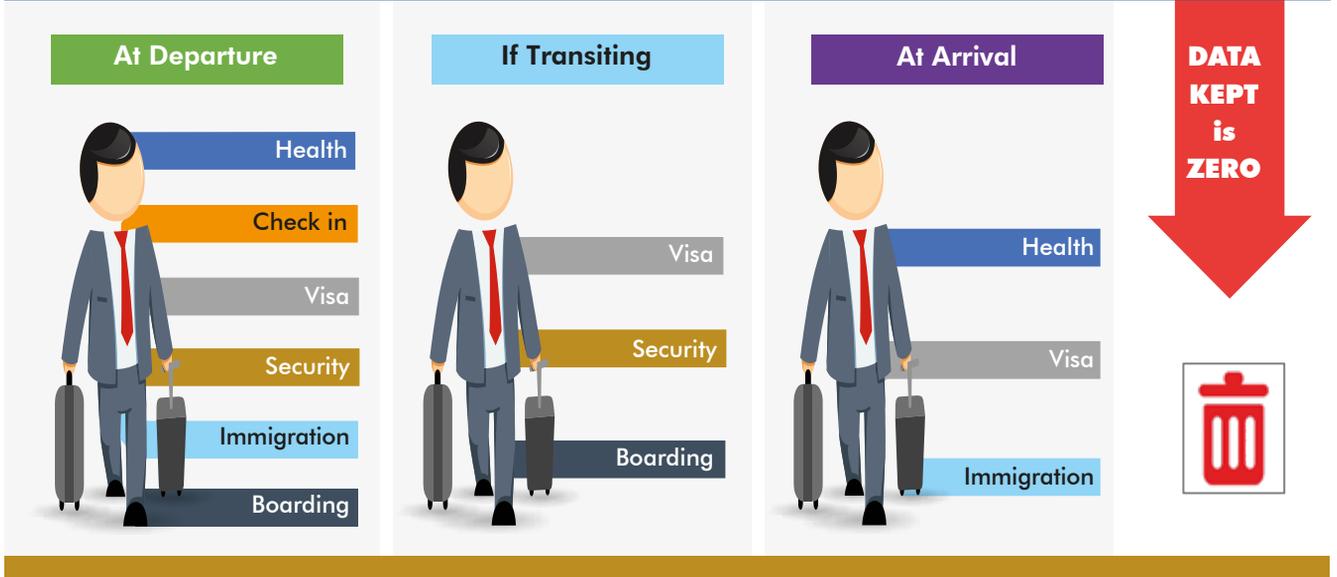
The future of travel processes would be

At Departure

Digital DNA

- Health
- Check in
- Visa
- Immigration
- Boarding
- Security

At Transit

PRE-VALIDATED

- Security

At Arrival

PRE-VALIDATED

- Immigration
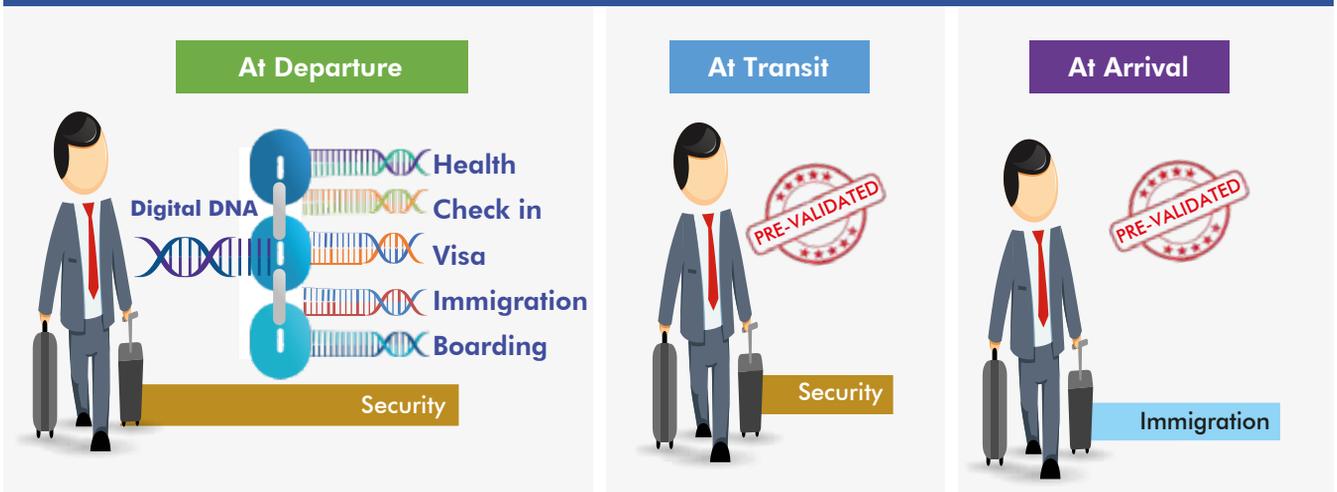
DATA KEPT are passports, digital identity, visa authenticity, credit worthiness travel habits and inclinations

AACO's Work

Recognizing the importance of the evolutionary, and sometimes revolutionary, technologies introduced by the innovators, AACO, through its Digital Transformation Task Force is exploring technologies that can add value to the airlines by providing solutions that can respond to their strategies to use biometric digital identity, blockchain applications, payment solutions, predictive analytics and real time personalization in their processes in the short to medium term to decentralize some if not all of their processes in the longer term. The task force will focus on exploring solutions and advocating for the foundation of the following:

1. Digital transformation at the passenger or shipper level so that the airline and the customer are handled inside a travel market environment, allowing the traveler to fulfill all his/her requirements in a single location as opposed to visiting many digital sites.

2. Optimizing the digital identification of travelers so that the relationship with the traveler does not cease at the end of the trip but is used to develop a dynamic relationship with this traveler for future transactions.

3. To work with governments to integrate digital identity and biometrics in an interactive manner, replacing paper-based physical verification with digital verification to facilitate travel. This can be accomplished through the use of "blockchain" technology, which ensures the credibility of the traveler's identity and the visas that he/she holds in a digital, decentralized, and secure form, thereby relieving the burdens borne by the traveler, creating seamless and data driven processes.

Effective Cooperation and Awareness

When the epidemic struck the entire world and had the greatest impact on the aviation industry, all estimates predicted that the industry would be able to return to 2019 levels by 2027. A year later, however, the pandemic became endemic, and most governments abruptly dropped all travel restrictions, resulting in a tremendous spike in traffic that indicated the business would recover by mid-2023. This enormous shift highlighted the need to support AACO members in dealing with the challenges faced as a result of the impact of the pandemic on air transport globally and in the region. AACO believes that effective cooperation between member airlines plays an important role in the recovery through the work of AACO's steering boards, task forces, and working groups. AACO also continued to utilize the e-environment that was crucial during the epidemic by utilizing the e-learning platform provided by its Regional Training Center and presenting pertinent virtual webinars.

Working under the Umbrella of AACO's Steering Boards, Task Forces, and Working Groups

AACO's groups held virtual as well as physical meetings throughout the year where each group identified the areas of focus within its scope of expertise in order to tackle issues related to the returning of airlines' operations to normalcy, while recovering from the effects of the pandemic, in addition to other evolving industry issues that have a direct effect on member airlines. Below is a brief of the issues that were identified by the various groups and which were the basis of AACO's joint work with the airlines throughout the year.

Aeropolitical Watch Group

The Aeropolitical Watch Group worked during the first half of 2022 under individualized advocacy plans with decision makers in each country in the Arab region. The advocacy campaigns addressed easing biosafety travel measures, opening air borders and going back fully to the air services agreements as the only base for air transport relations.

With the positive developments in the above-mentioned areas, the group moved to addressing the regulatory environment following the spike in air travel demand including but not limited to slot allocation rules, air passenger rights, accessibility and other aeropolitical affairs affecting the operations of AACO member airlines.

Environmental Policy Group

The Environmental Policy Group worked on two major issues pertaining to aviation's relationship with Climate Change namely: the issue of adjusting the baseline of CORSIA for the remaining period of the scheme and the issue of the long-term aspirational goal for aviation. Both issues will be decided upon at the ICAO Assembly to be held between 27 September and 7 October. AACO and the EPG are in close coordination with the members of the ACAO Environmental Committee in order to safeguard the interest of the Arab airlines.

Moreover, and on the issue of national states' initiatives, the group conducted a webinar with the European Commission in order to understand the position and aspects of the proposed EU Fit for 55 legislations and to share their views on the extraterritorial areas of it. The EPG is monitoring the discussion developments within the EC Council and Parliament.

Sustainable Aviation Fuel Task Force

In light of the increasing pressure to mitigate the impact of climate change and the debates within ICAO to explore the feasibility of a long-term global aspirational goal (LTAG) for international civil aviation, the AACO Sustainable Aviation Fuel Task Force has focused its work on identifying principles for the use of SAF, and on conducting webinars to keep the members up to date on all developments related to SAF on both the regulatory and production sides.

Digital Transformation Task Force

In view of AACO strategic priority to leverage technology to create a transformational environment for the airlines with the aim of empowering sales and distribution by airlines, as well as enhancing customer relationship management, the Digital Transformation Task Force (DTTF) was established with the following two objectives:

- Sharing experiences and increasing awareness of innovative technology solutions that maybe plugged to current technology to provide better customer relationship by exploring the solutions available by startups and creative developers.
- Identify opportunities for synergies between members in adopting disruptive evolutionary solutions to enhance their current technology.

Aviation Security (AVSEC Advisory Group)

AACO AVSEC Advisory Group continued utilizing the AACO Aviation Security Information Mechanism while focusing this year on managing overflying conflict zones and best ways to mitigate the risks facing Civil Aviation especially during February and March with the war in Ukraine. The group also addressed emerging security threats, best practices related to security management systems and cybersecurity.

Also, under the umbrella of the AACO AVSEC advisory group, AACO entered a mutual understanding with the European Commission and EASA to establish cooperation and synergies between AACO Aviation Security Information Mechanism and EASA's European Information Sharing and Cooperation Platform on Conflict Zones.

AACO Amadeus Steering Board

AACO Amadeus Steering Board identified the need to push the use of technology as a contributor to a speedier recovery and sustainable growth and rebuilding travel in a changing world. Moreover, the Board in line with the Executive Committee mandate identified a roadmap in order to leverage the innovative technologies to create a transformational environment for the airlines' relationship with their customers.

Fuel Steering Board

The Fuel Steering Board followed up on the recovery process of fueling operations, the ramp-up of operations, the increase in jet fuel prices, and the disruptions and shortages brought to the market. In addition, AACO's Aviation Fuel Advisory Group hosted several awareness sessions.

Engineering & Maintenance Steering Board

The Engineering & Maintenance groups continued to work actively on two initiatives. The first one is the Loans and Exchanges initiatives where the team started implementing AACO Materials Support Agreement after signing the agreement at the last AGM. The second initiative is the Purchasing initiative, where the team is doing the necessary preparations to launch a new tender in 2022 after freezing the initiatives' activities due to COVID-19.

Ground Handling Steering Board

The Ground Handling Steering Board discussed the pandemic's impact on operations especially the issue of shortage of ground staff that were cut during the pandemic which has caused flights' disruptions as well as the importance of ensuring high quality of handling services at outstations.

Human Resources Development Steering Board

The Human Resources Development Steering Board follows up on the activities of the Regional Training Center and discusses the training needs of member airlines during its periodic meetings. The Steering Board also followed up on the developments of the training center's e-learning platform and the new training fields that were added to the training activities.

The AACO Regional Training Center (RTC) continued to provide support to the human resources capabilities of aviation personnel in the region. In 2021, the center held 108 courses, attended by 878 trainees, including 62 virtual courses conducted through the RTC eLearning platform attended by 546 participants. Also, 101 scholarships were granted from the AACO-RTC to member airlines in addition to securing 6 scholarships from the European Aircraft Manufacturer ATR for the Part-time Executive Aerospace MBA program at Toulouse Business School in France.

Emergency Response Planning Steering Board

The focus of Emergency Response Planning (ERP) Steering Board was best practices to respond to emergencies amid the recovery of the travel market and the loss of human resources.

As part of AACO's mandate to enhance safety and ensure awareness and preparedness of member airlines, AACO and several other industry stakeholders, are working together to issue a comprehensive booklet that acts as guidance material for the proper execution of ERP operations during the COVID-19 crisis and possible similar future scenarios.

Webinars and Forums Jointly Organized by AACO and Partners Throughout the Year

In accordance with AACO's strategic directive to support airlines in returning to normalcy while recovering from the effects of the pandemic, AACO focused its work on hosting specialized webinars and forums on a variety of topics that align with AACO's strategic priorities and bringing attention on the industry's greatest challenges. Additionally, several webinars with AACO Industry Partners were organized to present innovative solutions.

Publications

Electronic Bulletins
النشرات الالكترونية

Social Media
مواقع التواصل الاجتماعي

AACO Website
موقع الإتحاد الالكتروني
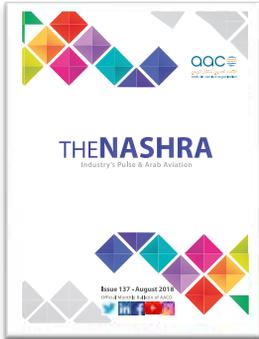
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