



Australian Aviation Network Overview

October 2023

Executive Summary

After a period of rapid recovery, the rate of growth in the Australian aviation network has slowed in recent months as we approach pre-pandemic traffic levels.

At the same time our performance as an industry has continued to improve against most metrics, but delivering the last few percent uplift in performance remains a challenge. Focused efforts are continuing to strengthen the network capacity/demand management processes and systems to enhance resilience and total system performance.

We are seeing faster-than-expected international recovery since our forecast in June, indicating resilient demand for international travel.

As traffic returns and airport infrastructure expands, further whole-of-industry action is required to ensure a balanced approach to enhance community outcomes while enabling the economic and social benefits of aviation.

Building on our efforts to increase transparency and foster industry understanding of the network performance, we recently engaged the International Air Transport Association (IATA) to review Airservices Air Traffic Flow Management (ATFM) reporting framework. The review, available on [Airservices website](#), identified continual improvement opportunities to align data, systems and business processes to international best practices, while acknowledging the overall effectiveness of the framework. Airservices has accepted all recommendations.



We acknowledge and embrace a culture that celebrates diversity, inclusion, and equality for all. In making this statement we acknowledge Aboriginal and Torres Strait Islander peoples as the Traditional Owners and Custodians of the country on which we operate, now called Australia.

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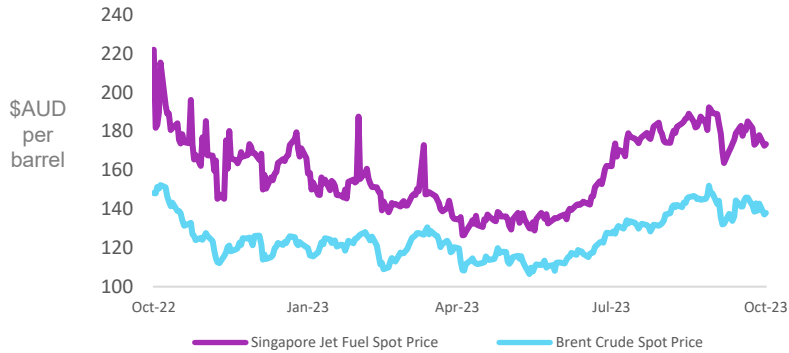
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Economic and social trends

Economic factors

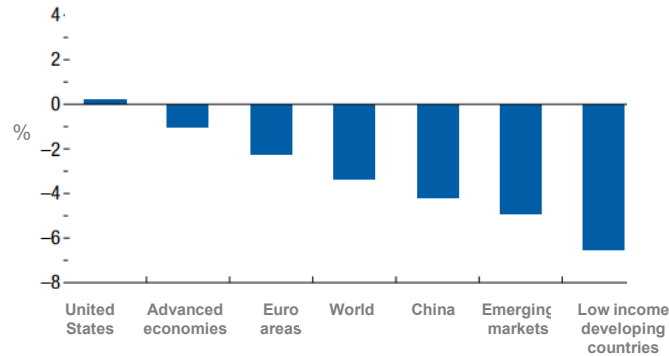
The macro environment of the Australian air transport sector remains challenging. Jet fuel prices increased by over 5% since the Israel-Hamas conflict started in early October which could further affect inflation and supply chain recovery. The recent fall in the Australian dollar and net migrations could boost inbound travel. Geopolitical tensions, weaker-than-anticipated economic recovery globally, high cost of living and a tight labour market present ongoing risks to our industry's growth outlook.

Figure 1. Jet fuel and Brent crude oil prices



Source: Bloomberg

Figure 2. Real Gross Domestic Product (GDP) difference in 2023 compared to pre-pandemic projections



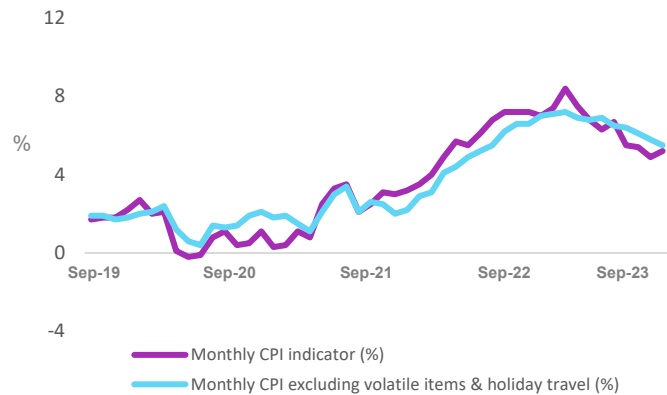
Source: International Monetary Fund ([website](#))

Figure 3. Global Supply Chain Pressure Index (standard deviation from the index's historical average as an indicator of supply chain constraints)



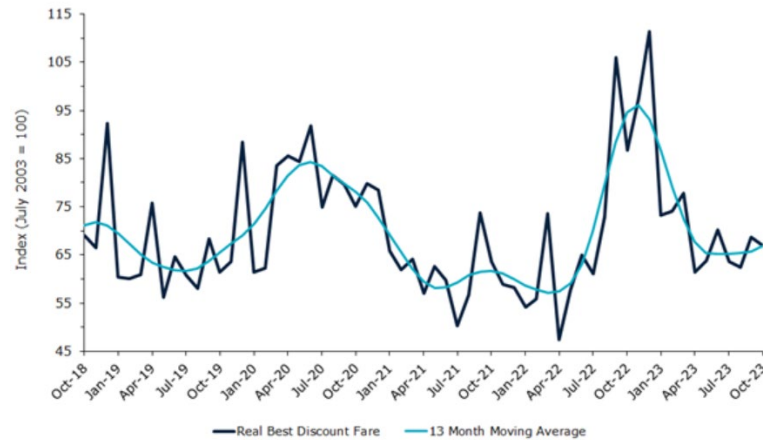
Source: Federal Reserve Bank of New York ([website](#))

Figure 4. Monthly Consumer Price Index (CPI) (annual movement %)



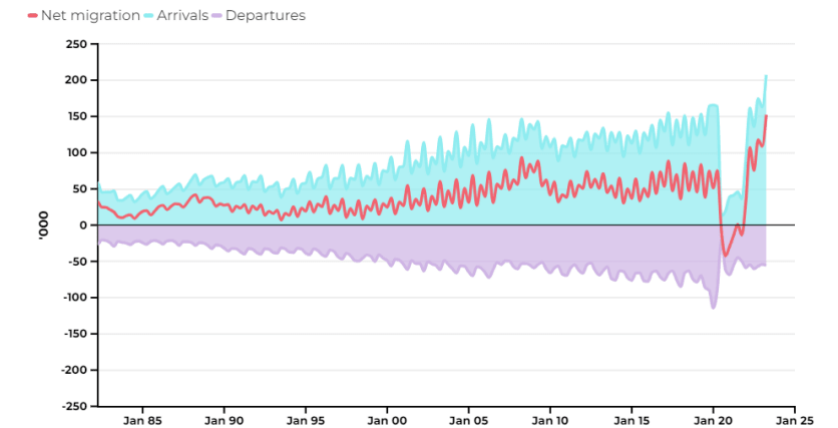
Source: ABS ([website](#))

Figure 5. Monthly domestic airfares (best discount)



Source: BITRE ([Link](#))

Figure 6. Quarterly net migration

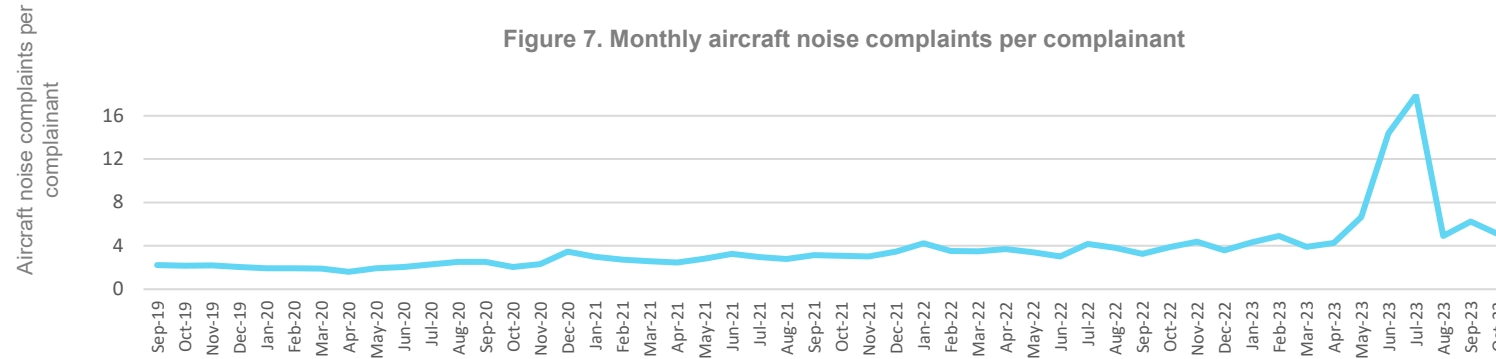


Source: ABS, PropTrack ([website](#))

Social factors

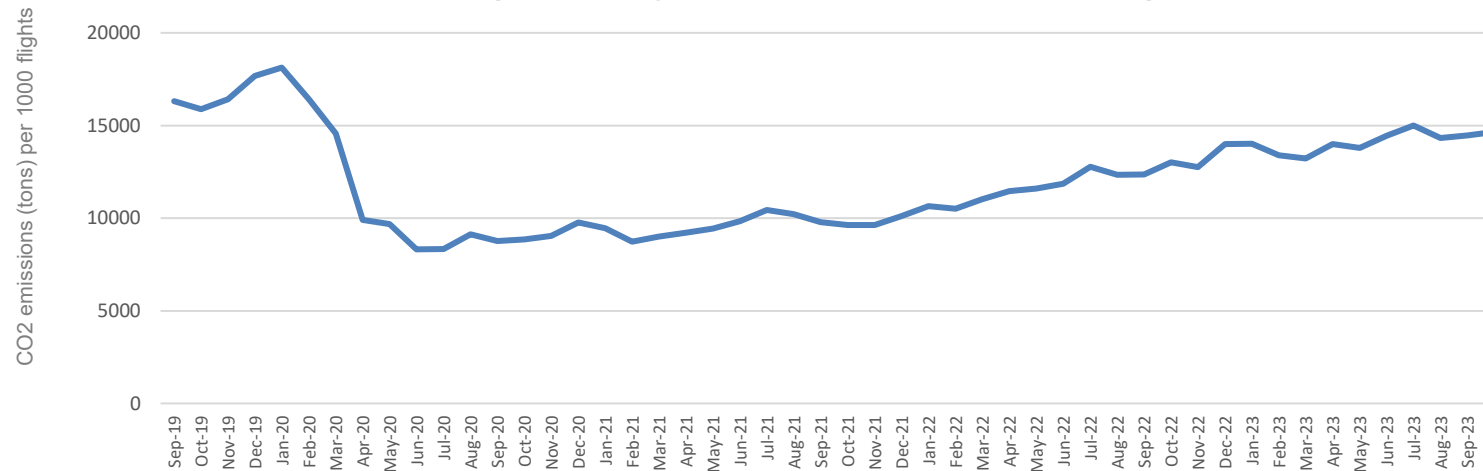
As air traffic and airport infrastructure returns to growth, there is a heightened sensitivity to aircraft noise and environmental impact. Further whole-of-industry action is required to ensure a balanced approach to enhance community outcomes to secure aviation's social licence.

Figure 7. Monthly aircraft noise complaints per complainant



Source: Airservices Noise Complaints and Information Service (NCIS)

Figure 8. Monthly aircraft CO2 emissions (tons) per 1000 flights



Source: Airservices Operational Data Analysis Services (ODAS)

Figure 9. International Civil Aviation Organization (ICAO) Balanced Approach to Aircraft Noise Management



Australian aviation and regional context

State of Australian aviation growth

Flights across the Australian aviation network have recovered to 95% of pre-pandemic levels with growth rates slowing in recent months. Activities from domestic industry segments continue to plateau, potentially constrained by resourcing, training and supply chain challenges across the air transport sector.

Figure 10. Overall network traffic metrics

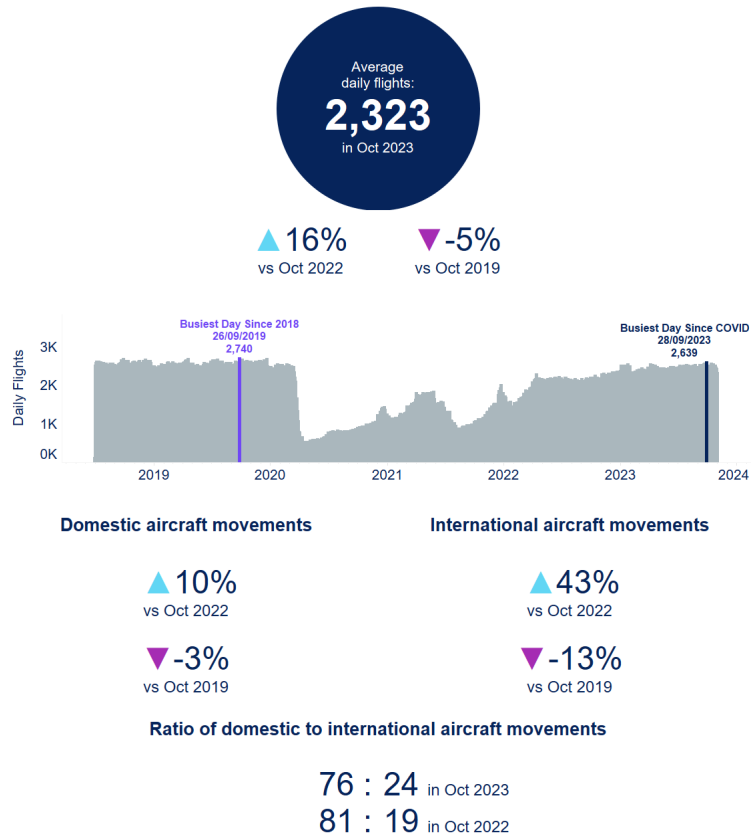
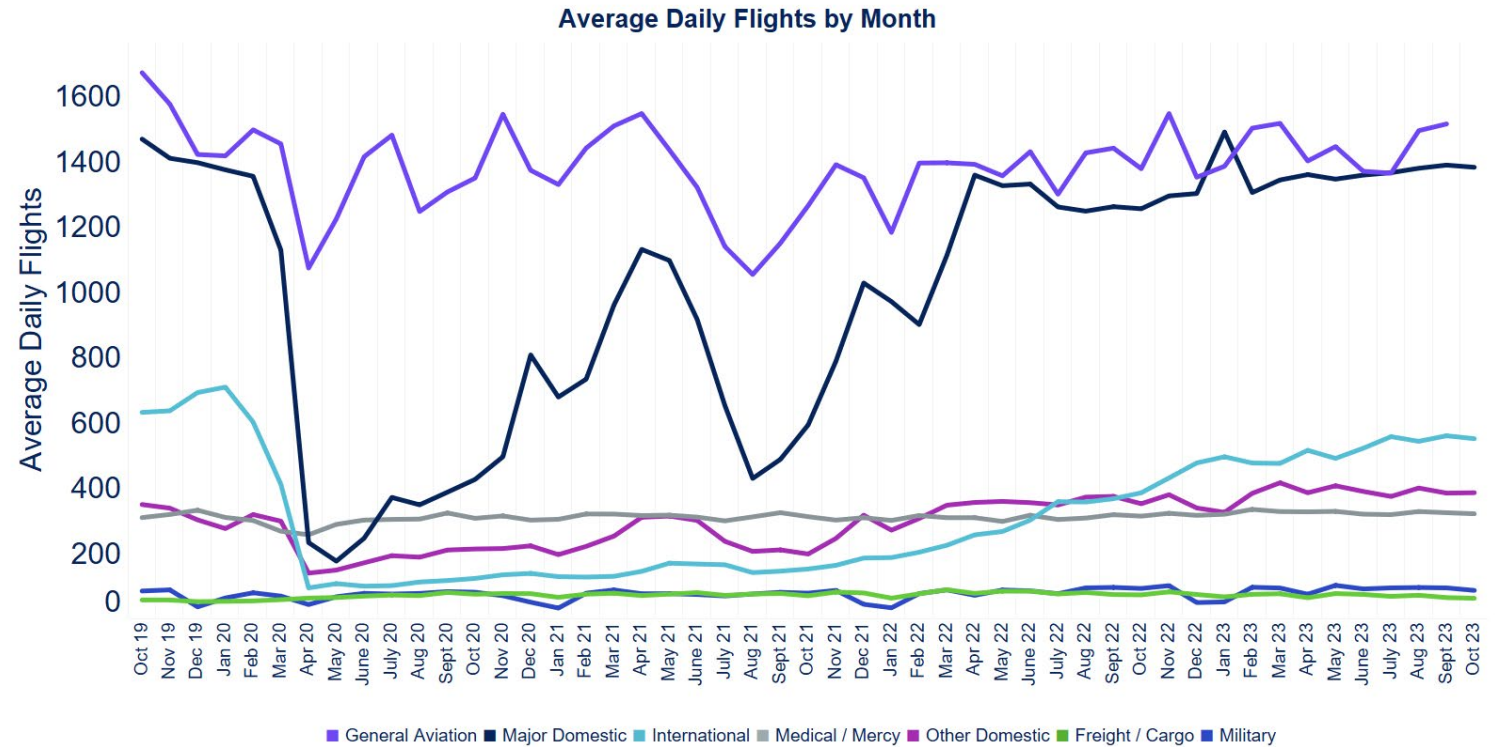


Figure 11. Average daily number of flights per month by industry segment



Source: Airservices ODAS (full data for the General Aviation category are not available for October 2023)

Source: Airservices ODAS (excludes general aviation, cargo, military and medical/mercy flights)

Overall traffic compared to Airservices forecast

Since our forecast in June 2023, we are seeing faster-than-expected international recovery. This may suggest the broader impact of continued and accelerated net migrations throughout 2023, recent weaker Australian dollar in attracting inbound travel and relatively resilient demand for international travel despite challenging economic conditions.

Figure 12a. Domestic daily average flights compared to Airservices forecast

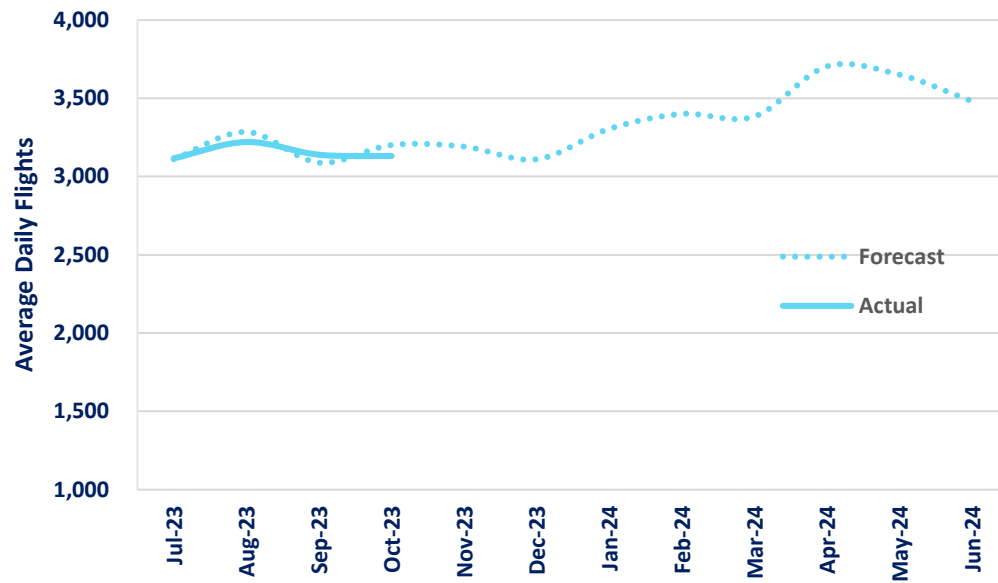
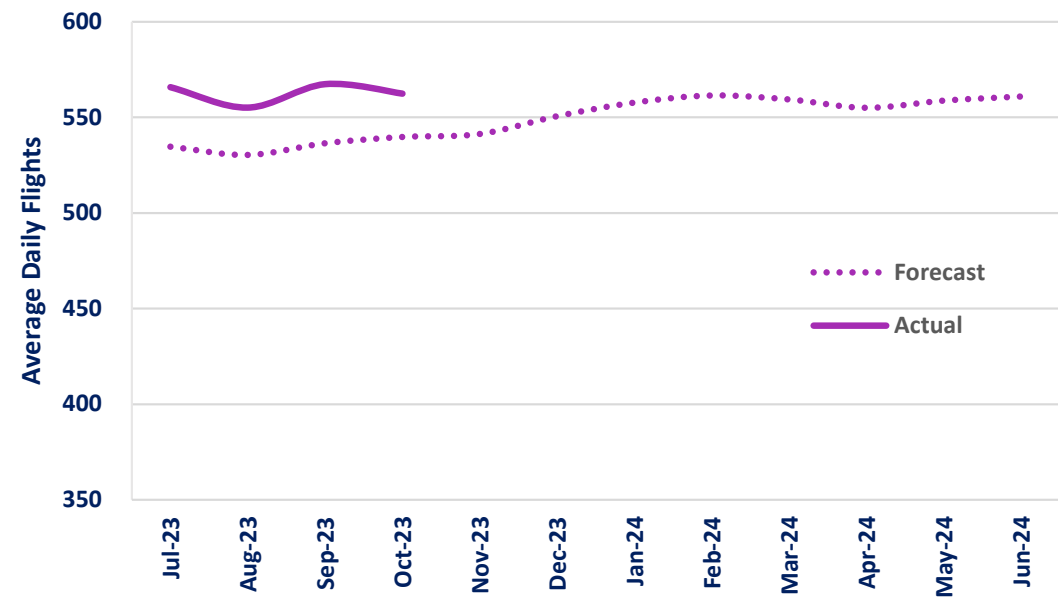


Figure 12b. International daily average flights compared to Airservices forecast



Source: Airservices aeronautical charge database (excludes some general aviation flights that are not subject to Airservices aeronautical charges; Airservices forecast is as of June 2023)

Top aircraft operators

The concentration of traffic in Australia remains relatively unchanged, with 75% of the network operated by Qantas Group, Virgin and Rex airline groups. The international recovery has been bolstered by the rebound of traffic from Chinese airlines, however these airlines currently still operate 35% fewer flights into Australia and serve fewer Australian airports compared to 2019. A full recovery of the Chinese market (including Hong Kong), which constituted 15% of our international market pre-pandemic, would bring international recovery to around 92% of 2019 levels (compared to 87% currently).

Figure 13. Average daily flights of top aircraft operators (October 2023)

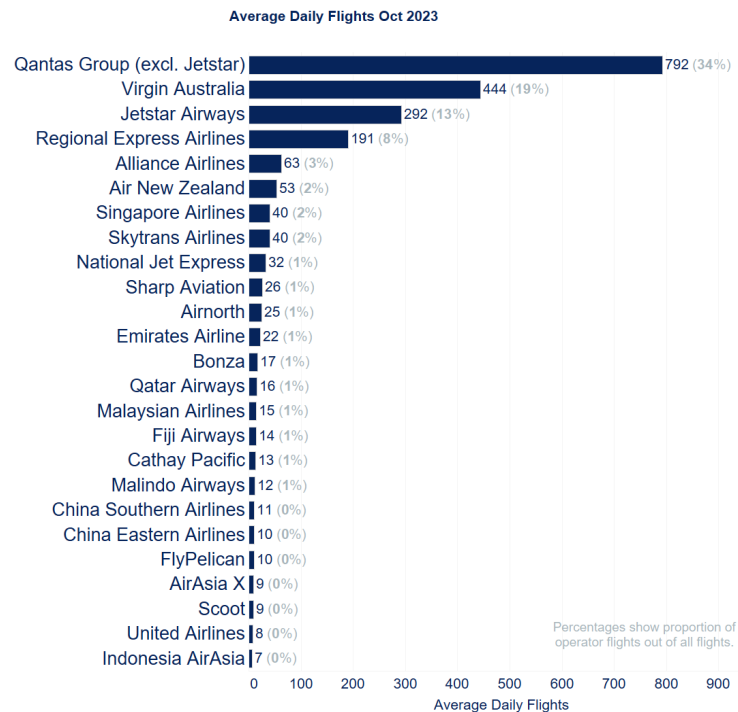
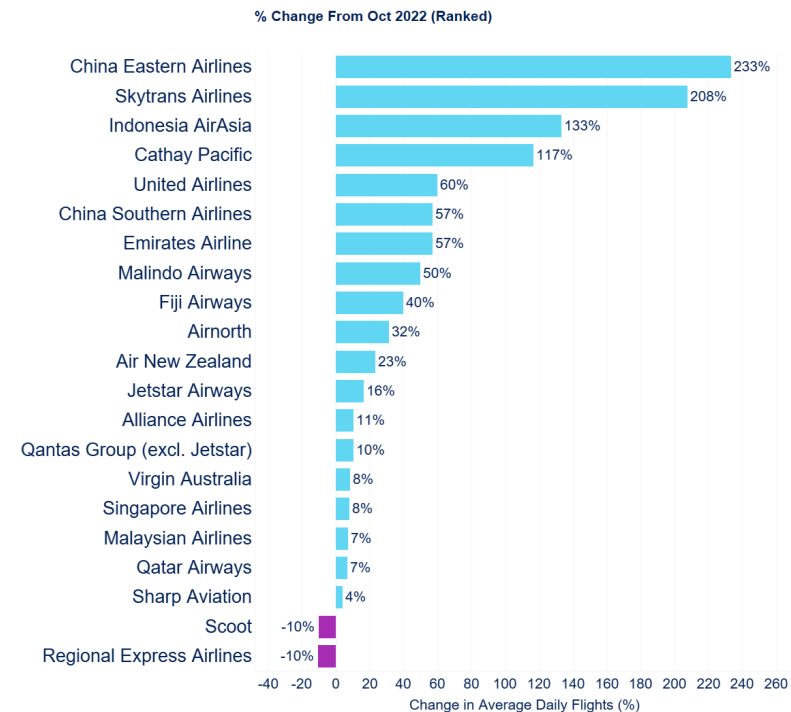


Figure 14. Percentage change in average daily flights of top aircraft operators (October 2023 vs October 2022)



Source: Airservices ODAS (excludes general aviation, cargo, military and medical/mercy flights)

Traffic flows from international markets

The international demand continues to be dominated by South East Asia and New Zealand, as these markets represent six out of the top ten destinations for Australian travellers. Traffic from India continues to exceed pre-pandemic levels. The return of direct services at Brisbane Airport from Chinese airlines in late October and their planned increase in capacity during the December holiday season could further stimulate aviation activities across the network.

Figure 15. Percentage change in total flights by international markets in October 2023 vs October 2022

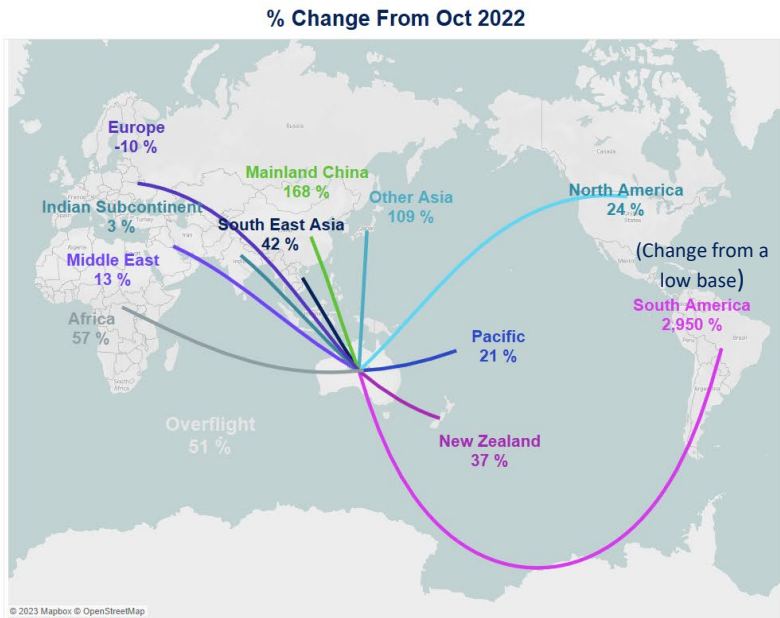
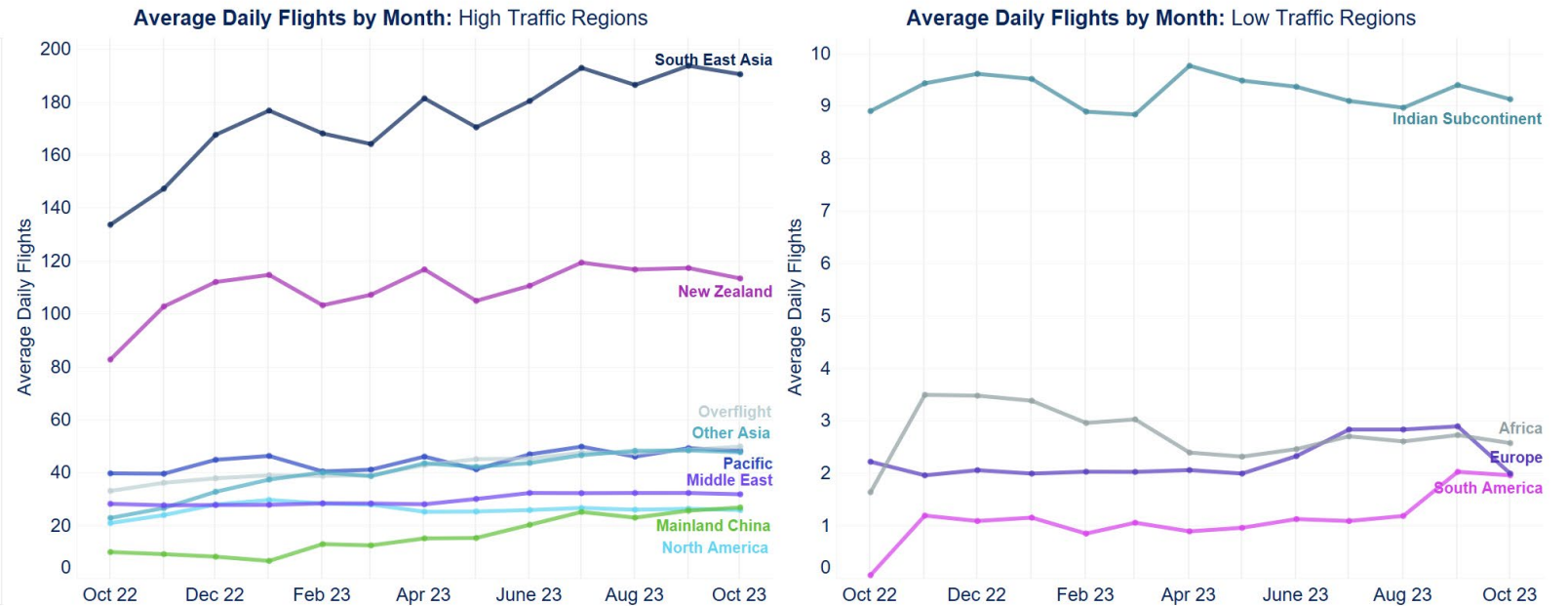


Figure 16. Average daily number of flights per month by international markets



Source: Aircservices ODAS (excludes general aviation, cargo, military and medical/mercy flights)
For multi-leg flights, legs that start and end outside Australian airspace are not included.

Domestic connectivity from Australian airports

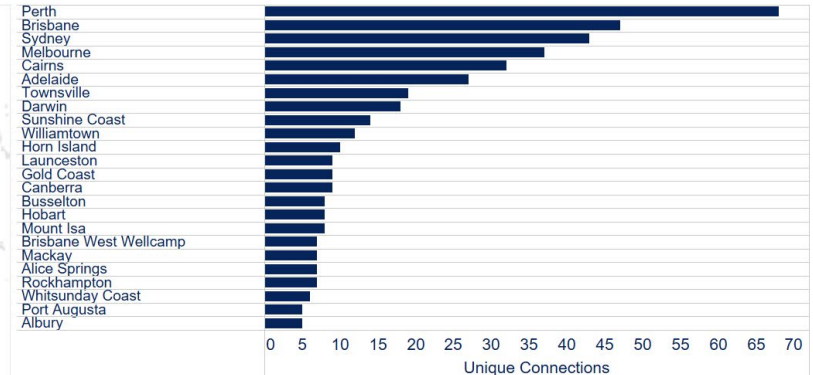
Point-to-point connectivity in Australian regional markets has surpassed pre-pandemic levels, as domestic regional airlines continue to expand their network and services especially for the leisure and mining sectors in Queensland.

Figure 17. Unique city-pair routes from Australian airports domestically (October 2023 and change vs October 2022)

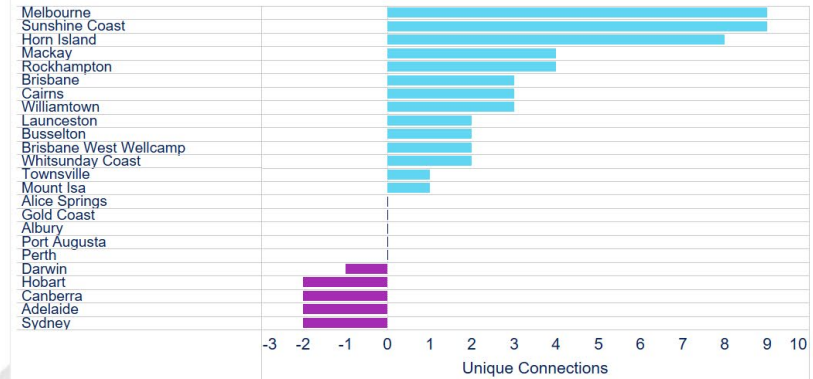
Domestic Airport Connections - Change From Oct 2022



Domestic Airport Connections - Oct 2023



Domestic Airport Connections - Change From Oct 2022



◆ : No change, ▲ : Increase, ▼ : Decrease

Source: Airservices ODAS (excludes general aviation, cargo, military, medical/mercy flights)
Connectivity is a measure of unique city-pair routes. Only airports with at least 5 unique connections/routes are shown, and only connections with at least 2 movements per airline a week are included in the connectivity measure.

Change in active fleet as a capacity indicator

Aviation capacity, in terms of active fleet, in Australia and globally are still below pre-pandemic levels. If this trend remains along with high load factors, this may indicate a post-pandemic trend to maintain margins and financial resilience. Australian airlines are simplifying fleet and moving towards more efficient and environmentally friendly aircraft types especially narrowbody jet aircraft such as Boeing 737 Max, Airbus A320s and Embraer E190s. However the pace of fleet renewal is being constrained by aircraft parts and manufacturing challenges.

Figure 18. Active Airbus and Boeing fleet in Australia and by region (percentage change as of 31 October 2023 vs 31 October 2022)



Figure 19. Change in total active Australian fleet (as of 31 October 2023 vs 31 October 2022)



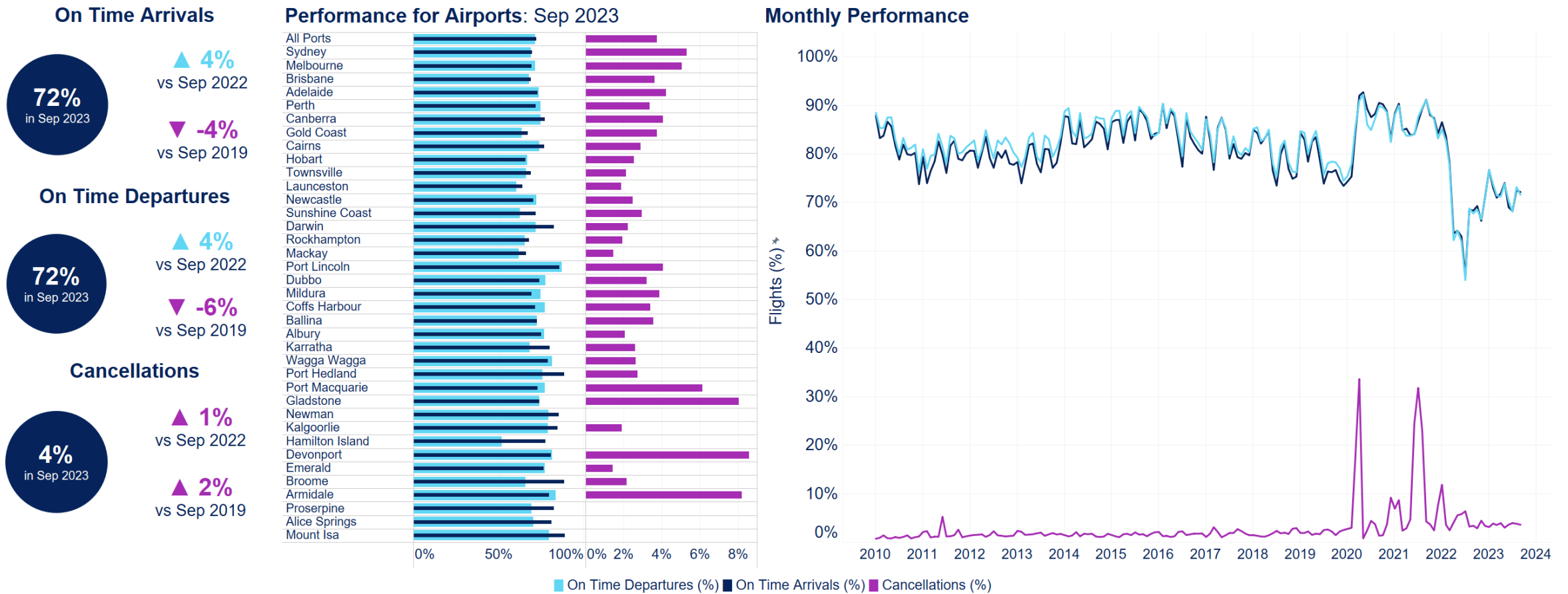
Source: CAPA Fleet Data

Australian aviation network performance

On-Time Performance (OTP)

The overall network performance in terms of OTP is improving gradually but remain below long-term performance expectations. This suggests that after quick-win improvements since last financial year, delivering the last few percent uplift in performance remains a challenge in the post-pandemic environment requiring greater resourcing and resilience.

Figure 20. Total industry OTP and cancellations by month (data available up to 30 September 2023)

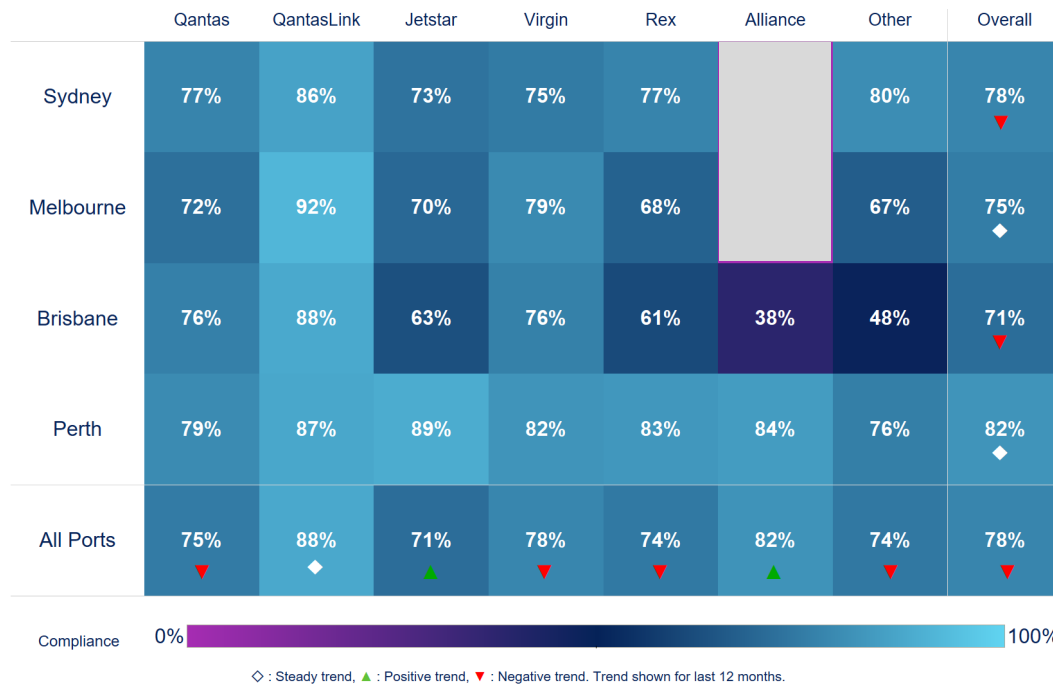


Source: BITRE ([website](#))

Airline Ground Delay Program (GDP) compliance

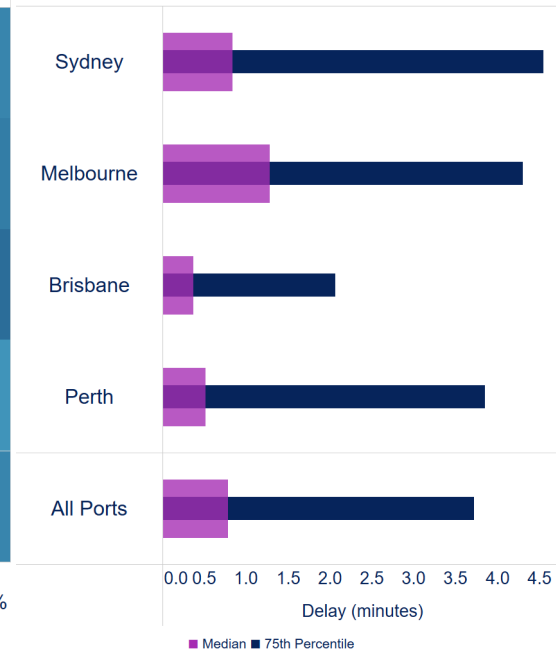
Overall GDP compliance decreased in October 2023. There were notably lower compliance when ad-hoc GDPs were implemented at short notice on the day of operations due constraints such as unforeseen weather or capacity constraints. Improving network operations planning to better anticipate and prepare for constraints has been a key industry collaboration focus area.

Figure 21. GDP compliance in October 2023 and trend over the last 12 months



Source: Airservices ODAS

Figure 22. Arrival airborne delay per aircraft at major airports in October 2023



A GDP is an agreed industry plan to balance the demand (based on airline schedules) to the available runway capacity that is collaboratively agreed by Airservices, airlines and the Bureau of Meteorology based on weather and other operating constraints (refer to [GDP Fact Sheet](#)).

GDP compliance represents the proportion of flights into an airport that departed compliant with their assigned GDP slot.

GDP typically starts one hour ahead of a period where the number of scheduled flights exceeded the predicted available capacity at an airport.

Runway occupancy time

As international traffic recovers, international operations with heavier aircraft types have recorded worsening runway occupancy time compared to pre-pandemic levels. Collaboration with airlines and industry associations is underway to understand the underlying drivers and seek improvement in runway occupancy time which is a critical driver of airport capacity.

Figure 23. Aircraft runway occupancy time at major capital-city airports (October 2023)



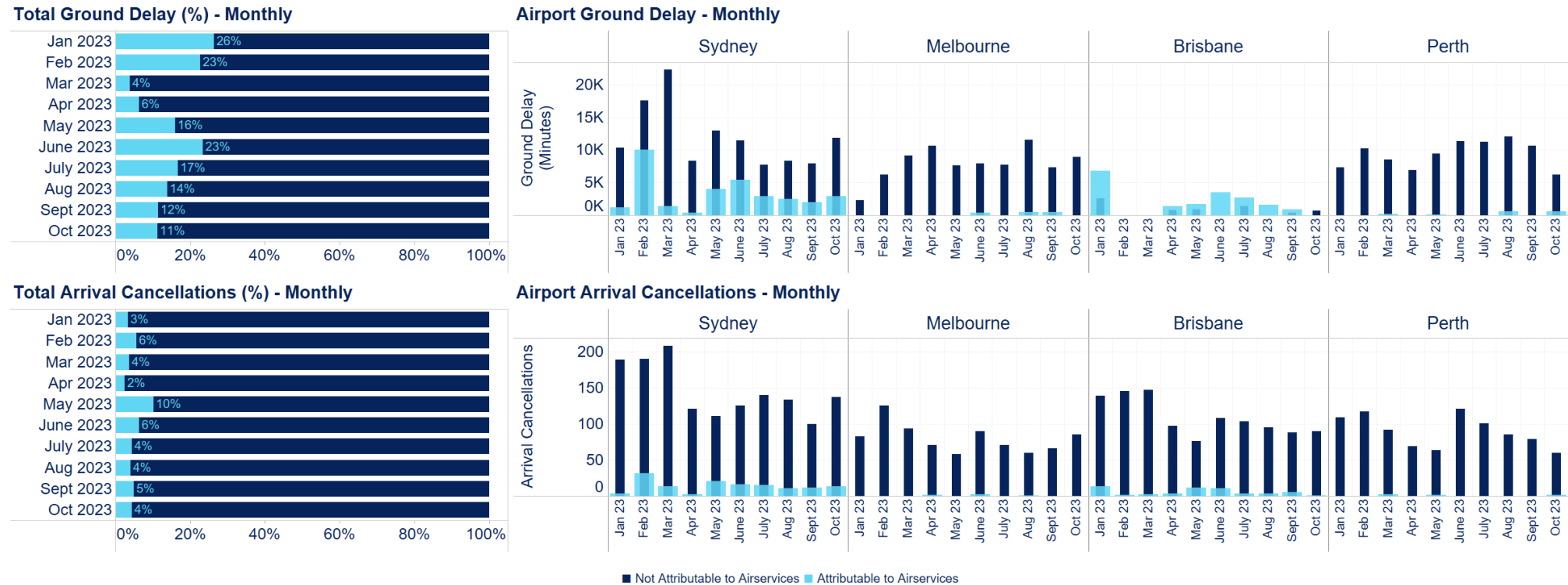
Source: Aircservices ODAS (data for Perth in 2019 are not available, and Brisbane runway 01L/19R opened in 2020)

For departures, the runway occupancy time is calculated from when an aircraft enters the runway area until it is airborne and has left the runway area (overflies threshold at runway end or turned away from runway centreline). For arrivals, the runway occupancy time is calculated from when an aircraft flies over the runway threshold until it has left the runway area after landing.

Aviation network performance

Overall air traffic management service outcomes at major airports that influence the national network continue to improve steadily, but not yet at the desired levels.

Figure 24. Air traffic management outcomes at major airports (October 2023)



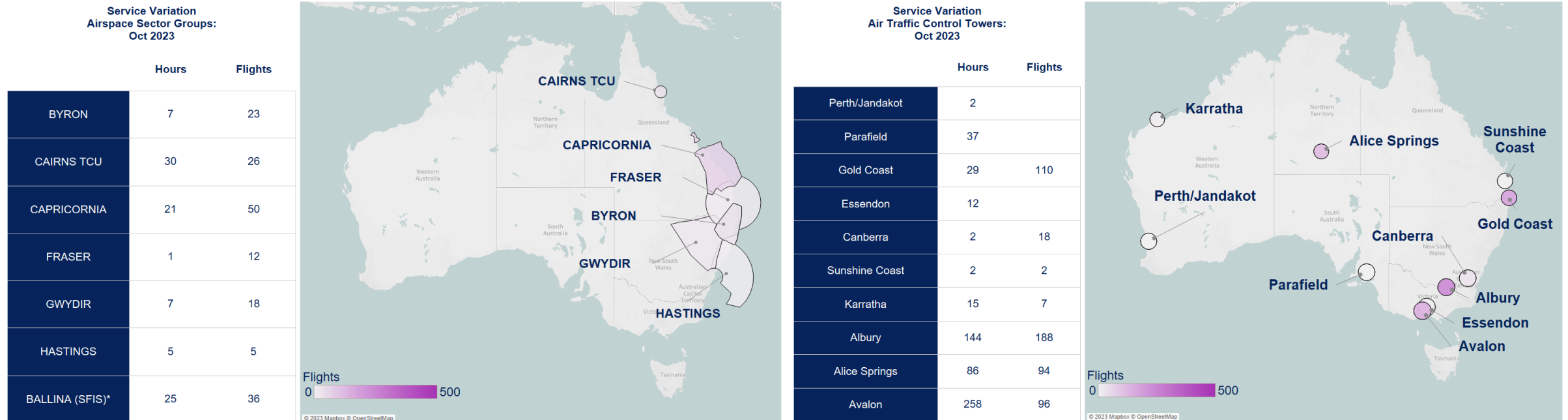
Source: Airservices ODAS

Airservices attributable ground delay and flight cancellations are only estimated for flights arriving at Sydney, Melbourne, Brisbane and Perth Airports, including measuring the flow-on effects into the subsequent hours at the arrival airport. Aiservices is working with airlines, airports and stakeholders to refine the estimation method and identify complementary data to better understand causes of delays and cancellations.

Air traffic management service provision

Consistency of air traffic service levels in airspace volumes around Brisbane and a number of regional airports still needs to be improved, as training of air traffic controllers is progressed to provide required resourcing and resilience requirements. Airservices Performance and Customer Experience (PACE) program remains the priority focus to strengthen the network capacity/demand and air traffic management processes and systems to return to long-term performance expectations.

Figure 25. Number of flights and hours during the periods when air traffic services delivered varied from published levels (October 2023)



Source: Airservices ODAS. Service variation comprises of Traffic Information Broadcast Areas / Temporary Restricted Areas and tower closure periods.

During the periods of service variations at regional aerodromes, services in adjacent Class G airspace are generally unaffected (e.g. provision of flight, traffic information and safety alerting).

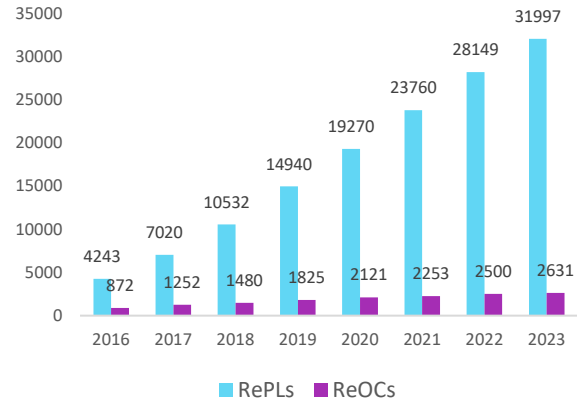
Flights are estimated by historic airline, charter, cargo and medical flights that typically operate during the periods of service variations. General aviation, military and government flights are excluded.

*At Ballina, Airservices provides Surveillance Flight Information Service (SFIS) from Brisbane Air Traffic Services Centre while the airspace classification remains Class G (i.e. entry into the airspace does not require air traffic control clearance)

Drone activities

There is continued growth in the drone market in terms of steady growth in remote pilot licences and ongoing detection of drone activities in the vicinity of capital-city airports. Work is underway to gain deeper understanding of the impact of drone activities on the aviation network to ensure their safe integration.

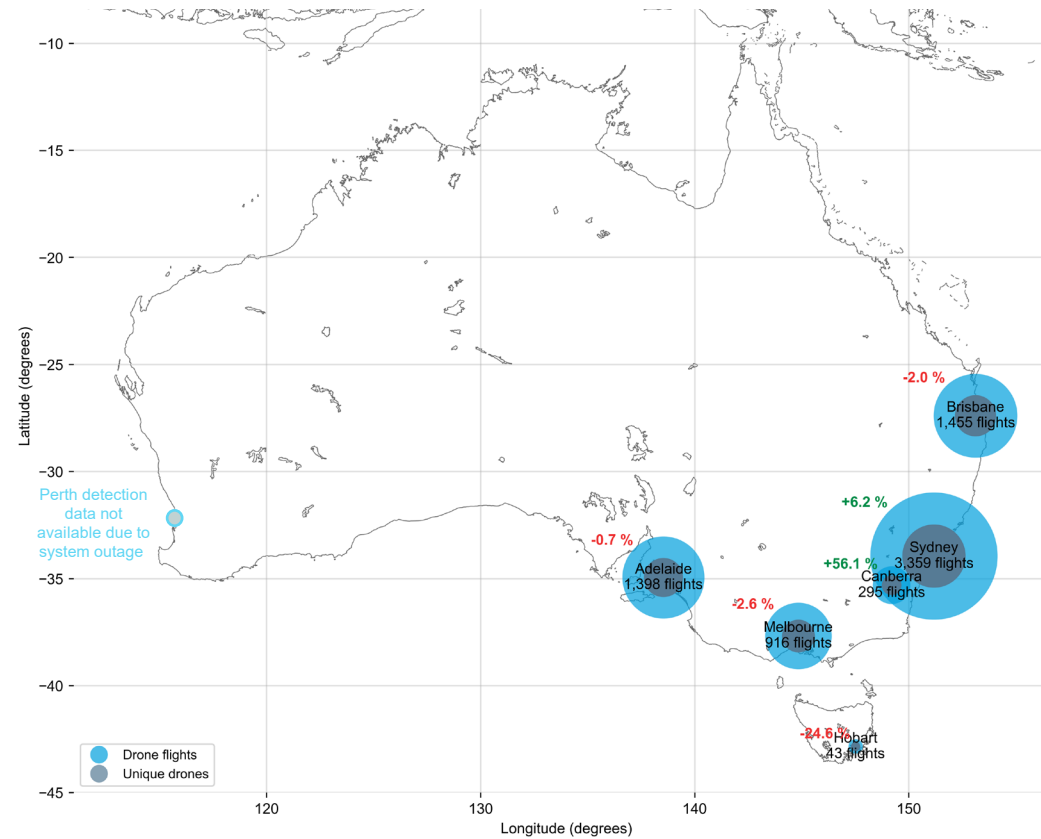
Figure 26. Cumulative totals of Remote Pilot Licences (RePLs) and Remotely Piloted Aircraft Operator's Certificates (ReOCs) (as of 3 November 2023)



Source: CASA

Remotely piloted aircraft operator's certificates (ReOCs) have an initial validity period of one year followed by three years once renewed. Remote pilot licences (RePLs) have a perpetual validity. The ReOC and RePL figures provided are cumulative totals.

Figure 27. Detected drone flights within No-Fly Zones (i.e. 5.5km, inner and outer runway splay) at capital-city airports in October 2023 and percentage change vs October 2022



Data is limited to drone activity detected by drone surveillance equipment installed at 29 controlled civil aerodromes. The Civil Aviation Safety Authority (CASA) can approve operations within the 3 nautical mile (5.5 kilometre) boundary and in the approach/departure paths of a controlled aerodrome. Micro drones (<250g) are allowed to operate within 5.5 kilometres of a controlled airport consistent with the requirements of the Civil Aviation Safety Regulations Part 101 Manual of Standards (outside the no-fly zone). All drones are allowed to operate in the outer runway splay of a controlled airport up to a height of 90 metres.

Source: Drone detection equipment



For more information
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