Australian Aviation Network Overview

May 2024

airservices australia

Executive Summary

In May 2024, the Australian aviation network recorded minimal growth in terms of daily average flights. Our industry continues to rebalance to a more stable seasonal trend, with softening demand following the peak Easter holiday season.

Overall industry on-time performance showed a notable 15 per cent improvement over the first four months of 2024, and the cancellation rate has dropped to its long-term benchmark. This suggests that cross-industry efforts to prioritise service reliability are delivering benefits through measures such as active recruitment, streamlining procedures and strengthening responses to disruptions.

We are also focused on enhancing network predictability by tightening governance around Ground Delay Programs (GDP) and refining demand/capacity balancing processes using recently deployed analytics technology. Monthly ground delays at the major airports that drive network performance have decreased by over 160 hours, or ~25 per cent, compared to the earlier months of the financial year, without adversely impacting airborne delays. Industry compliance increased by four per cent compared to the last twelve-month averages. There was no ad-hoc GDP applied at Brisbane in May.

The overall air traffic management outcomes in May returned to the level seen at the beginning of 2024, largely due to unplanned staff unavailability along with high levels of air traffic control (ATC) training related to the airspace volumes around Sydney and Perth. We are actively prioritising the cross-training, recruitment and utilisation of experienced air traffic controllers, targeting locations that drive network outcomes and require higher levels of resilience. We are further refining training processes to increase speed to competency, scheduling training activities outside peak traffic demand periods and progressing endorsement reform to increase flexibility and minimise industry disruptions. Building layers of resilience and embedding service first approach remain a priority to drive sustainable improvement.

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.

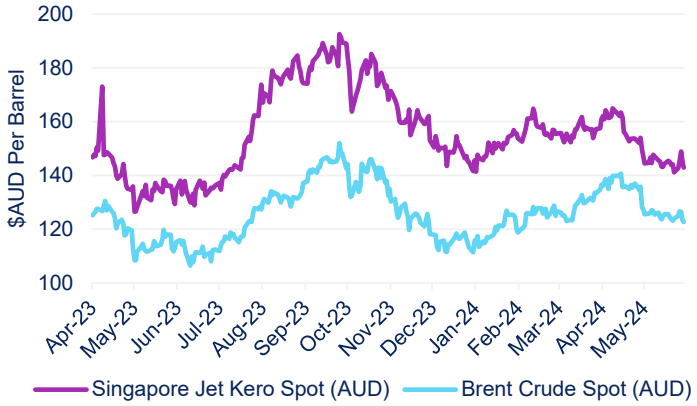
Report content

Economic and social trends

Economic factors

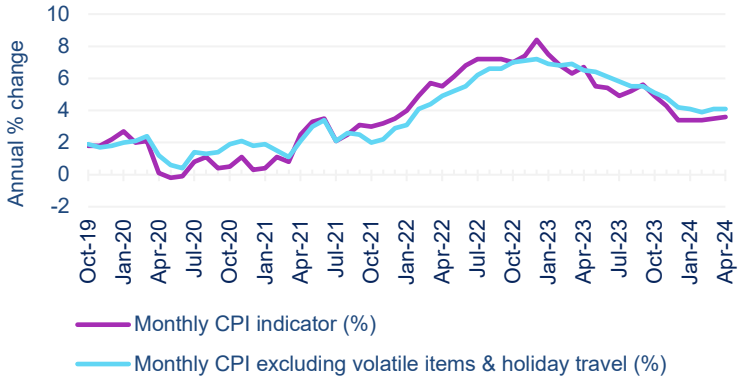
Against challenging economic conditions, we are seeing mixed patterns of travel and tourism impacting the aviation sector. Visitors from China, traditionally the top market for Australia's international tourism sector, are still below pre-pandemic levels. Increasing route choices and seat capacity from domestic and international airlines are putting downward pressure on air fares.

Figure 1. Jet fuel and Brent crude oil prices



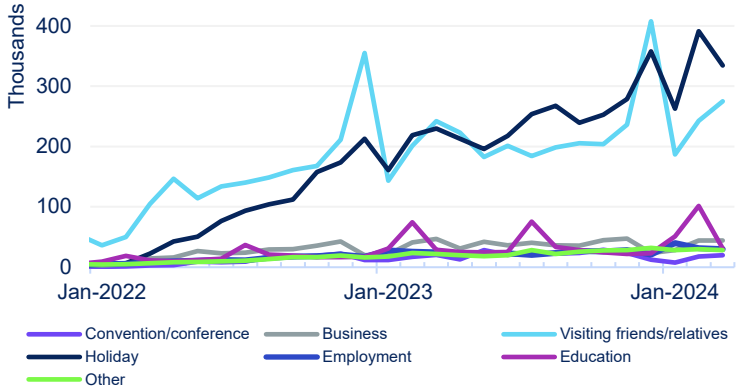
Source: Bloomberg

Figure 2. Monthly Consumer Price Index (CPI) Indicator



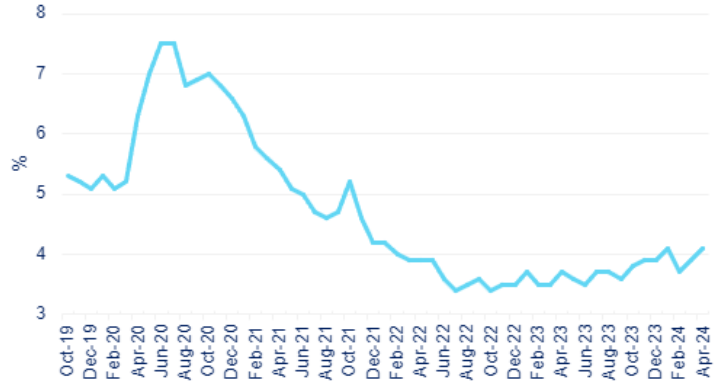
Source: ABS (website) – data released 29/5/2024 up to April 2024

Figure 3. International visitor numbers by reason



Source: ABS (website) – data released 14/5/2024 up to March 2024

Figure 4. Unemployment rate

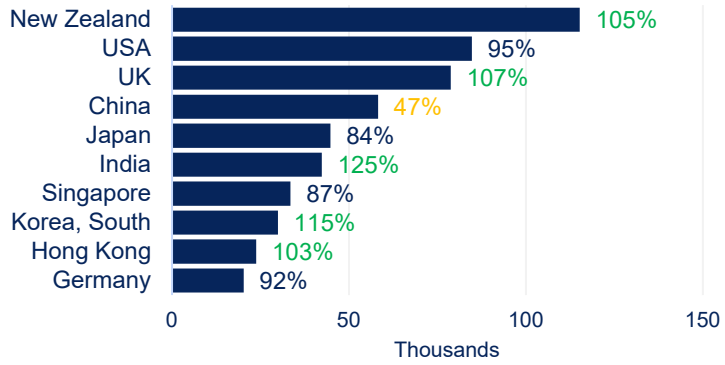


Source: ABS (website)

Figure 5. Domestic air fares (best discount)

Source: BITRE (website)

Figure 6. International visitor numbers by country and percentage of recovery (March 2024 vs March 2019, above pre-pandemic growth noted in green)



Source: ABS (website) – data released 14/5/2024 up to March 2024

Social factors

With the ongoing decarbonisation focus, initiatives such as user preferred routes have contributed to ~30,000 tons of CO^2 emission savings in this financial year to date. Submissions to the Senate inquiry into the impact and mitigation of aircraft noise demonstrate the complexity of balancing industry and community needs. A joined-up industry approach is needed to address the trade-offs between driving efficiency for reducing CO2 emissions and minimising the impact of flights paths on communities.

Figure 7. Monthly noise complaints per complainant for major airports

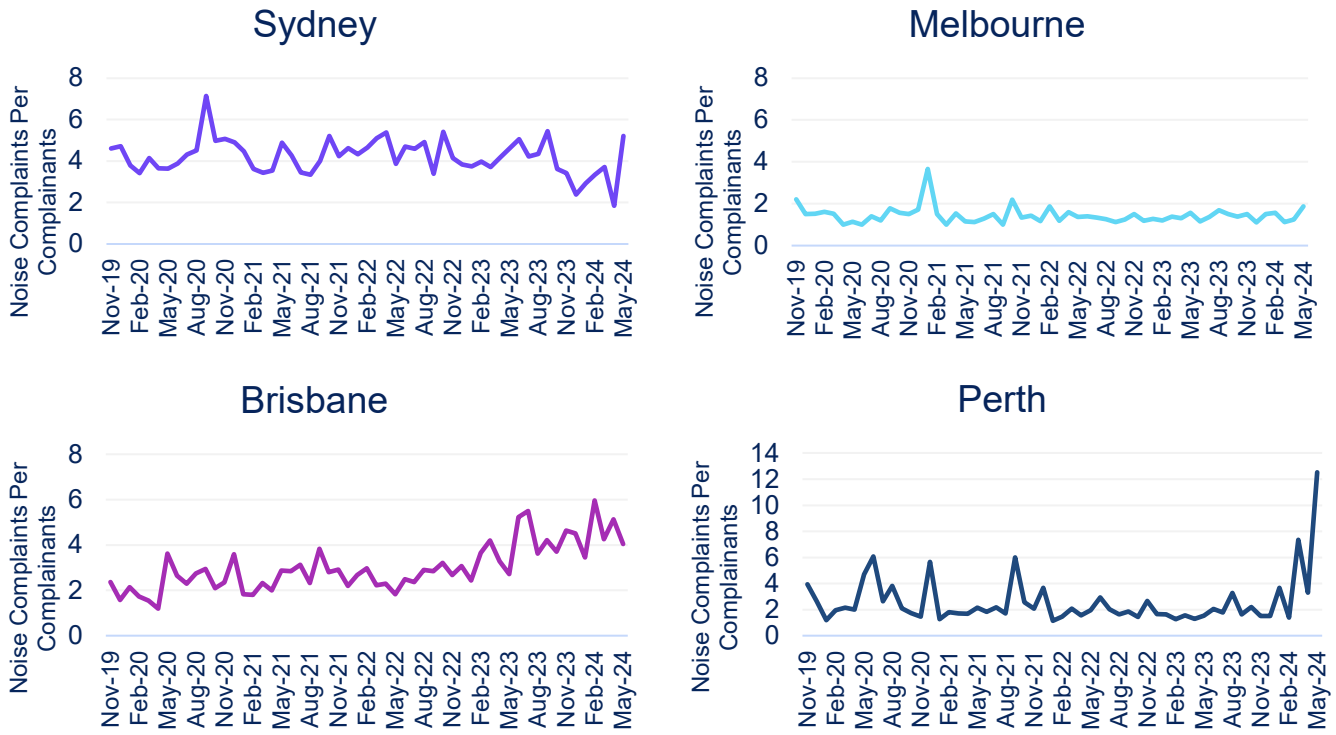
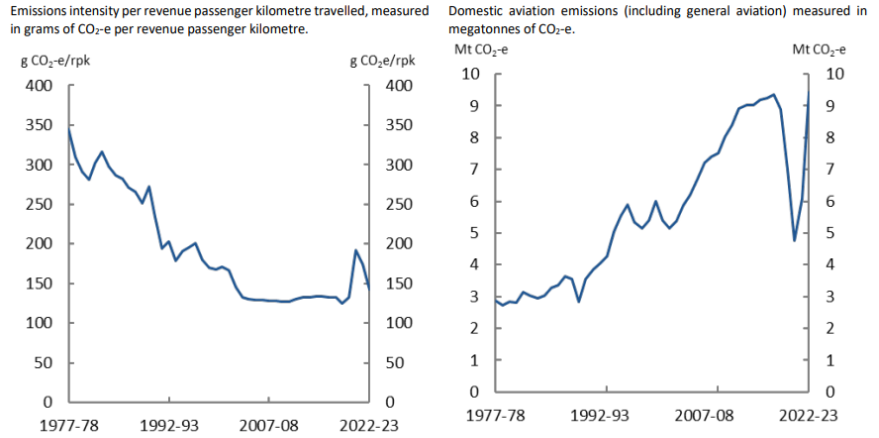
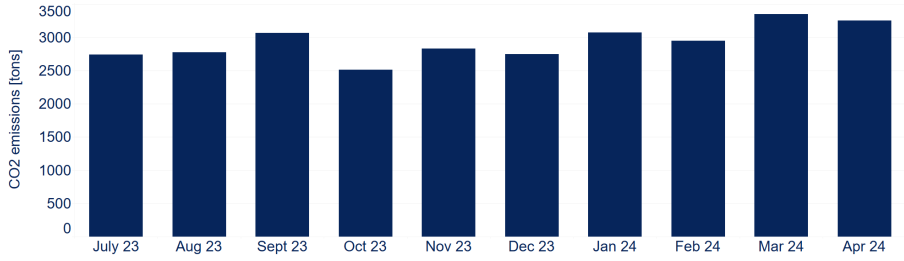


Figure 8. Domestic aviation CO_2 emissions intensity (left) and CO_2 emissions total (right)



Source: DITRDCA and BITRE

Figure 9. Monthly CO_2 emissions savings from user preferred routes



Source: Airservices Noise Complaints and Information Service (NCIS) and Airservices ODAS.

Australian aviation and regional context

State of Australian aviation growth

In May 2024, the Australian aviation network recorded minimal growth in terms of daily average flights. Our industry continues to rebalance to a more stable seasonal trend, with softening demand following the peak Easter holiday season.

Average Daily Flights
(May 2024 and percentage of May 2019)

Total Domestic Flights
(May 2024 and percentage of May 2019)

Total International Flights
(May 2024 and percentage of May 2019)

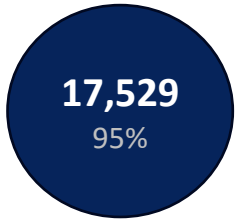
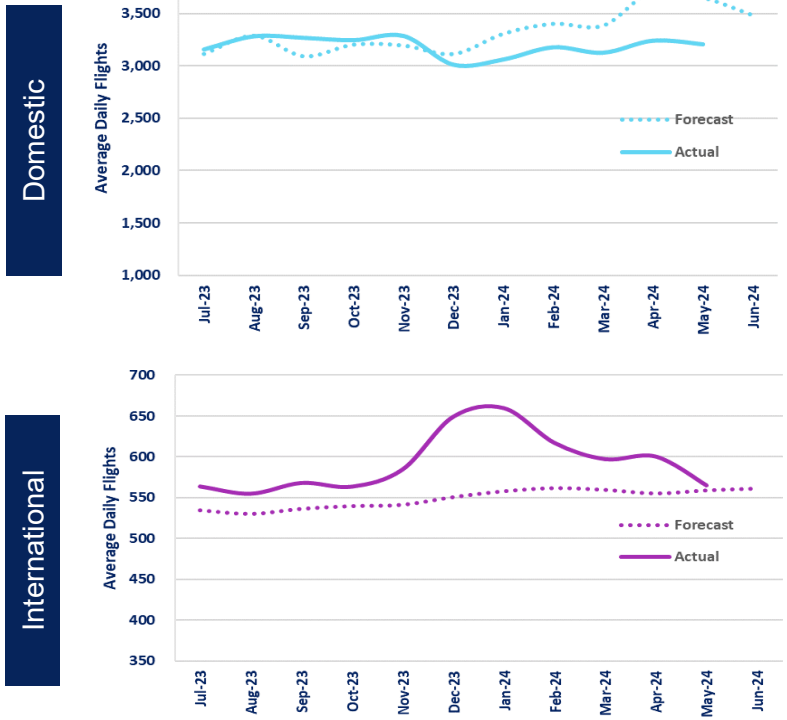
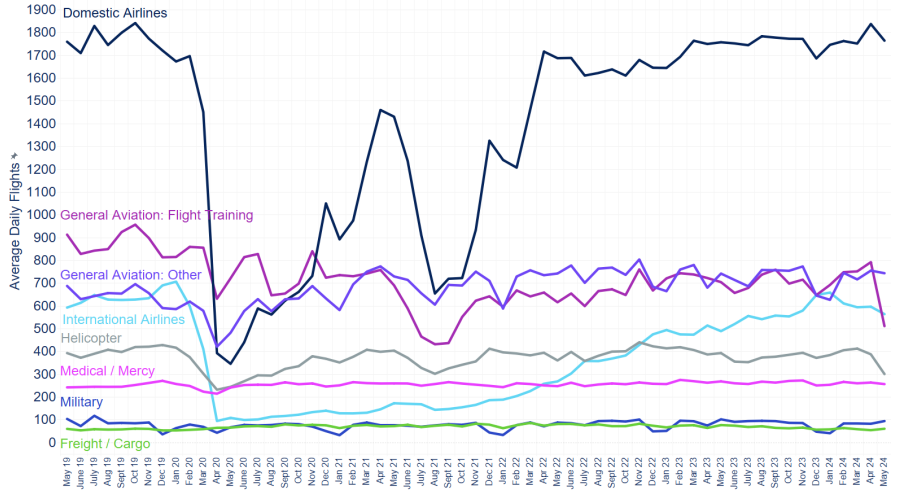


Figure 10. Domestic (top) and international (bottom) average daily flights compared to Airservices' forecast



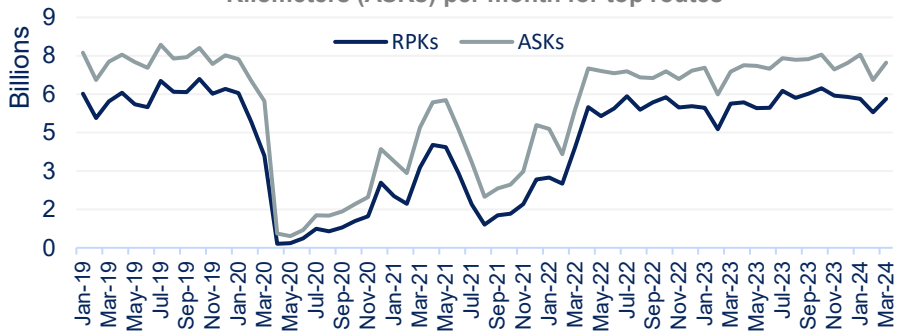
Source: Airservices aeronautical charge database (excludes some general aviation flights that are not subject to Airservices aeronautical charges; Airservices' forecast is as of June 2023).

Figure 11. Average daily flights per month by industry segment



Source: Airservices ODAS

Figure 12. Domestic Revenue Passenger Kilometers (RPKs) and Available Seat Kilometers (ASKs) per month for top routes



Source: BITRE (website) – data released 31/5/2024 up to March 2024

Top aircraft operators

Domestic and international airlines are increasingly seeking growth from moving to more direct point-to-point services. This is shown in the improved connectivity in regional Australia, and increased frequency and code-share partnerships targeting international tourism markets. We are also seeing some airlines moderating their expansion plans, affected by factors such as demand variability, delays in aircraft deliveries and labour hire challenges.

Figure 12. Average daily flights by top operators (May 2024)

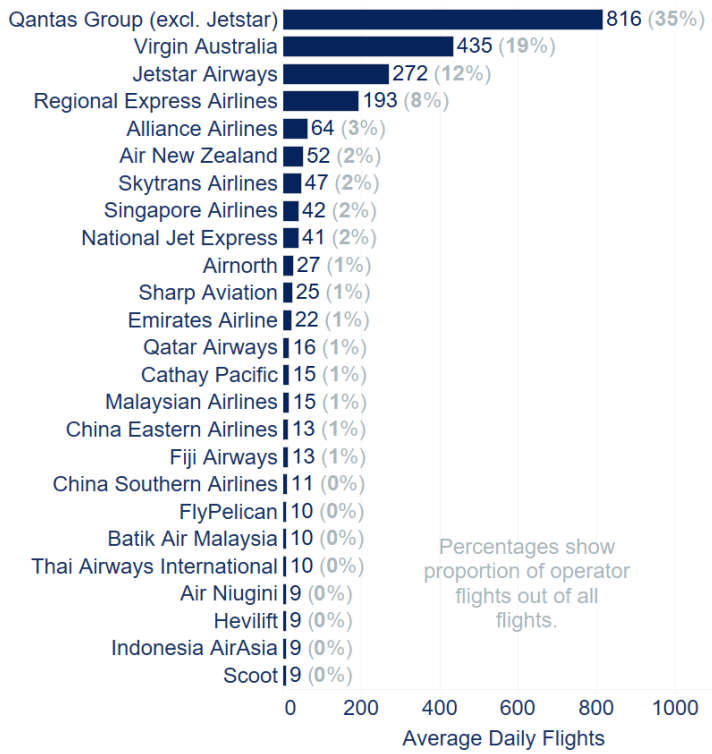


Figure 13. Top operators' change in average daily flights and percentage change (May 2024 vs May 2023)

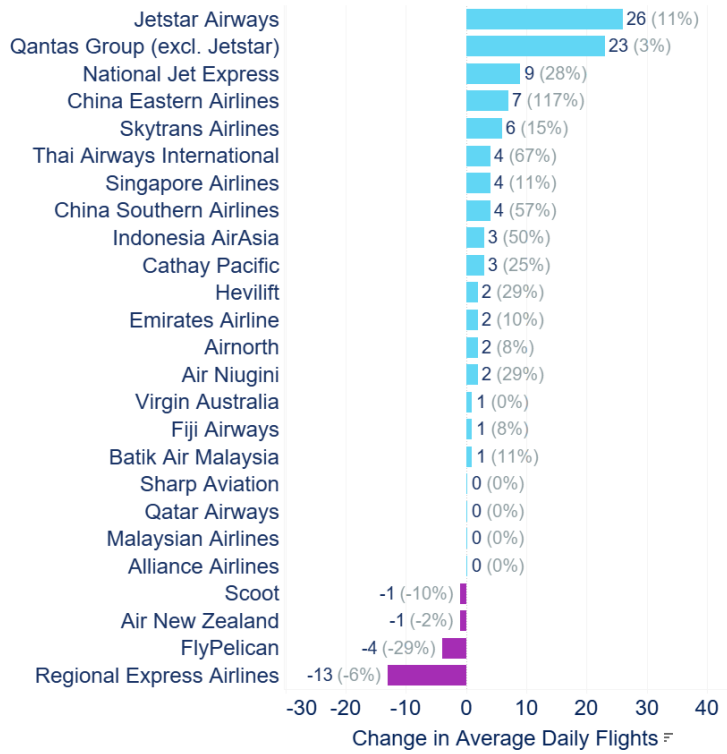
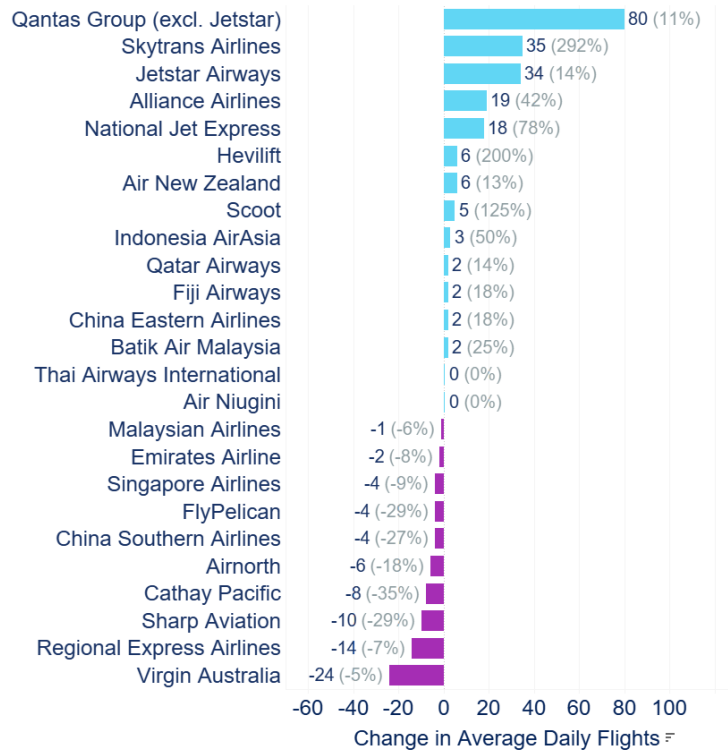


Figure 14. Top operators' change in average daily flights and percentage change (May 2024 vs May 2019)

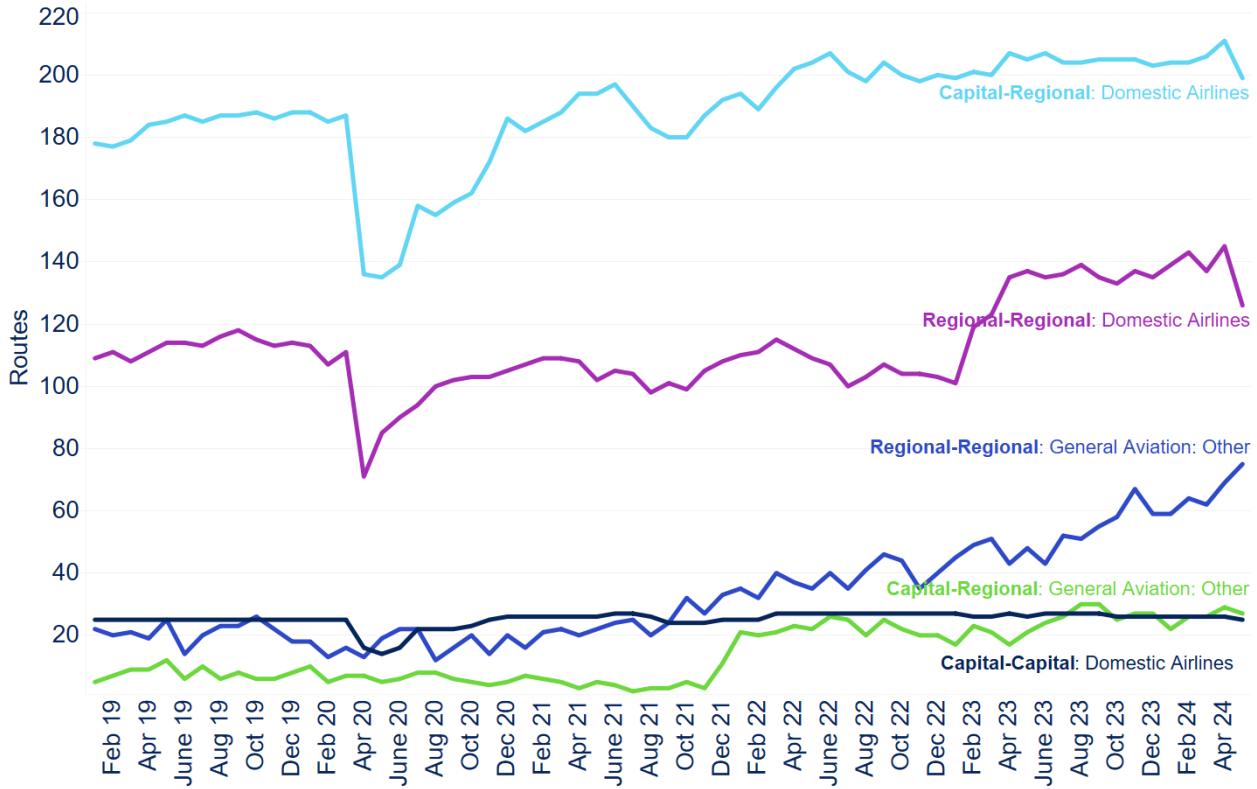


Source: Airservices ODAS (excludes general aviation, cargo, military and medical/mercy flights)

Domestic network

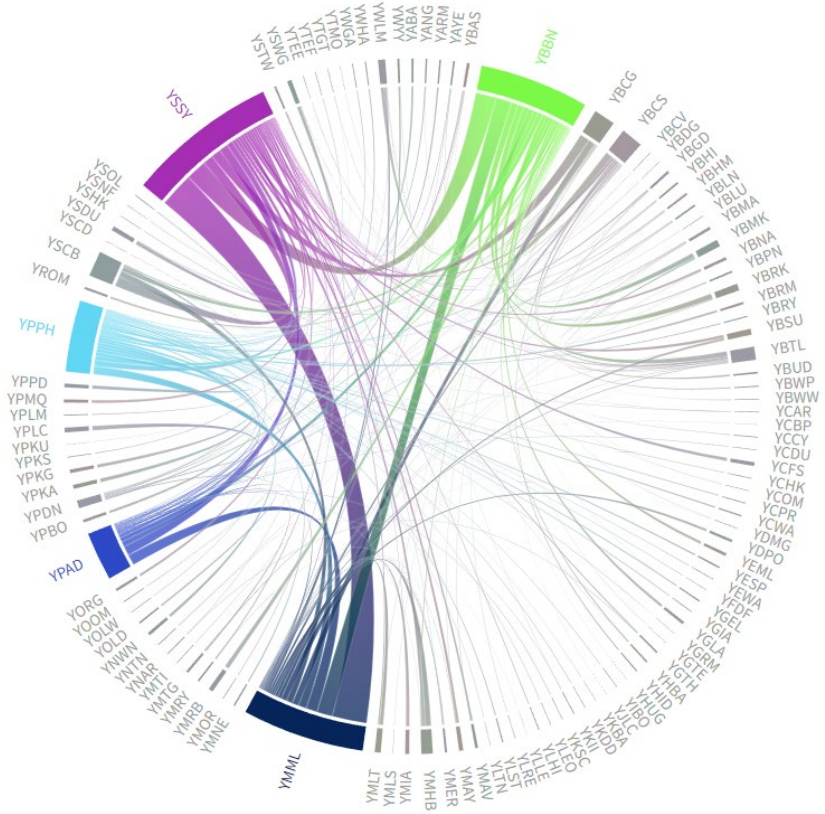
The shape of the domestic network is dominated by five major hubs that constitute 80%* of routes nationally. Regional connectivity from domestic airlines has been impacted by Bonza ceasing operations. This contrasts with the growth in charter operations that have nearly doubled regional-to-regional routes in this financial year to date, especially in Queensland and Western Australia to support both fly-in/fly-out operations in the resources sector and leisure demand.

Figure 15. Domestic connectivity by month, in terms of unique routes



Source: Airservices (excludes military, medical/mercy, training, and return flights). Only routes with at least one operator with at least 2 flights weekly are included.

Figure 16. Domestic route network in May 2024 associated with major airlines (Qantas, Virgin, Jetstar, Rex, and Alliance), with major airports highlighted



Source: Airservices ODAS. Thickness of chords indicate the relative number flights on route. *Only routes with at least one operator with at least 6 flights weekly are included. Route network includes major domestic airlines (Qantas, Virgin, Jetstar, Rex, and Alliance).

Traffic flows from international markets

Recent international traffic growth has been driven by India, Japan and Pacific markets, benefitting from trade and tourism development. However, traffic from the Chinese market is sitting around 75% of pre-pandemic levels, with some airlines reducing services on key Chinese routes due to subdued demand and competitive pressures.

Figure 17. Percentage change in total flights by international markets in May 2024 vs May 2023

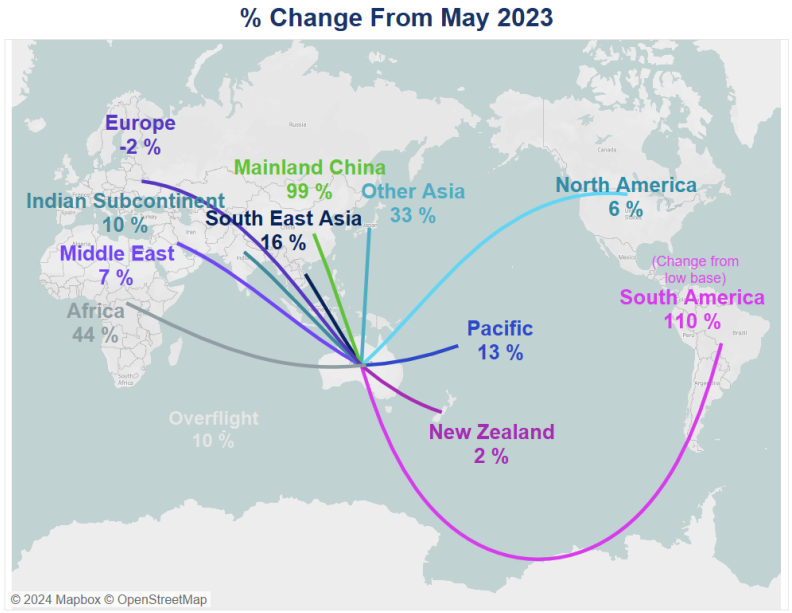
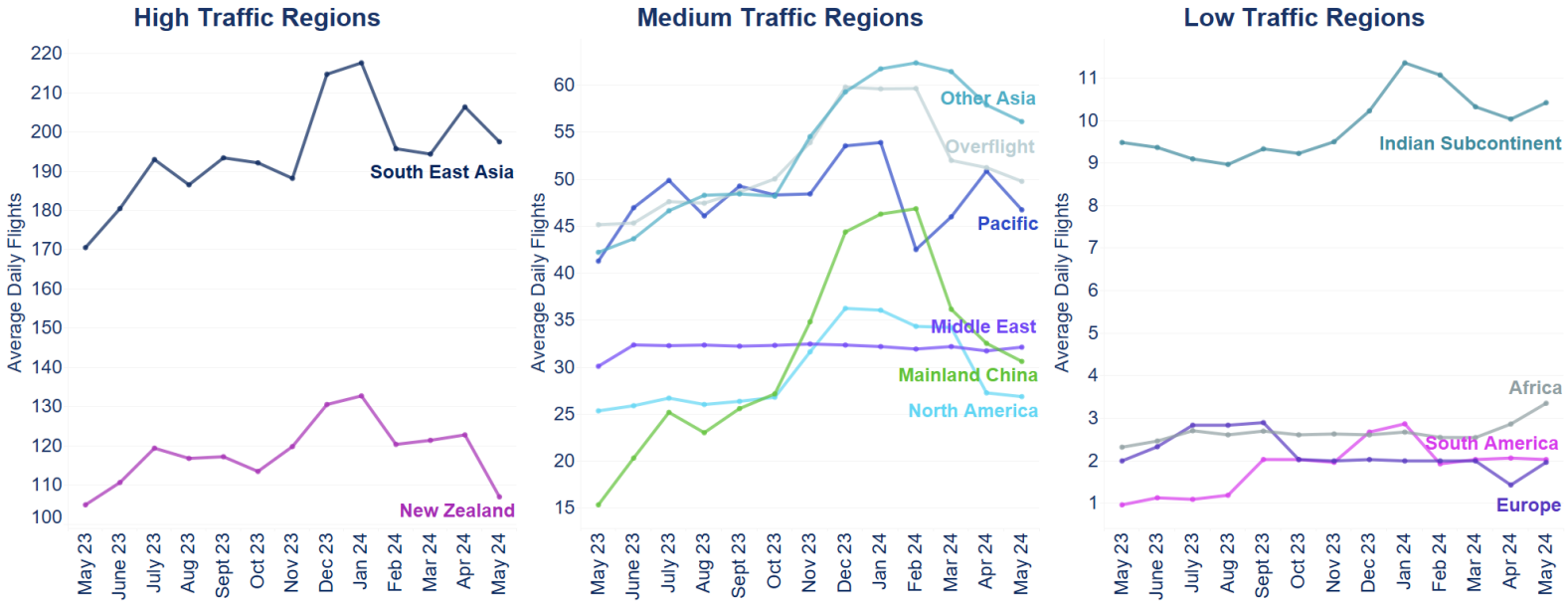


Figure 18. Average daily number of flights per month by international markets



Source: Airservices 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.

Change in active fleet as a capacity indicator

The pace of fleet renewal remains slow globally, impacted by ongoing aircraft manufacturing and supply chain challenges. Some operators are resorting to leasing arrangement in the short term in efforts to find alternative ways to match demand.

New aircraft orders globally in 2023 (Source: IATA)

Most of the new aircraft deliveries went to Asia Pacific, the Middle East and Latin America, where airlines received three times more aircraft than in the previous decade

Figure 19. Active Airbus and Boeing fleet in Australia and by region (as of 31 May in 2019, 2023 and 2024)

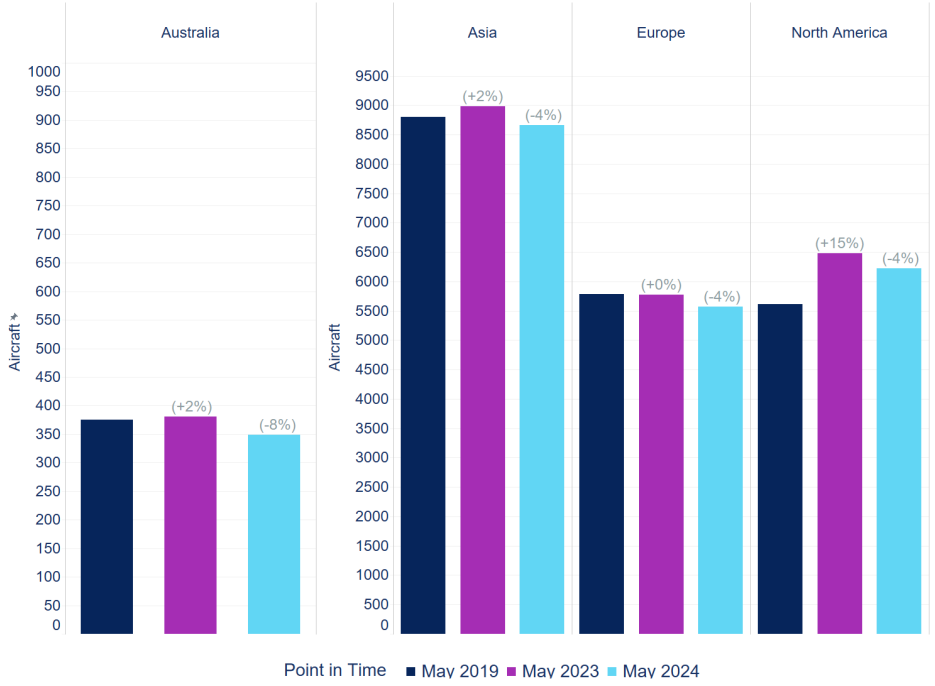
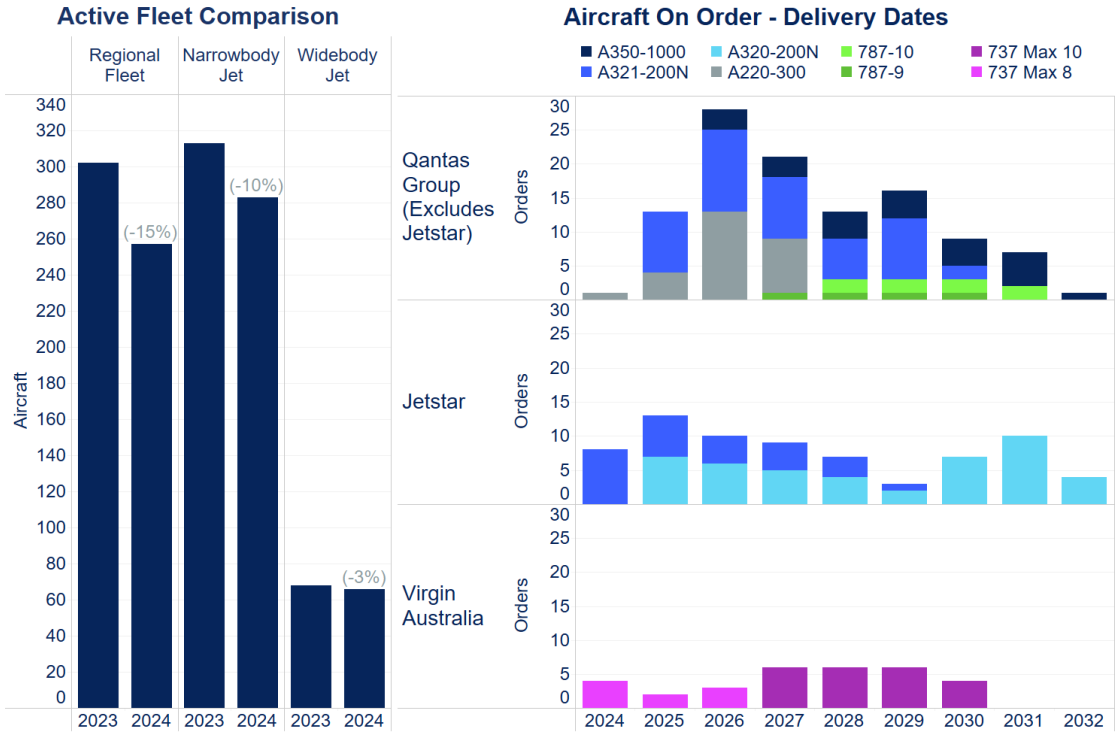


Figure 20. Change in total active Australian fleet (as of 31 May 2024 vs 31 May 2023) and aircraft orders and deliveries (as of 31 May 2024) for Qantas Group and Virgin Australia Group



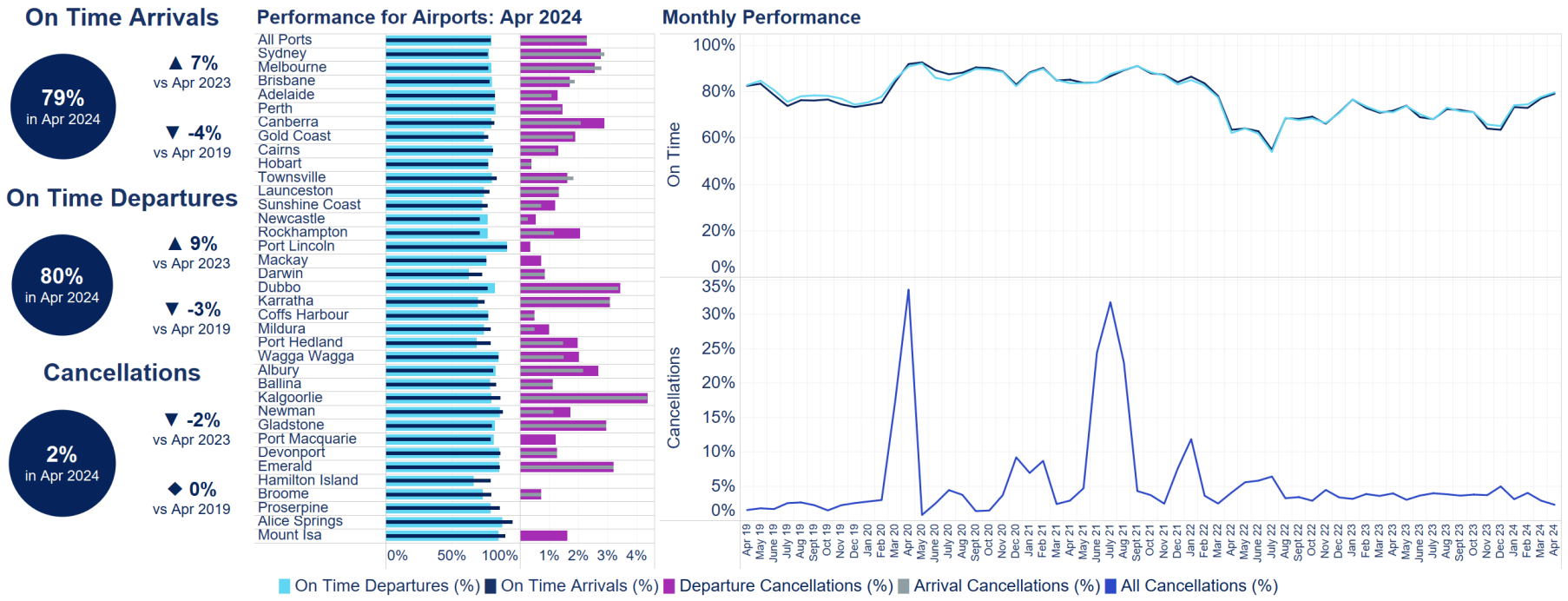
Source: Centre for Aviation Fleet (CAPA). Percentage comparisons are with respect to the previous period.

Australian aviation network performance

On-Time Performance (OTP)

Overall industry OTP showed a notable 15 per cent improvement over the first four months in 2024, and the cancellation rate has reached its long-term benchmark. This is the result of cross-industry efforts to prioritise service reliability through measures such as active recruitment, streamlining boarding procedures and strengthening responses to disruptions.

Figure 21. Total industry OTP and cancellations (data available up to 30 April 2024 based on latest BITRE data release)



Source: BITRE (website)

Figure 22. Average arrival OTP by region, based on the top ten performing airlines (April 2024) for all regions except Australia, with change compared to previous month

Region	On Time Arrivals	Change from previous month
Global	86%	◆0%
Asia Pacific	83%	◆0%
Europe	86%	▼1%
Latin America	87%	▼2%
Middle East & Africa	79%	▼8%
North America	80%	▲5%
Australia	79%	▲2%

Source: Cirium (website) and BITRE (for Australia)

Drivers of On-Time Performance (OTP)

Analysis of the key building blocks of OTP shows that, on average, a consistent level of buffers are incorporated into scheduled operations to account for delays. Opportunity exists to further understand how this approach and other aspects of planning processes across the aviation ecosystem contribute to managing risks of network disruptions, balancing factors such as asset utilisation, operational efficiency and need for resilience.

Figure 23. Total contribution of components to OTP (January to May 2024) and average flight values per month

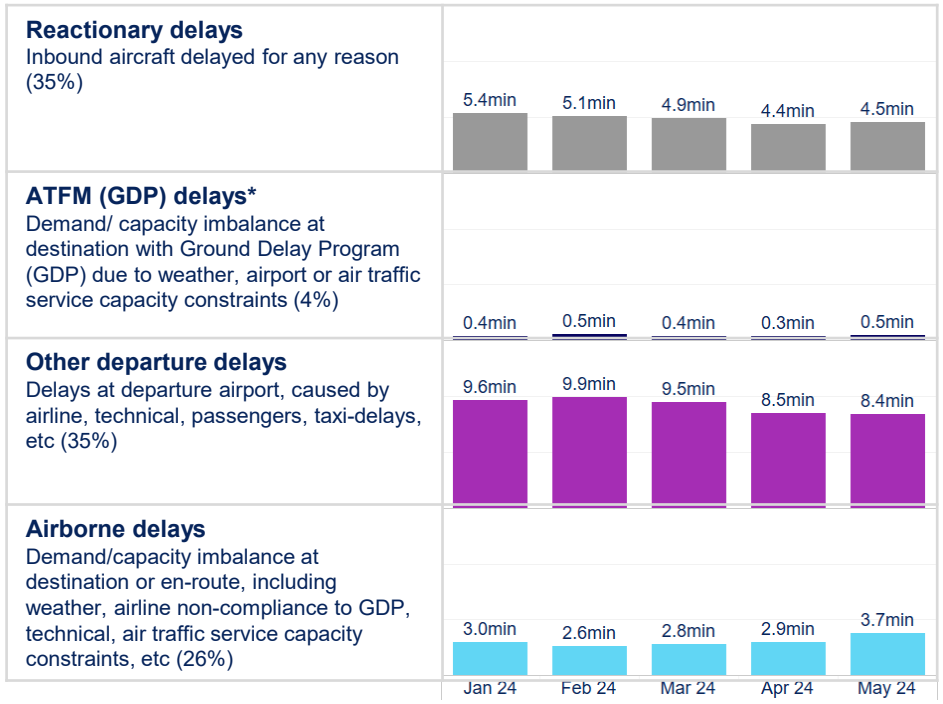
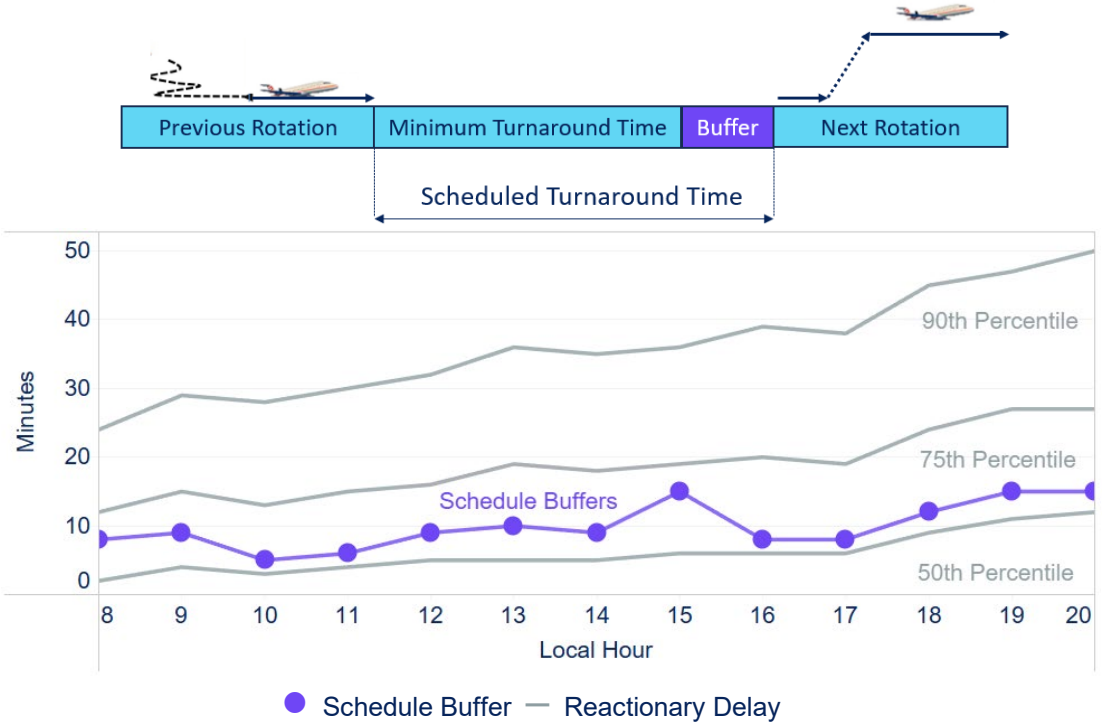


Figure 24. Scheduling buffers (violet) and percentiles of reactionary delays (grey). The violet line representing the schedule buffers lies just above the 50th percentile of reactionary delay. This means that throughout the day, about half of the reactionary delay can typically be absorbed by existing schedule buffers.



Source: Airservices ODAS (excludes general aviation, cargo, military and medical/mercy flights). The delay presented is an estimate based on domestic flight data available to Airservices for Qantas Group (incl. Jetstar), Virgin Australia, REX, and Bonza. Airservices is working with airlines and stakeholders to refine the estimation method and identify complementary data to better understand causal factors.

*The ATFM system allows airlines to change GDP slots to respond to reactionary delays, which may allow a GDP slot to be obtained closer to the updated departure time. Therefore, the additional ground delay as result of a GDP can appear low but should be considered in conjunction with reactionary delay.

Ground Delay Program (GDP) application

Tightening governance around GDP and refining network management processes using Digital Twin technology are delivering network benefits. Monthly ground delays at the major airports have decreased by over 160 hours (or ~25 per cent) without adversely impacting airborne delays, compared to the earlier months of this financial year. Industry compliance improved by four per cent compared to the last twelve-month averages. There was no ad-hoc GDP applied at Brisbane in May.

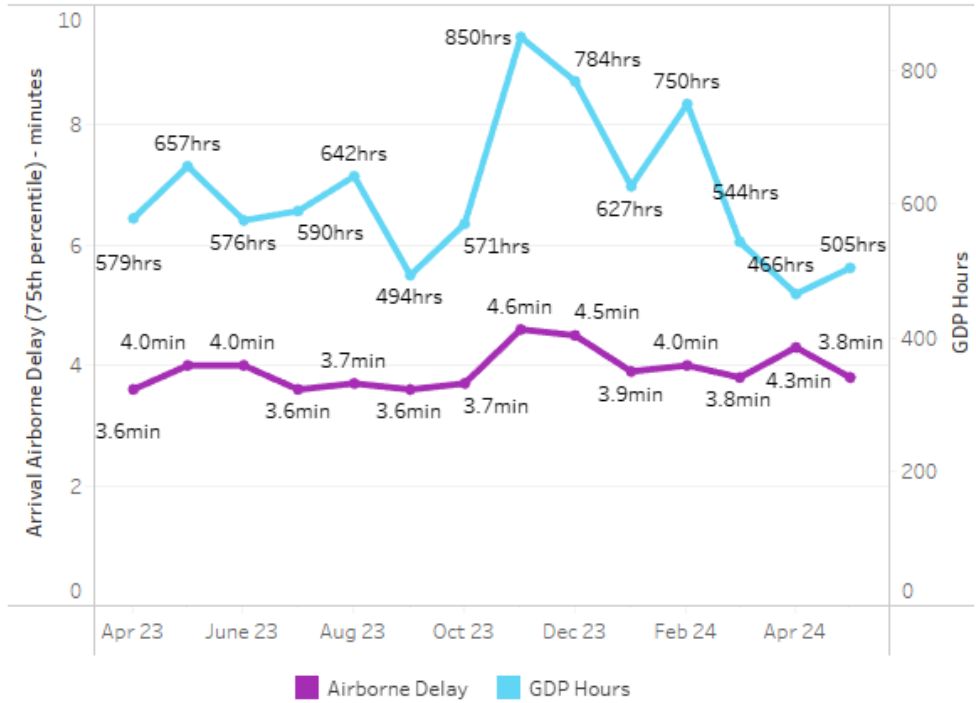
Figure 25. GDP compliance in May 2024, with comparison to previous 12 months

	Qantas	Qantas Link	Jetstar	Virgin	Rex	Alliance	Other	Overall
Sydney	87%	88%	86%	87%	75%		55%	85% ▲6%
Melbourne	84%	85%	79%	88%	75%		75%	83% ▲6%
Brisbane	A single ad-hoc GDP was applied at Brisbane on 31 May 2024 due to fog for 4 hours. There were not enough flights impacted for compliance trend data to be presented.							
Perth	87%	83%	71%	80%	72%	86%	71%	79% ◆0%
All Ports	86% ▲8%	85% ▲1%	83% ▲9%	85% ▲7%	75% ▼-1%	86% ▲6%	70% ▼-2%	82% ▲4%

Compliance 0% — 100%

◇ No change △ Increase ▽ Decrease.
Change is based on comparison to previous 12 months.

Figure 26. Monthly GDP usage (duration in hours) and arrival airborne delay (75th percentile in minutes) - April 2023 to May 2024



Source: Airservices ODAS.

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

Together with Brisbane Airport, data sharing has been progressed with targeted operators to understand the key drivers of runway occupancy time and inform their training and checking programs. This collaborative approach is being extended to other major airports seeking to further understand and improve runway utilisation.

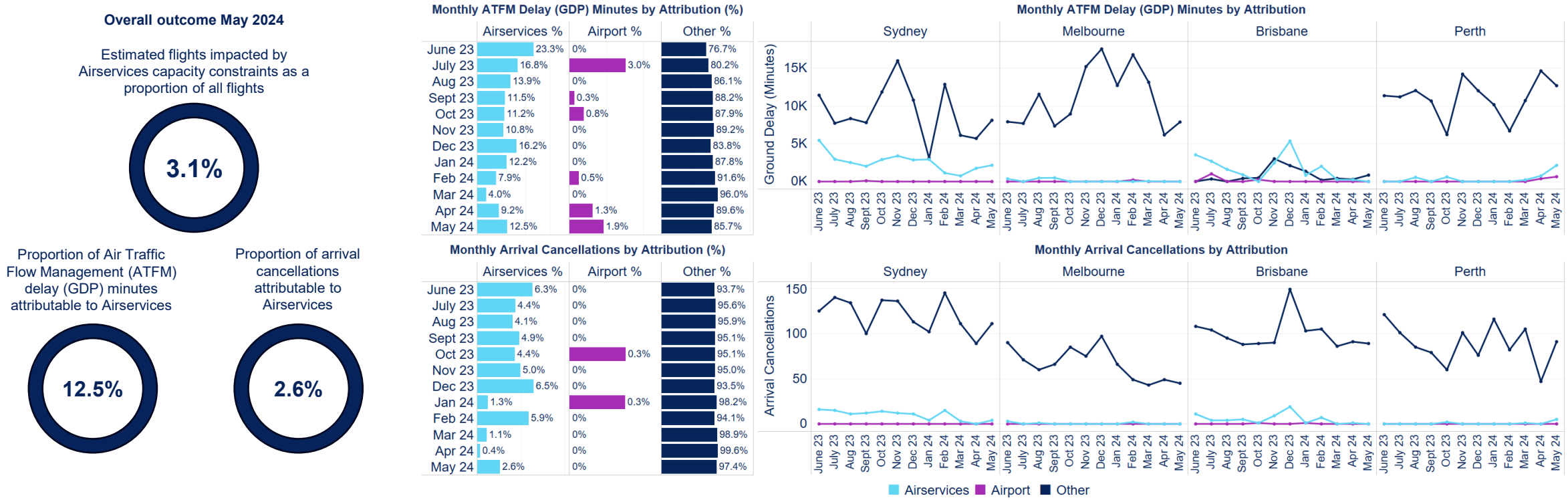
Figure 27. Medium jet departure and arrival runway occupancy times (median to 75th percentile) during peak periods (May 2024) by runway and taxiway at major capital-city airports

Source: Airservices 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.

Air traffic management outcomes

The overall air traffic management outcomes in May returned to the level seen at the beginning of 2024, largely due to unplanned staff unavailability along with high levels of air traffic control (ATC) training related to the airspace volumes around Sydney and Perth. We are actively prioritising the cross-training, recruitment and utilisation of experienced air traffic controllers, targeting locations that drive network outcomes and require higher levels of resilience. We are further refining training processes to increase speed to competency, scheduling training activities outside peak traffic demand periods and progressing endorsement reform to increase flexibility and minimise industry disruptions.

Figure 28. Air traffic management outcomes at major airports



Source: Airservices ODAS.

Flights impacted are estimated as scheduled to arrive at the four major airports during a period with slot reduction attributable to Airservices. ATFM delay (GDP) and flight cancellations attributable to Airservices 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. Airservices is working with airlines, airports and stakeholders to refine the estimation method and identify complementary data to better understand causes of delays and cancellations. As part of the actions to address the recommendations from the IATA review (published on Airservices website), the delay attribution and analysis methods are being reviewed in consultation with industry.

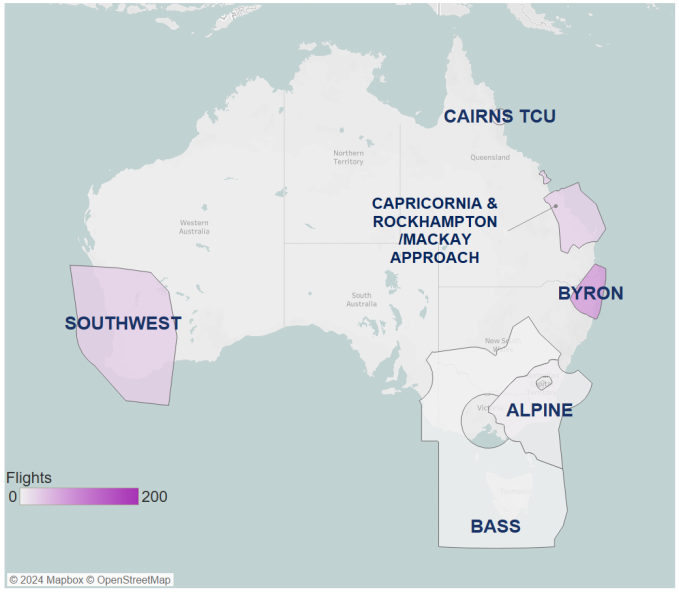
Air traffic service provision

Air traffic service provision across airspace sector groups improved in May compared to the previous 12-month average, however regional aerodromes service consistency remains variable. Building layers of resilience and embedding service first approach remain a priority to drive sustained month-on-month improvement.

Figure 29. Number of flights and hours during the periods when air traffic services delivered varied from published levels (May 2024)

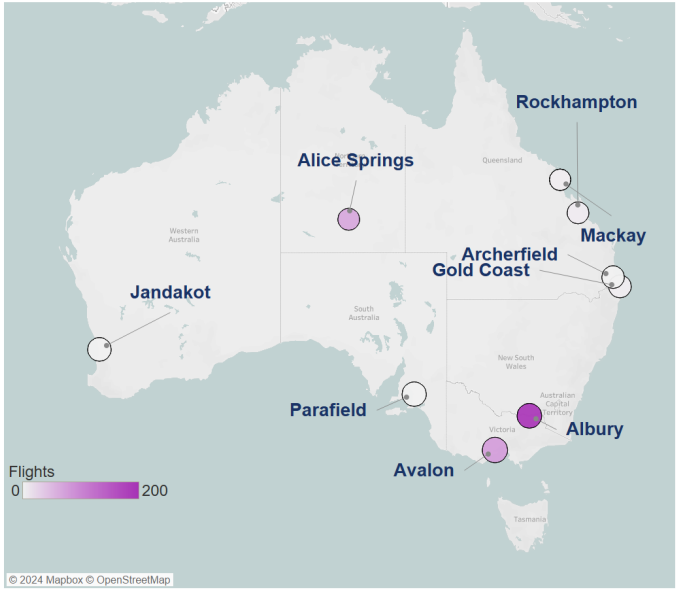
	Events	Hours	Flights
SOUTHWEST	2	5.0	30
BYRON	6	9.4	74
BASS	2	9.7	0
CAPRICORNIA & ROCKHAMPTON/ MACKAY APPROACH	17	17.9	27
ALPINE	1	2.8	3
CAIRNS TCU	2	13.6	8
BALLINA (SFIS)*	6	9.5	9
All	36 ▼-31%	68 ▼-40%	151 ▼-49%

Variations to Published Services
Airspace Sector Groups: May 2024



	Events	Hours	Flights
Jandakot	5	7.3	
Parafield	23	46.0	
Gold Coast	1	1.0	4
Archerfield	4	3.5	
Canberra**	2	1.8	
Mackay	1	2.5	3
Rockhampton	3	4.5	5
Albury	49	164.0	178
Alice Springs	9	90.0	62
Avalon	88	212.0	71
All	185 ▲98%	533 ▲65%	337 ▲23%

Variations to Published Services
Air Traffic Control Towers: May 2024



◆ No change ▲ Increase ▼ Decrease
Change is based on comparison to the previous 12-month average.

Source: Airservices ODAS. Variations to published services comprise of Temporary Restricted Areas and tower closure periods. During the periods of variations to published services 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 approximations by historic airline, charter, cargo and medical flights that typically operate during the periods of variations to published services, noting the exact reasons for flight impacts cannot be directly inferred from information on flight times or tracks. General aviation, military and government flights are excluded. Airservices is working with airlines to refine the estimation method to better understand the impact of variations to published services. Service variations are with respect to published services as per ERSA including any approvals by CASA for temporary amendments.

*When there is a variation to published Surveillance Flight Information Service (SFIS) at Ballina, standard Class G services as regulated by the Civil Aviation Safety Authority (CASA) are still provided by Brisbane Air Traffic Services Centre.

**At Canberra Tower during the periods of service variation, the Canberra Approach service managed the airspace surrounding the airport to the ground. Instead of contacting the tower, aircraft contacted Approach directly for instructions.

Drone activities

Over the past two years, the number of drone flights for mapping and inspections, and agricultural purposes in the vicinity of airports have increased steadily. We are now also seeing an increasing trend in delivery drone activities. Commercial drone flights are growing at a greater rate than hobby drones as industry adoption of drone platforms increases.

Figure 30. Number flights per drone activity type within No Fly Zones of controlled aerodromes (1 June 2022 to 31 May 2024)

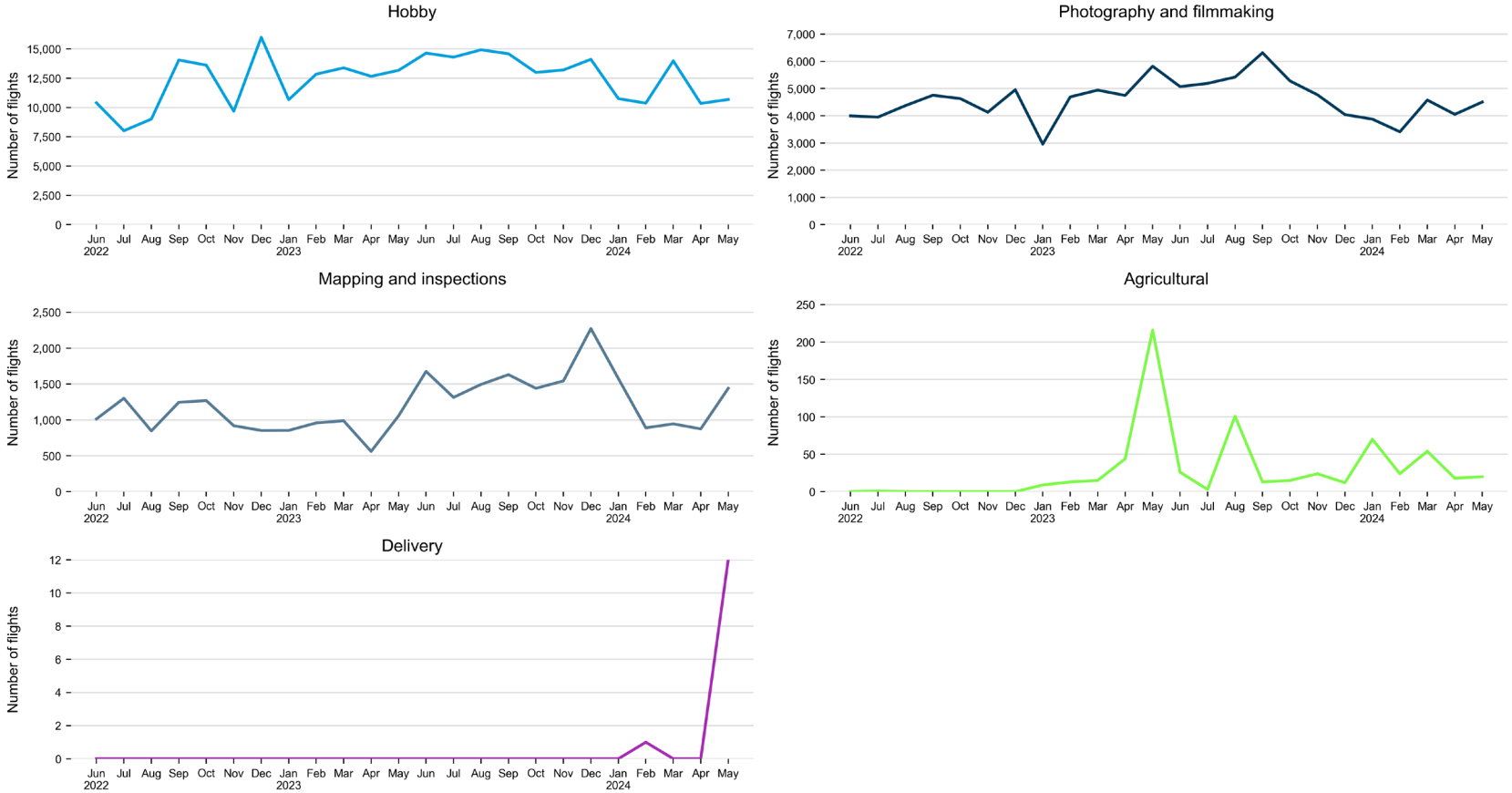
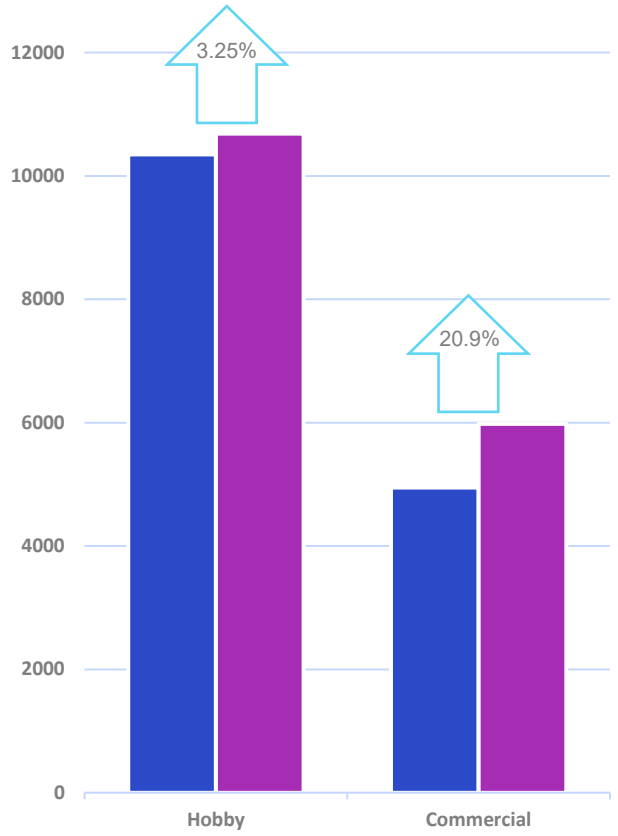


Figure 31. Change in drone flights by use type (April to May 2024)



Source: Drone detection equipment. 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 (known as the no fly zone). Micro drones (<250 g) 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 approach/departure splays). All drones are allowed to operate in the outer runway splays of a controlled airport up to a height of 90 metres.

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