

INDUSTRY PROFILE - Aviation Flight Operations



**Transport, Postal and Warehousing
Air and Space Transport
Flight Operations**

ANZSIC: 4900

Report Prepared April 2023

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1. Background

1.1 Industry Regulatory / Licencing Bodies

- The national regulator overseeing activity in this space is the Civil Aviation Safety Authority (CASA). Together with the Department of Infrastructure, Regional Development and Cities, and Airservices Australia, they constitute a tripartite structure for providing safe aviation in Australia.
- At State level, the Department of Transport (DoT) coordinates, develops and influences government and the aviation industry in providing the best aviation services and infrastructure for Western Australia.

2. Workforce Opportunities and/or Challenges for Industry

Please note this response relates to the Aviation Industry. Other sectors within the Transport, Postal and Warehousing sectors have been completed individually, please refer to those for more information. Where an answer cannot be provided here (i.e. due to the many varied licencing, experiential or qualification requirements of industry) please contact the LDSC for more information.

2.1 Industry Overview

Airlines:

- **Bonza:** Bonza has officially been given the green light for operating flights in Australia, after it was granted its Air Operator Certificate to operate on the East Coast. New routes will be gradually added, as the airline's workforce and fleet continued to grow, and it is expected they may expand operations to include WA at a later time. Mr Jordan has stated "We will serve WA as the airfares into and around WA are very high and we believe there are opportunities for new routes". Bonza's business model is based on connecting cities that are not currently served and 93% of its routes are not on any airline's schedule. WA routes that could be of interest could be Perth-Bryon Bay, Adelaide to Broome, Busselton to the Sunshine Coast and Geraldton to Melbourne. The airline has had discussions with a number of airports in WA to sound out options. This may increase the competition for Pilots between airlines. The addition of a third airline Bonza to compete with Virgin and Qantas on 19 routes would also drive down domestic prices.
- **Qantas:** Qantas has hired more than 1,500 new staff between April and September 2022, which will help meet capacity and operational requirements. The carrier is also including more options. In December 2022, Qantas added new routes from Brisbane to Tokyo, Melbourne to Dallas Fort Worth in Texas and Sydney to Korea's capital Seoul. This is further supported by the Bureau of Infrastructure and Transport Research Economics (BITRE) figures which tracks the cost of discounted tickets has revealed a significant drop in its most recent figures. The index has not sat this low since August 2022 however it remains considerably above 2018 and 2019 levels.
- **Jetstar:** Jetstar is currently beginning the delivery of 38 A320 NEOs, comprised of 18 A321 LR and 20 A321XLR aircraft which may also see an increase in the demand for pilots with the appropriate rating to operate them.
- **Virgin:** Some airlines have returned to the international market but at reduced capability. To cut costs, Virgin Australia discarded its long-haul, wide-bodied aircraft after relaunching in November 2020. As a result, the airline is now flying to fewer international destinations and with less seat capacity. Virgin Australia accounted for 2% of Australian international seat capacity in September 2022, down from the 7% it held pre-pandemic (September 2019). Comparatively, Qantas and Jetstar increased their market shares from 18% to 19% and 8% to 12% respectively.

2.2 Industry Opportunities and Challenges

The below trends will impact on industry's capacity and future workforce requirements.

Pilot Shortages & Potential Automation of the Aeroplane Pilot role

- Pilot shortages and other factors (i.e. new technology) are influencing airlines to explore aircraft with the potential for single-pilot operation (i.e. Cathay Pacific and Lufthansa). Air north, a regional airline, reports that pilot shortages are continuing to cause cancellation or delays for remote residents relying on these services. For some industries relying on FIFO believe this service is essential in keeping skilled people in regional areas, such as the Kununurra for the longer term; this may have a flow on effect to those industries potentially exacerbating other workforce shortages.
- Competition for Qantas pilots remains high, with Qantas pilots often recognised as the best of the best when it comes to safety due to the rigour around training and skill level required for these pilots. Qantas has been ranked the world's safest airlines in 2022 (beating 380 airlines). According to Chief Thomas Qantas pilots are judged to be the "world's most disciplined, best trained and most skilful in the world" in their ability to respond to unexpected incidents.
- This is an internationally recognised and highly sought after occupation and so Australia is in heavy competition with many other countries making similar efforts to increase their flight capacity. There is also a time factor affiliated with the attainment of certain ratings and endorsements, therefore, multiple avenues are utilised by industry to attract, retain and grow the workforce (locally and internationally).
- Although the workforce is mobile, luring pilots through interstate migration can be challenging. Due to lifestyle choices (i.e. mortgages and family support structures), some pilots may not be as easily incentivised to permanently relocate to WA.

Helicopter Pilots:

- Helicopter operations span a number of niche operational areas. Pilots can specialise in specific areas such as search and rescue, firefighting, aerial surveying or cattle mustering. Pilots who operate helicopters require specialised training due to the unique handling characteristics of these aircraft and the impact of different weather conditions. Helicopter pilots must be highly skilled and experienced to operate safely in various conditions. Helicopters have proven to be very agile and useful in disaster relief efforts. As access to areas such as those impacted by flooding is restricted due to loss of vital infrastructure, operators can fly in essential supplies and aid with recovery efforts.
- In the oil and gas space, Helicopter services continue providing transfer services for ongoing operations and maintenance work. Helicopter operators must follow strict safety protocols and regulations to ensure the safety of passengers and crew. Helicopter pilots often work long hours and irregular schedules, which can lead to fatigue. Fatigue can impact a pilot's cognitive ability, judgment, and decision-making, which can compromise safety. Therefore companies must have sufficient levels of Pilots to cover roles, schedules and comply with fatigue management directives.
- Due to regulatory changes, operators in senior roles such as Chief Pilots are required to have Instructor Ratings. There is a time lag associated with the attainment of this rating and this is causing bottlenecks in the progression and upskilling of pilots. It has also been noted that examiners, instructors are either leaving the industry completely (retiring, medical reasons or to other sectors) or being lured into operational roles elsewhere.
- Demand for Helicopter Pilots is ongoing as a result of mining, oil and gas operations ramping up, as well as the increase in tourism being seen, and ongoing cattle mustering and asset inspection activities.

Flying Instructors:

- For those flying instructors that weren't lured back to industry roles during the height of COVID-19, they were, and continue to be faced with challenges to maintain currency due to limited access to simulators, accrual of flight hours to progress through to the next level of licence.

- Due to the increase in global demand for pilots, as an incentive lower level instructors are increasingly requesting that the cost of attaining ratings be covered by employers. Industry is finding this challenging due to the potential loss of instructors returning to industry as well as the return on investment and high costs.
- A high proportion of flying instructors are located in the metropolitan area (i.e. Jandakot), with some regional training areas (e.g. Bunbury and Esperance).
- This cohort of workers, like many other industry sectors, is faced with housing (affordability and low stock availability), childcare, infrastructure and amenities (i.e. broadband and mobile coverage), and access to healthcare (i.e. GPs). Even within the Metropolitan area, housing is also an issue not just for the trainers but for the students also. This would impact on student numbers from overseas.
- There have been amendments to Part 61 of the Civil Aviation Safety Regulations 1998. Flight Instructors no longer have NVFR privileges (i.e. a night VFR (NVFR) rating allows flight at night under visual meteorological conditions), prior to the amendments this was automatically awarded but this is no longer the case. This has implications on risk elements, capacity to deliver training and cost implications on flight schools.
- As seen with other industry sectors, the increase in fuel costs has adversely affected on flight schools. Margins are pre-determined with very little room to absorb additional increases in costs. There are few other alternatives, other than to pass on the costs to students. This is cost prohibitive with the high cost of the pilot's licence attainment taken into account.
- The Jandakot airport precinct is already near capacity catering for flight training for fixed and rotary wing operations and training. In addition, construction activity taking place on airport land is having implications on flight schedules.

Aviation Freight:

- DHL Express has launched GoGreen Polus, the first global express courier to give customers the opportunity to use sustainable aviation fuel to reduce emissions associated with their shipments. This will launch first in the UK, shortly followed by Italy, Denmark, Sweden, Canada, Australia, South Africa, and the United Arab Emirates. It is unclear at this time, how this may affect air freight costs.

More Flight Routes added:

- Kalgoorlie could see direct flights from the east coast return if a plan to increase racing patronage in the Goldfields is successful. Discussions are underway between Kalgoorlie-Boulder Racing Club and airlines to secure flights from Perth, Melbourne and Sydney for key race events. The flights are part of the club's plan to secure the future of country racing events like the Kalgoorlie Cup.
- More routes continue to be added to diversify offerings, with flights now going to Perth to Manilla, Melbourne to Exmouth also now available. The Derby-Broome trial has also been extended until June 2023. New 11 hour non-stop flights to South Africa will launch from November 1 2022, with Qantas to operate three return flights per week from Perth to Johannesburg on its Airbus A330 - reconnecting South Africa to WA with a direct route for the first time since 2020. The Johannesburg route will be the only direct connection between WA and South Africa and is expected to be highly sought after as it removes any transit via Sydney, Singapore or the Middle East, which travellers currently have to contend with.
- Direct flights between Perth and Jakarta will start from November 30 2022, with Qantas to offer three flights per week on its Boeing 737 aircraft. The four and a half hour new route will help build important economic relationships between WA and Indonesia, an important trading partner.
- In addition, Airlines were invited to tender for the exclusive rights to operate air services on regulated air routes between Perth and Albany, Esperance, Carnarvon and Monkey Mia, as well as Perth-Laverton-Leonora and Perth-Mount Magnet-Meekatharra-Wiluna (Northern Goldfields routes). The tender sought proposals from airlines to provide services on the regulated routes under a new minimum

five-year agreement with the State Government, with flexibility for airlines to propose flights that may link to other regional or intrastate centres. The Department of Transport has agreements in place with Rex and Skippers Aviation that are due to expire in October 2023. Rex currently holds the exclusive rights to provide air services between Albany, Esperance, Carnarvon-Monkey Mia and Perth, while Skippers Aviation holds the exclusive rights for air services between Perth-Laverton-Leonora and Perth-Mount Magnet-Meekatharra-Wiluna (Northern Goldfields routes).

- To boost tourism, special routes were also offered to Interstate travellers for the 'Walk On A Dream' campaign in Western Australia with special Qantas return airfares. Qantas' 'Dream of WA' flight sale offers holidaymakers the chance to fly to Perth from \$175, from all Australian capital cities, when purchased with a return ticket. The special fares were available for travel between October 2022 to June 2023. Virgin participated in The 'Escape to WA' which offered 50 per cent off flight sale, in partnership with the state Government through Tourism WA, with the aim of boosting hotel occupancy rates and visitor spend in the State's economy.

Fly in / Fly out Operations:

- As a large proportion of flights fly out of and into Perth for commercial airlines, activity tends to be metropolitan centric with all regional centres being serviced from Perth. It should, however, be noted that there is some activity in the regions which caters for tourism (i.e. scenic flights and corporate charter operations) also has a demand for pilots.
- The continued value proposition of the Fly-in-Fly-out market to Western Australia is vital to sustaining the numerous oil & gas and mineral resources projects operations across the state. In some cases, these service offerings have helped provide better and more frequent services to regional centres with some seats on aircraft made available to local residents. Throughout COVID-19 and up until 2021/2022 financial year, Perth Airport recorded consist intrastate passengers of approximately 4,000,00 a year.

2.3 Supply and Demand for Workforce

- Pilots are globally in demand and with aggressive recruitment campaigns from airlines in places such as the United States, significant pressure is placed on Australian carriers to not only attract but also incentivise the retention of the existing flight crew.
- For those Pilots that managed to stay in the industry (following the impact of COVID-19 on the sector), they were and continue to be faced with challenges to maintain currency due to limited access to simulators, accrual of flight hours to progress through to the next level of licence. This placed supply constraints on the restricted pool of available workers needed to meet capacity needs for air freight and passenger travel. After several years of being unable to travel and despite inflationary cost pressures such as fuel, the demand for Australian air travel soared over the peak holiday periods. Strong demand and reduced capacity places upward pressure on airfares.
- Wheat generates 50% of Australia's total wheat production with more than 95% of this exported predominantly to Asia and the Middle East. It should also be noted that aerial crop dusting is a highly specialised skill and very important to the agricultural sector (that for the second year running in WA had record harvest figures). Crop dusting pilots often have to work long hours, performing multiple take-offs and landings in a day, and flying at low altitudes for extended periods. Crop dusting is perceived as a risky and dangerous profession due to the challenging flying conditions and the use of chemicals. This can deter potential pilots from pursuing a career in crop dusting. This requires a high level of physical fitness and stamina, which can be challenging for some individuals.
- Due to the close links and pathways between trainers and licenced pilots, trainers in aviation have in many cases been lured into operational roles to help fill the capacity gaps in flight operations. This places resourcing pressures on flight schools to ensure a steady pipeline of students can progress through the differing licenses and ratings.

2.4 The impact of COVID-19 to the workforce

- Over the past two years the aviation industry has undergone unprecedented change and transformation, with diverse opportunities emerging across this important sector. With airlines reporting more profitability as they recover from the economic losses wrought by COVID-19. However, fuel costs are expected to reach about \$5 billion for the 2023 financial year - a record high despite Qantas still running at about 70 per cent of its pre-COVID international capacity. Qantas said a \$200 million investment in additional staff would help maintain its improved operational performance throughout the new COVID-19 wave, and the busy holiday period. Although in recovery airlines said capacity remained "constrained", despite over a million sale fares being launched in October 2022.
- The impacts of COVID-19 are continuing to be felt with industry still in the recovery phase. These effects are likely to be seen over the shorter-term for various industries as the impact of COVID-19, other geo-political factors, environmental impacts (i.e. bushfires/floods) continue to be experienced.
- The reopening of borders has also resulted in an optimistic trajectory for the scenic flights and tourist charter operator activity. Helicopter operators are recovering as more interstate and international visitors come to WA. Given the increased promotion of WA as a tourist destination, it is anticipated that demand will also increase for these services.

2.4 Technology

- Aviation automation has advanced in leaps and bounds, and navigators and flight engineers are no longer needed and there is potential for this to occur. However, stakeholders have highlighted that computer or communication systems can crash (as evidenced by Qantas' recent spate of issues and system failure/s), and well experienced crew of two are more reliable in these circumstances. Qantas is currently exploring a proposal to switch from dual pilots to solo pilots on some commercial flights. However, given the recent media attention on Qantas with many technical issues causing flight delays and cancellations, this may be delayed.
- The area of AI and its impact on the assessment practices will need to be monitored. ChatGPT is a chatbot launched by OpenAI in November 2022 and has the ability to generate human-like text, making it capable of using natural language conversations. Due to this ChatGPT is having an impact on the Assessment space both at secondary schools and for those offering online learning in determining the authenticity of individuals work for assessment who may be using the AI to submit work not of their own making. Schools are looking for ways to mitigate these effects, with some planning to return to paper and pencil based assessments conducted in the classroom to ensure they are accurately assessing individuals understanding of concepts in their submitted work. This trend will need to be monitored to see how/if it affects the VET area. Within the UK they have also recognised the potential for students utilising ChatGPT with permission and if it may create biases in grading, as well as the possibility it could replace human instructors and how this may affect the fair grading and assessment of individuals work. Some National retailers are also investigating it's potential to provide training.
- ChatGPT has also been identified as a possible area to assist in career planning. In particular it can Level up job searches by targeting opportunities for career moves, assist in elevating résumés, and assist in preparing responses to interview questions. As not everyone has access to career resources this can be a hidden benefit of AI.
- Further there are concerns around the roll-out of such technologies (i.e. ChatGPT) and the lack of consultation, from both from a consumer/public perspective - large companies tend to trial new technologies on their customers without informing them (i.e. Kmart and Bunnings face recognition as an example). This has the potential to impact customers (i.e. customer experience/satisfaction) as well as workers (in regards to understanding how and when to utilise these technologies). These technologies are often introduced into workplaces without consultation with the workforce. The Award states there is a requirement for this to occur however, industry feedback has been that this is rarely enforced. Further this area will need to be monitored to ensure that workers gain the requisite skills to understand, interact with or use this technology. As well as to understand their rights if used in the workplace from an industrial relations perspective.

3.Environmental, Social and Corporate Governance (ESG)

Zero-emission electric vertical take-off and landing aircraft (eVTOL):

- Leading WA-based aviation and tourism businesses, Aviair and HeliSpirit, in 2022 announced their partnership with Eve Air Mobility (“Eve”), an Embraer company, that will introduce a fleet of up to 50 new zero-emission electric vertical take-off and landing aircraft (eVTOL) with flights commencing as early as 2026. Aviair and HeliSpirit carry more than 70,000 guests each year, and being able to provide an emission-free, low-noise solution for both tourism and business travel is an important step forward toward the company’s net-zero emission goals.

4. Training and Education Needs

4.1 Current and Anticipated Training Needs

- Obtaining a Commercial Aeroplane Pilot’s licence is generally an expensive undertaking costing from \$60,000. This may be a significant deterrent to prospective students under a fee for service arrangement however, fee help options are available.
- Alternatively, the attainment of a Private Pilot’s licence can be used as a pathway that would progress students through the different classes of licence.
- Another avenue is utilised to attain licences is conducted through Australian Defence Force (i.e. Royal Australian Air Force RAAF). Given the high demand for Pilots retention strategies have been strengthened to prevent these pilots being lured away to general aviation roles.
- Some specialty programs are offered by certain Schools such as Kent Street College and Melville Senior high School that offer school students the opportunity to attain the Private Pilots Licence before they progress on to secure other licence types.
- The Aviation industry is heavily regulated by the Civil Aviation Safety Authority (CASA).
- Industry consultations suggest that the current supply status of Helicopter Pilots is meeting industry demand. However, there are bottlenecks related to attaining, keeping and upskilling of industry currency. This is a result of limited access to examiners / assessors that are required for issuing Type Ratings.
- The onset of the pandemic saw a mass exit of pilots from the sector. The prolonged period of grounded fleet and the level of uncertainty led to many in the industry pivot and seek employment elsewhere for job security and to continue to earn a living. It should also be noted that the long lead time to become a pilot and pipeline for students to attain the required skills has also been affected.
- Following the re-opening of the international borders the optimal flying conditions in WA, there has been a resurgence in demand and interest to undertake flight training. This is in addition to catering to the domestic market (i.e. international students). One training organisation has reported having to schedule multiple intakes to accommodate this increase.
- The Flying Instructor role is in high demand as supply constraints linked to Pilots returning to industry based roles, bottlenecks with examiners/assessors ability to issue ratings and ageing workforce resulting in a loss of experience, and mentoring opportunities.

4.2 Career Pathways and Graduate Outcomes

- It is not a requirement of this industry that any qualification is undertaken to become a pilot. CASA states that the competencies must be achieved and successfully examined with the prescribed flying hours.
- **231111 Aeroplane Pilot:** The **AVI502222 Diploma of Aviation (Commercial Pilot Licence - Aeroplane)** is the most closely aligned to the meeting the theoretical requirements needed for underpinning knowledge of this occupation.

- **231114 Helicopter Pilots:** The **AVI50319 Diploma of Aviation (Commercial Pilots Licence – Helicopter)** is the most closely aligned to meeting the theoretical and practical requirements needed for the underpinning of knowledge in this occupation. There is also the additional requirements of flying hours which needs to be undertaken in addition to licencing.
- **231113 The Flying Instructor** occupation is very closely linked to the Aeroplane pilot job role. This is because flying instructors is one of the avenues pilots utilise as a pathway to attaining a Commercial Pilots License and an Air Transport Pilot Licence (ATPL). To attain this a pre-prescribed number of hours and ratings is needed as set out by Civil Aviation Safety Authority (CASA) requirements. Furthermore, this is inclusive of the number of flying hours which can be accrued to attain the flight instructor rating.
- **The AVI50419 Diploma of Aviation (Flight Instructor)** is the most closely aligned to the meeting the theoretical requirements needed for underpinning knowledge of this occupation. There is also the additional requirements of flying hours which needs to be undertaken in addition to licencing.
- **Other Pilot Resources**

Pilot Safety Hub: To assist in the safety training of Pilots, the Civil Aviation Safety Authority (CASA) launched a national pilot safety education campaign – ‘Your safety is in your hands’. Backed by major aviation partners, the campaign aims to enhance pilot safety skills and knowledge. The safety topic areas have been chosen based on a review of Australian Transport Safety Bureau occurrence data and each quarter will focus on a new safety topic with online resources and podcasts. The hub will bring together a range of safety educational tools and resources across 4 main safety focus areas:

- Non-controlled aerodromes
- Weather and forecasting
- Flight planning
- Controlled aerodromes.

4.3 Additional Licences and Training Requirements

In addition to the above qualifications and licences other training and education requirements (dependant on each Pilot occupation) may also include, but are not limited to:

Air Transport Pilots Licence	Aeroplane Pilot	Helicopter Pilot	Flying Instructor
<ul style="list-style-type: none"> • Hold or be eligible to hold a flight radiotelephone operator licence. • Have a current aviation security status check • Have a total of 1500 hours flight time including at least 750 hours as pilot of registered or recognised aeroplanes. • Must have completed a Multi-Crew (Pilots Licence) Co-Operation Course before sitting for an Air Transport Test Pilots Licence (ATPL) Flight test. 	<ul style="list-style-type: none"> • Hold a PPL • be able to speak and understand a certain level of English • Get a medical certificate. • Hold or be eligible to hold a flight radiotelephone operator licence. • Have a current aviation security status check. • Have completed training and gained the necessary flying experience in one of the following: <ul style="list-style-type: none"> ○ have passed a CASA approved integrated CPL course where the theory and; ○ flying training are co-ordinated and acquired 150 hours in aeroplanes or; ○ Have acquired at least 200 hours flight. 	<ul style="list-style-type: none"> • Must be at least 18 years of age. • Hold PPL. • be able to speak and understand a certain level of English. • do a medical test and get a medical certificate. • Have a current aviation security status check. 	<ul style="list-style-type: none"> • Flight instructor Rating (FIR) or simulator instructor rating (SIR) • Flight Examiner Rating (FER) • be able to speak and understand a certain level of English • do a medical test and get a medical certificate. • Hold or be eligible to hold a flight radiotelephone operator licence • Have a current aviation security status check • Have completed training and gained the necessary flying experience in one of the following:
<p>See the casa website for more details (www.casa.gov.au)</p>			

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6. Industry Consultation:

Industry Consultation: Regular industry consultation is undertaken by the LDSC through the Road Transport Industry Advisory Group (IAG), the Registered Training Organisations (RTOs), LDSC Annual RTO Forum, the LDSCs Board of Management (BoM) meetings, regional consultations, participation in industry advisory committees, teleconferences, email and social media and the use of online surveys.

Participation in group and individual meetings varies year on year. Continued and ongoing contact is made throughout the year via emails, newsletters, surveys (our most recent State of the Industry Survey had 89 industry respondents: across all industries under the LDSC remit. This data has also been included in these responses); and other channels by the LDSC to members and non-members of the Road Transport IAG and RTO IAG networks.

Participating organisations for the Aviation sector included **many small, medium and large companies** providing both flight operations (i.e. airlines) and ground operations services (i.e. maintenance and management, ground handling and mechanical engineering) and organisations with an aviation related interest (i.e. Royal Flying Doctor Services (RFDS) and the local Chamber of Commerce and Industries (CCIs)) across WA, **Airports and Aerodromes** (across WA), **Industry Associations** (i.e. Regional Airports Association (RAA)), **Unions** (i.e.. the Transport Workers Union (TWU)), the **licensing/regulatory body for Aviation** (i.e. Civil Aviation Safety Authority (CASA) and Airservices Australia (AA)), **Local and Commonwealth Government Departments** (i.e. local Shire Councils, The WA Local Government Association (WALGA), the Department of Transport, the Department of Fire and Emergency Services (DFES), Department of Infrastructure, Regional Development and Cities, School Curriculum and Standards Authority (SCSA), Defence West, and the Western Australian Defence Industry Workforce Office (WADIWO)), the **WA Industry Training Council Network**, and **Registered Training Organisations** (RTOs).