The Australian Licenced Aircraft Engineers Association

# Submission to the Aviation White Paper

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The Australian Licenced Aircraft Engineers Association (ALAEA) represents certifying Licenced Aircraft Maintenance Engineers throughout the Australian domestic, international, regional and general aviation industries.

The ALAEA welcomes the opportunity to provide a submission to the Aviation White Paper. We believe it essential that significantly greater effort needs to be put into the aviation and airline industry within Australia, particularly around reforming training and supporting a regeneration of Australia's training capacity and facilities.

## About the ALAEA

The ALAEA is an organisation founded in 1960 to advance the professional, technical and industrial interests of Aircraft Maintenance Engineers who are licensed by the Civil Aviation Safety Authority (CASA) to certify for work performed on aircraft within Australia. Currently the ALAEA has members employed in all sectors of the industry – in the major airlines as well as in regional operations and the general aviation sector. The motto of the ALAEA is:

## "To undertake, supervise and certify for the safety of all who fly".

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#### **Executive Summary and Recommendations**

The ALAEA recommends future aviation policy;

- recognises and supports Australia's research and manufacturing ability to be at the forefront of technological advancement in aviation to achieve net zero aviation whilst placing emphasis on the Civil Aviation Safety Authority to work with the industry to achieve the policy goal.
- 2. recognises the potential export market for aviation training products and supports the industry to maximise trade returns and augment visitor growth.
- acknowledge and reflect the social dimension of the transition towards sustainable aviation, to ensure the reskilling and upskilling of workers in the new technologies required for net zero aviation.
- recognises that aviation is a Commonwealth responsibility and assigns a responsible department and minister to oversee and fund aviation training standards and connect interdepartmental silos.
- 5. embeds the importance of introducing new workers into the industry to address the shrinking and aging workforce by ensuring secure work principles are adopted by airlines and airports, and by supporting aviation apprenticeships.
- 6. supports the regeneration of the general aviation sector by assigning a responsible Commonwealth department to plan, implement and oversee improvements in training, licencing and the regulatory framework
- 7. adopts the 23 recommendations contained in the University of NSW's 2015 report *The Future of Aircraft Maintenance in Australia: Workforce Capability, Aviation Safety and Industry Development*

#### ALAEA Submission to specific Terms of Reference

- how to maximise the aviation sector's contribution to achieving net zero carbon emissions including through sustainable aviation fuel and emerging technologies;
- changing aviation technologies and ways to position our policies, regulations and systems to encourage uptake and manufacturing of new, more efficient, transport technologies;
- aviation's role in economic development, trade and the visitor economygeneral, domestic, regional and international aviation;

In the 120 years since the Wright Brothers flew the first heavier than air powered aircraft, aviation technology development has accelerated exponentially. There is no reason to doubt the technological advances in aeronautical materials and designs will continue to accelerate, leading to lighter, quieter and more efficient aircraft. Australia has the skills and smarts to play a larger role in the development and manufacture of the next generation of aircraft. The Commonwealth has a direct interest in fostering these investments in research and development and smart manufacturing. Future aviation policy should contain provisions for additional Commonwealth investment in aviation research and development and manufacturing. Policy needs to reflect the Civil Aviation Safety Authority's (**CASA's**) role in the oversight and approval of new technologies and manufacturing and ensure that adequate resources (in both funds and expertise) are available to support the investment. CASA should take an active role in the safe growth of the industry.

#### • future industry workforce skills and training requirements.

With an average age of  $52^{1}$  the number of Australian Licenced Aircraft Maintenance Engineers (**LAMEs**) moving towards retirement in the next decade will be sizeable. However, a failure to adequately train sufficient replacement apprentices over the past 30 years, combined with the closure of multiple major maintenance facilities has created a skills shortage, of which the industry is standing at the precipice. It is pleasing to see a recent announcement by Qantas in relation to creating a training academy in an attempt to replenish their engineering stocks. The reality, however, is that even if, and when, such an academy is up and running, the timeframe to properly train an engineer (including the necessary vocational experience to support the academic qualification) will take around 8 – 10 years. Significantly, consideration needs to be given to the fact that only 5 years ago the numbers in training were the lowest since statistics have been available. It is difficult to interpret ABS data to identify how the aviation engineering trade training has increased, but an overall analysis of "engineering trades" shows that pre 2012 numbers have not yet been achieved <sup>2</sup>, resulting in a lag in new engineers reaching their optimum outputs.

Although there will be significant attrition over the next 10 years there will still be a sizeable cohort of LAMEs aged in their mid 50's employed in the maintenance sector. It is essential that these workers aren't left aside when new technologies come online.

The importance of a "just transition" to a net zero aviation sector is paramount. The ICAO working paper *The Successful Development of A Sustainable Aviation Industry Needs A Just Transition To A Zero Carbon Future*<sup>3</sup> presented by the International Transport Workers Federation (ITF) at the 41<sup>st</sup> Assembly in August 2022 clearly articulates the principles and reasons for a just transition and was not opposed by the Australian government representatives at the Assembly. Putting it simply, no worker should be left behind and future aviation policy should reflect these principles and enable the reskilling and upskilling of the existing workforce to the new technologies required to achieve net zero aviation.

<sup>&</sup>lt;sup>1</sup> ALAEA member records 2022

<sup>&</sup>lt;sup>2</sup> Historical time series of apprenticeships and traineeships in Australia from 1963 to 2022 - NCVER

<sup>&</sup>lt;sup>3</sup> https://www.icao.int/Meetings/a41/Documents/WP/wp 415 en.pdf

The role the Commonwealth should play in achieving these goals should not be underestimated. Currently the aviation maintenance sector training requirements are bludgeoned with regulatory and interdepartmental inertia. CASA sets the "standard" for civilian licenced aircraft maintenance engineer training in safety regulation. CASA comes under the portfolio of the Department of Infrastructure, Transport, Regional Development, Communications and the Arts. Defence sets the standards for defence maintenance training under the Department of Defence portfolio. The vocational training package is "developed" by an Industry skills body, overseen by the Australian Skills Quality Authority (ASQA) and the Australian Industry Skills Committee under the Department of Employment and Workplace Relations. Skilled migration and associated standards are covered by Immigration, Citizenship and Multicultural Affairs. The individual states are responsible for the end training product including the funding and regulation of the training organisations and apprenticeships.

There is no Commonwealth minister who takes responsibility when there are conflicts and issues across the multitude of departments and states. Aviation maintenance training modernisation has been deadlocked for years due to conflicting and competing regulations and regulators (CASA/ASQA/DEWR) at great detriment to rural and regional businesses and individuals. Despite the issues being well known there is no-one volunteering to take on the task to fix it.

If the above could be achieved, it would go a long way towards easing the shortfall of LAMEs and AMEs in general aviation (and airlines) as the creation of fit-for-purpose VET training (aligning with CASA's licencing requirements) could actually be achieved.

#### **UNSW Research Project**

The Future of Aircraft Maintenance in Australia: Workforce Capability, Aviation Safety and Industry Development

Final Report of Findings from Australian Research Council Linkage Project110100335October 2015 University of NSW Business School 4

<sup>&</sup>lt;sup>4</sup> <u>https://www.business.unsw.edu.au/research-site/industrialrelationsresearchcentre-site/Documents/FutureAircraftMaintenanceReport.pdf</u>

In 2015 the University of NSW (**UNSW**) release a comprehensive research report into the future of aircraft maintenance in Australia. The research was conducted in nonpartisan manner in partnership with aviation businesses, unions, employer groups training providers and VET Skills Councils. The importance of the project was recognised by the Australian Research Council and subsequently received significant funding. It remains one of the most valuable pieces of research into the Australian aircraft maintenance industry to date.

Significantly, the report predicted the current situation in Australia and made 23 recommendations – all of which are still highly relevant to the Terms of Reference for this white paper in 2023.

Without replicating the report's recommendations (which stand for themselves) the executive summary has been attached at appendix 1. To be clear, this submission endorses the adoption of the report for the white paper.

# **Executive Summary**

#### In a nutshell

- By 2025, there will be an estimated 30% global workforce shortfall in aircraft maintenance capacity, with Australia and the Asia Pacific region particularly hard hit: Australia has a both a strong need and excellent opportunity to help meet this shortfall in the region.
- 2. This means moving quickly to rebuild both our aircraft maintenance and maintenance training industries by 2020, to permit Australia to handle a high proportion of its own needs across the civilian airline, general aviation and Defence sectors.
- 3. This is also a great opportunity to capitalise on our strong safety standards and high-end maintenance capability by building a maintenance and training capacity, capable of competing aggressively in the highest-value niches of the global market.
- 4. We must move to establishing a system of quality control safeguards, adequate to guarantee that maintenance on Australian aircraft, whether done in Australia or elsewhere, is carried out to best international safety standards.
- 5. Australian maintenance qualifications must be globally integrated through complete alignment with International Civil Aviation Organisation (ICAO) and European Aviation Safety Agency (EASA) training and licence standards; teething problems in the introduction of the new licensing and training system must be quickly addressed.
- 6. Regional and General Aviation are essential national services and so the new small aircraft maintenance licensing system must be quickly finalised, to ensure a nation-wide supply of qualified staff to perform and sign off on repairs and overhaul.
- 7. Developing workforce capability and career paths to meet the impending maintenance skills shortfall and develop a maintenance training export industry will require:
  - The expansion of training both in the skills required to work on existing aircraft and in innovative techniques for work on next generation aircraft
  - Keeping as many as possible of the present generation of aircraft maintenance engineers productively employed, and their skills and knowledge current, until local market demand revives
  - Reforming and rebuilding MRO training to ensure that a new generation of properly qualified engineers will be available to replace the current one as it retires
  - Harmonising training and career paths across sectors (Civilian and Defence; airline and General Aviation) and between aerospace manufacturing and aviation.
- 8. To help develop the training capacity required to build an innovation-oriented aircraft maintenance workforce, and to ensure that maintenance training makes a significant contribution to Australia's education exports, a National Aerospace/Aviation College (NAAC) should be established, with nationally-networked branches in each state and territory. It would draw on the combined resources of the university and TAFE sectors, gain recognition as Part 147 category Maintenance Training Organisation, a Registered Training Organisation and a nationally registered higher education provider, and have support from aerospace and aviation industry employers for the in-depth provision of practical skills training and experience.
- 9. A national Aircraft Manufacturing/ Maintenance Industry Forum or Working Group needs to be established to advise on planning towards achieving these goals.

For recommendations, see pages xv to xviii.

