

2022 – INTERNATIONALISATION

Time has run out, government must change the process to **internationalise** Australia’s civil aviation engineering disciplines of design, maintenance and manufacturing to open the Australian civil aviation engineering fields to compete in the global aviation markets in their own right.

This will create jobs that the real potential of this engineering industry can add to the workforce.

When we once again have over 1500 directly supervised flight training facilities and over 1000 directly supervised maintenance organisations we will know that we have succeeded in implementing (adopted) safety regulations and practices that also enable **internationalisation**.

We Trained Hard.

but it seemed that every time we were beginning to form into teams we would be reorganised. I was to learn later in life that we tend to meet any new situation by reorganising; and a wonderful method it can be for creating the illusion of progress while producing confusion, inefficiency and demoralisation.”

PETRONIUS: 65 A.D.

1. Face the Facts – CARs/CASRs have collapsed civil aviation in Australia.

CAA/CASA does not have any vision for a safe and viable civil aviation non-airline industry.

AMROBA does, see item 2.

Civil Aviation Regulations and now Civil Aviation Safety Regulations are strangling the industry.

Government Acts and Regulations developed since the decision to make CAA/CASA an independent government agency has created government jobs & destroyed civil jobs. ([continued](#))

2. The Big Engineering Picture - Internationalisation

Government may not have an understanding of where the civil aviation engineering fields in Australia want to be in the near future but AMROBA and its members do. Internationalisation of our engineering products and services in their own rights. Internationalisation needs adoption of the FAR non-airline regulatory system by Australia and reduce red tape by 50%. ([continued](#))

3. Aviation Safety – How Engineering Skills Keep it Safe

Civil aviation engineering is not dissimilar to other forms of transport and the safety culture that has been imbedded over the last 100 odd years is not dependent on legislation and regulations that mostly add red tape that does not value add to safety. ([continued](#))

4. Training – Bring Back Trade Training Career Pathways

Federal Education must be made responsible to provide trade training based on the ICAO AME trade training system. CASA collapsed the AME trade training in Australia when it took over the NVET trade training organisations and replaced with licencing knowledge training under Part 147.

Solution: Make the Federal Education Department responsible under the Annex to provide trade training at non Part 147 trade training schools based on ICAO AME training standards. These ICAO training standards were the basis of our trade training system well before Part 66/147.

([continued](#))

Content

1. Face the Facts – CARs/CASRs have Collapsed Civil Aviation in Australia. (continued)	2
2. The Big Engineering Picture – Internationalisation (continued)	3
3. Aviation Safety – How Engineering Skills Keep it Safe (continued)	4
4. Training – Bring Back Trade Training Career Pathways (continued)	5

1. Face the Facts – CARs/CASRs have Collapsed Civil Aviation in Australia. (continued)

Government Acts and Regulations developed since the decision to make CAA/CASA an independent government agency has created government jobs & destroyed civil jobs.

Government issues the following documents:

- design organisation certificates,
- maintenance organisations certificates,
- manufacturing organisation certificates, and
- Release Certificates for use by above;

and other government aviation documents to be used by industry but these certificates and documents are not recognised or accepted in their own rights in the global civil aviation market.

Government has built an inwardly regulatory system of protective regulations that prevents competition and recognition by other nations.

All that has happened since 1988 is that Australian small aviation businesses have been forced out of business. Now we have major shortages without a system to address this shortage. Small business is the initial training sector for flying training and maintenance, it virtually no longer exists in its past structure because regulations, or lack of regulations, have removed them.

Reason: CASA created, but government made Regulations and Standards that are not acceptable globally.

CASA created unique red tape closing small businesses and protecting others.

Airport operators converting airports to non-aviation business parks.

- Small business being evicted from these airports for non-aviation businesses.

CASA has spent nearly two (2) decades of customising partial adoption of either the EASRs or FARs but failing to adopt either foreign system fully to implement the same practices & benefits their counterparts in EU or US have. CASA system simply adds red tape.

What has been imposed on the civil aviation engineering industry demonstrates incompetence and/or lack of understanding government obligations under the Convention and its Annexes, nor understanding the EASRs and/or FARs that they tell the industry they have adopted.

CASA created Regulations are not the same safety standard when compared to the EASR or FAR from where CASA tells industry they have based the regulations on.

It is too late to start further consultation with industry participants because industry cannot “trust” CASA to have regulations made based on what has already been consulted.

- Remember when industry agreed with CASR Part 146, Design Organisations, and CASA inserted a partial CS 21 Subpart J into CASR Part 21 without consultation. CASR Part 146 was buried by CASA.
- Pity, NZ and PNG have a Part 146 based on FAR Part 183, recognised by FAA and EASA. Why did CASA go EASA when the rest of Part 21 is based on FAR Part 21?

The most annoying aspect of CASA adopting the CS 21, Subpart J, is CASA could not even copy this Subpart word for word with defined levels of personnel; designer, certification verification engineers and Head of Design. CASA left the designer level out of Subpart J but increased cost by requiring 2 Verification Engineers. Even EASA Inspectors have told CASA their system is different to the EASA system.

This is the same problem with FARs and EASRs that have been “partially” adopted.

CASA introduction of EASRs Parts 42, 66, 145, 147 into the CASRs have the same flaws – they leave out the provisions that provide relief for the industry.

EASA regulations in many cases have a Part and Part B. Part B is instructions the NAAs on what must be done by the NAA to support Part A. Pity CASA couldn't adopt those provisions.

Harmonisation works if it also enables internationalisation of the Australian engineering sectors of design, maintenance and manufacture.

This inability of government to provide a civil aviation engineering disciplines regulatory system, that enables international recognition and acceptance by other nations of these businesses and their product and services, is why the civil aviation small to medium size businesses are declining.

[Back to the Top](#)

2 The Big Engineering Picture – Internationalisation (continued)

CASA may not have an understanding of where the civil aviation engineering fields in Australia want to be in the near future but AMROBA and its members do. Internationalising Australia's civil aviation engineering sectors must be the aim of government and its agencies to create jobs and businesses that can compete in the global civil aviation market in their own rights.

Civil aviation engineering disciplines of design, maintenance and manufacturing are globally recognised as a job creating industry of mainly high technical skilled personnel.

Civil aviation engineering is a true global industry with international requirements, standards and practices that must be adopted and implemented to enable internationalisation. The issue in Australia is not only adopting these requirements, standards and practices but government to obtain recognition, in civil aviation businesses own rights, by other nations of Australia's civil aviation products (including aircraft) and services.

This includes government civil aviation certificates that are attached to products manufactured or serviced by government approved civil aviation businesses being accepted by other nations.

Important: Australian individuals and businesses have been international aviation innovators and their designs and products move to other nations because government has not obtained other nations recognition of Australian civil aviation products and services.

Another big design, manufacture and maintenance business moved off-shore to another nation to gain international recognition last year. When will the export of Australian civil aviation expertise and skills stop? When will we have internationalisation of those regulated?

This requires a complete new approach to provide civil aviation regulations to meet internationalisation requirements and also maintain a domestic civil aviation engineering system that underpins the internationalisation system.

Underpinning such an engineering internationalised businesses must be the domestic engineering support businesses like the US FBO SASO system. Those old enough will remember DCA's regulatory system that implemented the US non FAA approved FBO system by approving direct supervision flight training schools and maintenance organisations.

CASA can look back into past requirements and resurrect the "direct supervision" AMO to implement the FAA FBO system for general aviation.

Summary:

Internationalisation of civil aviation by government will create many jobs within Australia.

It should always be government's civil aviation policy.

[Back to the Top](#)

3. Aviation Safety – How Engineering Skills Keep it Safe (continued)

All forms of transport engineering have a quality control system of the workforce and the overall management of their workforce. In aviation it is crucial that the engineering discipline quality control system is effective. ICAO has specified the quality control in the aircraft maintenance sector by stating the privileges of the licenced aircraft maintenance engineer are a specific quality control function of certifying the aircraft, or parts of the aircraft, as “airworthy” after the maintenance has been performed by competent personnel. The other important role of the LAME is to sign the maintenance release (return to service/release to service etc). EASA/CASA Part 66 “C” rating in a Part 145.

The same quality control process exists in the engineering disciplines of design and manufacture. In the design discipline there is the “designer” that creates the design and the technical specifications and drawings. The system used by the FAA & EASA applies quality control by having a Design Verification Certification Engineer check the design for compliance to airworthiness standards. The Head of Design can then release the design to the manufacturer or maintenance organisation to use.

Manufacturing has the same quality controls of their process workers. The Manufacturing Inspector checks for compliance at specified stages of manufacture. Like Maintenance and Design, manufacturing then has the final certification to release the product to service.

This 3 definitive levels of responsibilities underpinned our regulatory system until the regulatory reform implemented over the last decade muddied the system.

When you closely look at the CASR system, these 3 levels are not clearly specified in the regulations in any discipline, so safety within these engineering fields reverts to conscientious individuals doing the work and the quality control exercised in all civil aviation engineering fields.

Whilst the regulatory system excludes the clarity of the FARs, the attitude of the civil aviation engineering personnel and their culture is based on safety.

ICAO Quality Control in Maintenance.

ICAO promulgates the standards for an Aircraft Maintenance Engineer (Technician/Mechanic) and it also promulgates the quality control function of the LAME.

Though this is defined well in the Annexes and the FARs, it is not clear in the EASRs or CASRs.

Quality control requires the LAME to assess the aircraft or system, or part of the aircraft or system as airworthy after maintenance has been completed. This role is no longer clear in Australian civil aviation regulations. In fact, the LAME now has to sign for maintenance, not ‘completion of’.

The second function of the LAME is to coordinate the maintenance and when certified as airworthy at completion of maintenance, sign the maintenance release (return to service/release to service) to enable the aircraft to go back into service.

This industry inbuilt culture and LAME traditions have kept the VH aircraft sectors safe.

CAR 30 has better clarity and is more ICAO compliant than CASRs.

For those that are not a LAMEs, they need to look at the international ***Aircraft Maintenance Engineer (Technician/Mechanic) Creed*** reprinted at the end of this Newsletter to understand the safety conscious LAME.

Whilst regulations are being made, changed and remade on a regular basis, the actual work being performed on aircraft has not changed.

The same maintenance that was carried out on aircraft before partial adoption of EASRs, is still being carried out by the same people as before. Only the regulations have been changed.

[Back to the Top](#)

4. Training – Bring Back Trade Training Career Pathways (continued)

Federal Education must be made responsible to provide trade training based on the ICAO AME trade training system. CASA collapsed the trade training in Australia when it took over the trade training organisations and replaced with licencing knowledge training.

Government Recognised Training Organisations (e.g. TAFE) provided ICAO based avionic and mechanical training streams until CASA convinced them to become Part 147 approved to provide licencing training.

This collapsed the trade training system and career paths for young maintenance personnel.

Solution: Make the Federal Education Department responsible under the Annex to provide trade training **at non-Part 147 trade training schools** based on ICAO AME training standards. These ICAO training standards were the basis of our trade training system well before Part 66/147 were introduced by CASA. Alignment with the trade courses of NZ would make a lot of sense that has not been shown by government and its agencies over the last decade or two.

Career Pathways

If the training returns to the ICAO skills, the aircraft maintenance engineer training package will provide career pathways beyond just maintenance of aircraft, engines or components.

In the ICAO training manual there is a chapter devoted to additional knowledge beyond the trade skills that the LAME should know, the manager of maintenance should know and the knowledge that the maintenance controller of aircraft should know.

If that training is made available through the VET system, the career pathway for apprentices can be supported by additional options covering the supervisory, management and aircraft airworthiness control. These skills open doors to allied work like work planners, workshop supervisors, quality control/auditors and other like work.

Education of a skilled workforce is essential to an expanding industry.

The Aircraft Maintenance Engineers/Technician Creed

“UPON MY HONOR I swear that I shall hold in sacred trust the rights and privileges conferred upon me as a qualified aircraft maintenance engineer/technician. Knowing full well that the safety and lives of others are dependent upon my skill and judgment, I shall never knowingly subject others to risks which I would not be willing to assume for myself, or for those dear to me. regarding the ability of others who have worked on it to accomplish their work satisfactorily.

IN DISCHARGING this trust, I pledge myself never to undertake work or approve work which I feel to be beyond the limits of my knowledge nor shall I allow any non-qualified superior to persuade me to approve aircraft or equipment as airworthy against my better judgment, nor shall I permit my judgment to be influenced by money or other personal gain, nor shall I pass as airworthy aircraft or equipment about which I am in doubt either as a result of direct inspection or uncertainty regarding the ability of others who have worked on it to accomplish their work satisfactorily.

I REALIZE the grave responsibility which is mine as a qualified aircraft maintenance engineer/technician, to exercise my judgment on the airworthiness of aircraft and equipment. I, therefore, pledge unyielding adherence to these precepts for the advancement of aviation and for the dignity of my vocation.”

[Back to the Top](#)