



THE ASSOCIATION OF AUSTRALIAN CERTIFIED UAV OPERATORS INC. (ACUO)

REPLY TO THE ASRR PANEL REPORT

30th JUNE 2014

Executive Summary

This submission to the Australian Federal Government and the Department of Infrastructure and Regional Development addresses concerns of the Australian Certified UAV Operators Association (ACUO) emanating from the report of the Aviation Safety Regulation Review as issued 3 June 2014.

Specifically this submission seeks to draw attention to the absence of discussion of key regulatory issues associated with the operation of civil unmanned aircraft systems (UAS) in Australian airspace by the report of the Aviation Safety Regulation Review.

This submission seeks to redress that absence by providing point by point response from ACUO to all recommendations made by the Aviation Safety Regulation Review, assessing each from the perspective of the national commercial UAS operator's community.

In parallel this submission draws specific attention to the current Civil Aviation Safety Authority (CASA) fast track Notice of Proposed Rule Making (NPRM) 1309OS process as a primary example of why key reforms proposed by the Aviation Safety Regulation Review are required.

ACUO and a significant number of other aviation community entities share deep concerns at the safety implications of key NPRM 1309OS proposals, specifically the desire of CASA to give an exemption from regulatory certification or licencing for operators of Remotely Piloted Aircraft Systems (RPAS) up to a maximum weight of 2kg. ACUO holds this move is inconsistent with requirements to sustain the overall safety of the Australian airspace system and will fail to address the core problem of increasing instances of illegal and unsafe UAS/RPAS operations.

ACUO strongly encourages reforms to CASR Part 101 but believes this is best achieved through an evidence based process which closely involves the Australian UAS user communities. That process has not occurred with respect to NPRM 1309OS, which has instead been developed without adequate or effective consultation, resulting in a fundamentally flawed and under-developed set of proposals which stand to increase the overall level of risk associated with aviation operations in Australia by all airspace users.

This submission argues that NPRM 1309OS now stands as a test case for implementation of the proposed Aviation Safety Regulation Review reforms by the Federal Government, the Department of Infrastructure and Regional Development, and CASA itself. In this regard ACUO sets forward the recommendation that NPRM 1309OS should be set aside pending decision making regarding the future of the Aviation Safety Regulation Review proposals, with the review of CASR Part 101 relaunched as a test bed for revised whole of aviation sector engagement rule making processes.

Recommendation: That the Federal Government and the Department of Industry and Regional Development direct CASA to suspend the current NPRM 1309OS process and relaunch the review of Part 101 as a test-case for revised regulatory reform procedures and processes in a manner compliant with the enhanced practices proposed by the report of the Aviation Safety Regulation Review.

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Note on Terminology:

The terms; 'Unmanned Aerial Vehicle' (UAV); 'Unmanned Aircraft System' (UAS); 'Remotely Piloted Aircraft System' (RPAS); and 'Drone' are, in the broad, all references to one and the same thing, this being:

"An aircraft [or aircraft-system] that is flown from a remote location without a pilot located in the aircraft itself."

Normally the operator of such an aircraft is located on the ground, but could also be stationed in a vehicle, a boat or even another (manned) aircraft. The locational delta between the aircraft in question and the pilot can be a matter of tens of meters or, as is the case with some large endurance classes of systems, transcontinental or intercontinental.

'UAV' was the original term adopted by CASA in July 2002 and is still widely in use including much of CASA certification, licencing and guidance material. This term predominated at the time of the formation of the Australian Certified UAV Operators and its legal incorporation.

'UAS' is the more up-to-date internationally accepted term in use today, with this now recognised as the overarching 'class' terminology by ICAO as well as by CASA.

'RPAS' is defined by ICAO as a form of UAS which is non-autonomous in its capacities, the aircraft being subject to direct pilot control at all stages of flight despite operating 'remotely' from that pilot. CASA has recently shifted to use of the term RPAS as its primary day to day terminology.

This submission will make reference throughout to UAVs, UAS and RPAS, with application dependent upon the phase of discussion in question. Background discussion of ACUO for example, will refer to UAV and UAS operators given the historical origins of the association as noted above.

'Drone' historically refers to a UAS which exists to act as a target for live-fire air defence weapons training by armed forces with this remaining the correct terminological reference. Popular culture uses the term as a generic descriptor for all classes of unmanned or remotely piloted aircraft, but particularly in relation to military systems with weapons carriage capabilities. The term 'Drone' is not used within this submission.

Recreational 'remotely piloted' aircraft are considered by CASA as 'Model Aircraft', and are flown only for sport & recreation purposes, under the administration of the MAAA and the Civil Aviation Safety Regulations (CASR) 1998 - Part 101.G.

ACUO notes that the UAS sector as a whole is continuing to undergo significant technological advancement with this driving much of the ongoing revision of terminologies and definitions. This is not unusual in a new industry, and mirrors terminological and definitional flux as seen in the rise of commercial aviation and the motor transport industry in the early 20th century. Notwithstanding, the ongoing work of ICAO with respect to standardising terminology and definitions can be expected to result in a 'lock in' within short years with the terms UAS and RPAS already holding legal status in a number of jurisdictions.

Part A: ACUO the Association

The Association of Australian Certified UAV Operators Inc. (ACUO) is a not-for-profit association launched in 2009 by seven of the first eight certified Australian UAV Operators. The association was formally registered in Queensland on the 31st March 2010.

The ACUO membership has decades of experience in commercial UAV/RPAS operations and an impeccable record of safety. Since commercial UAV/UAS/RPAS operations formally began in this country in November 2002, there has not been a single accident or incident resulting from ACUO member's thousands of hours of commercial UAV flight operations.

It's a record ACUO members are understandably proud of, and one they are eager to protect by maintaining the highest standards of safety & risk management.

ACUO is bound by its Constitution to:

- Protect the interests of CASA Certified UAV Operators
- Establish the association as a responsible authority and;
- Promote the growth and expansion of the commercial UAV/UAS/RPAS industry in Australia

Specific objects of the association are:

- To improve the standards of unmanned aviation for commercial purposes whilst promoting and maintaining a sound regulatory framework in which to do so.
- To improve the safe and responsible flight activities of commercial unmanned aircraft within an easily accessible and low cost environment.
- To foster and encourage the formation and growth of development of unmanned aviation controllers, and to provide the guidance and training impetus for inexperienced controllers and new entrants to the industry.
- To revive, encourage and promote interest in Australian commercial unmanned aviation by encouraging participation in unmanned flying.
- To act as an information resource for counsel to organisations or individuals whose decisions may affect commercial unmanned aviation activities and operator rights.

ACUO currently has 29 Ordinary Members and 1 Industry member, representing approximately one third of all commercially certified UAV Operators in Australia. Our membership has undergone a three-fold increase in the past 12 months, this reflecting our enduring relevance to the ever increasing numbers of CASA certified UAV operators in Australia.

The seven founding members of ACUO were the first certified UAV Operators in Australia, with a combined experience of more than 100 years in commercial UAV operations of all types, from fixed-wing UAVs to conventional rotary UAVs and the new multicopter types, both in Australia and internationally.

ACUO was the first commercial UAV association of its type in the world and only in the last 18 months have we seen similar associations being formed in Europe and the Americas. ACUO is the only UAV industry body directly representing the commercial sector of 'unmanned' aviation in Australia.

ACUO is a Non-Corporate Partner Organisation member of UVS International, the global unmanned systems industry associated headquartered in Paris. ACUO is Australia's representative on the International RPAS Coordination Council, a prestigious industry body initiated by UVS International to coordinate RPAS standards globally. ACUO also participates in a variety of international RPAS committees focusing on issues of importance to the commercial sector of unmanned aviation, including RPAS Insurance, RPAS Flight-Crew Training & RPAS Airworthiness & Maintenance.

ACUO regularly provides advice on UAS related issued to governments, public and private enterprise, businesses and organizations on the fundamentals of UAV/RPAS operations in the Australian national airspace, and associated issues.

Contact details for the association are:

President: Joe Urli – [for all Media Representation/Interviews/Statements etc.]

PH: [REDACTED]

Email: president@acuo.org.au

Secretary: Brad Mason – [for all General Admin, Association & Membership enquiries]

PH: [REDACTED]

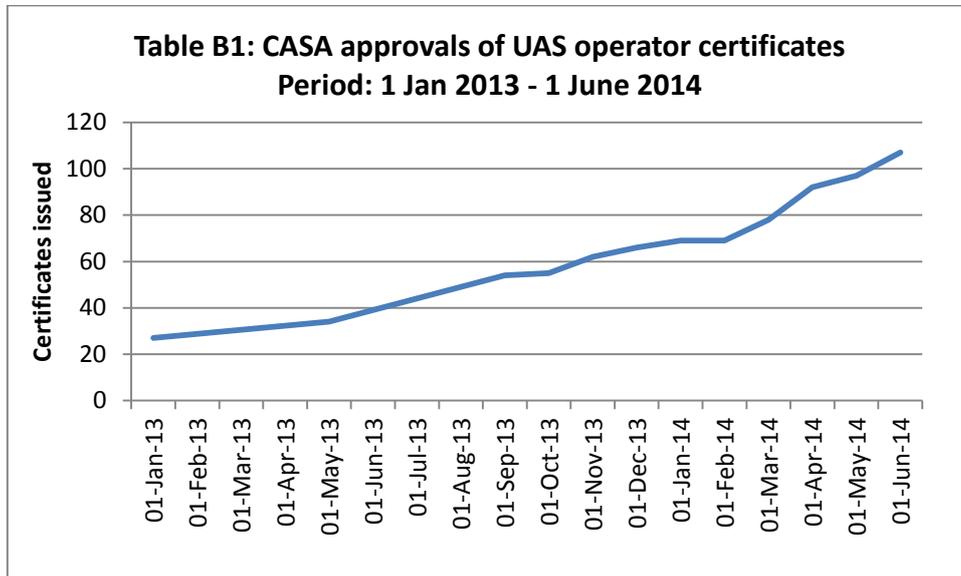
Email: secretary@acuo.org.au

Members: <http://www.acuo.org.au/findoperator.htm> [i.e. Commercial UAV/RPAS Services]

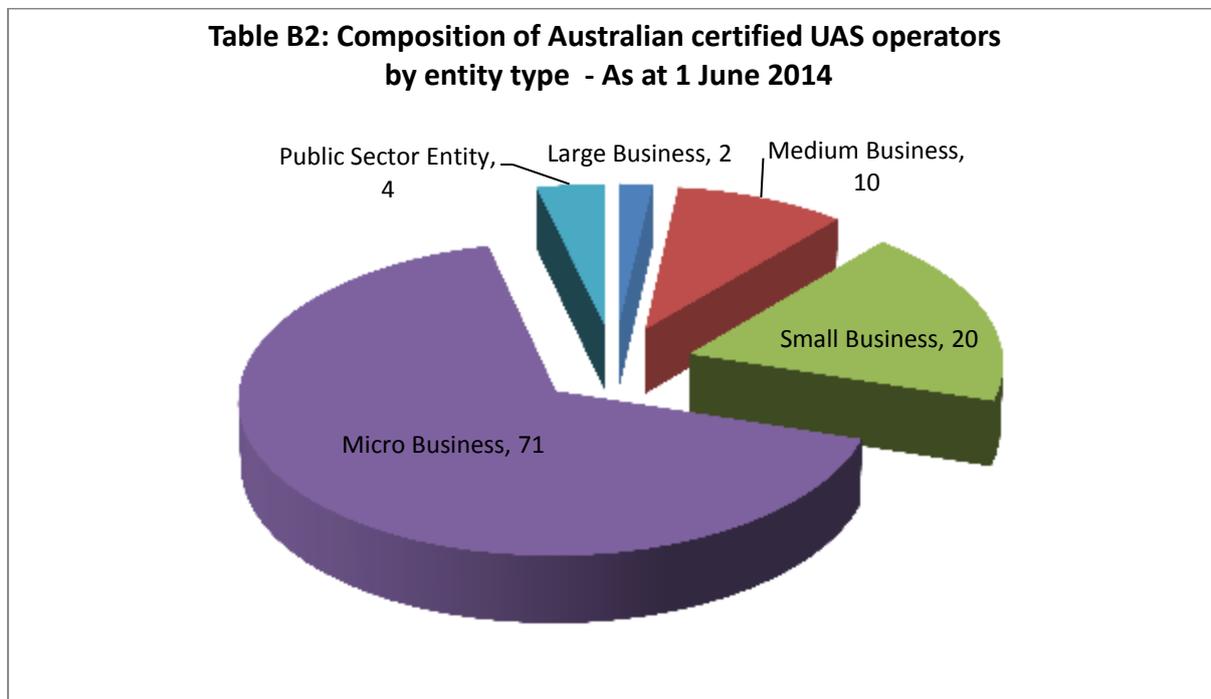
Website: <http://www.acuo.org.au/>

Part B: Current status of the UAV/UAS/RPAS industry in Australia

The Australian commercial unmanned aircraft systems sector has undergone major growth over the past 18 months. As at 1 June 2014, CASA had awarded a total of 107 UAS operator certificates, a fourfold increase since January 2013. Table B1 illustrates.

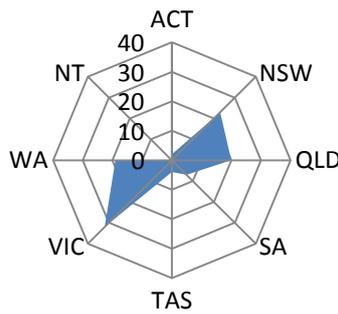


The vast bulk of CASA UAS operator certificates are held by new start enterprises, the majority of which are in the micro and small business categories as defined by the Australian Tax Office. Table B2 provides a breakdown of operator certificates by entity size.



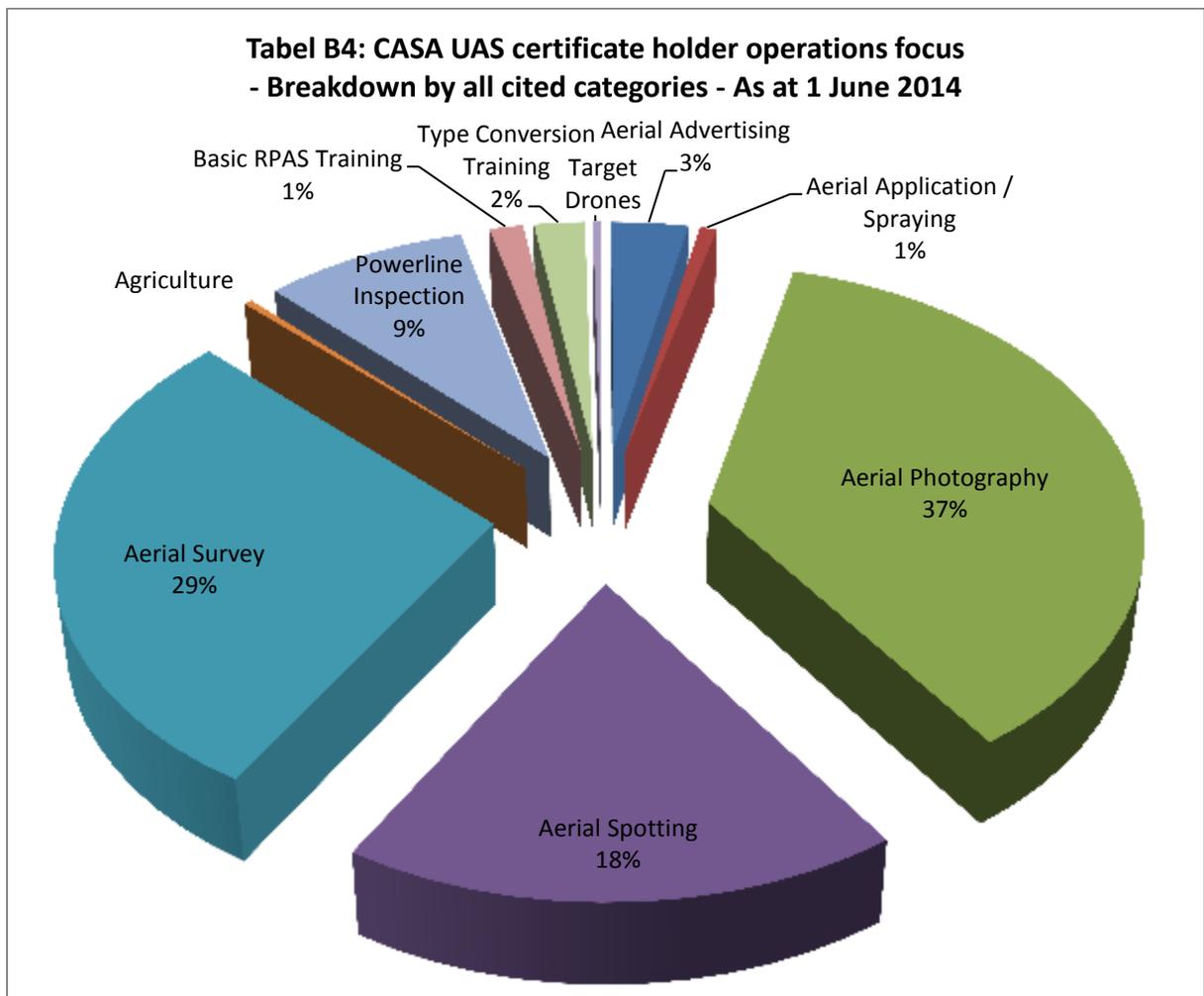
The commercial UAS operators sector is currently dominated, in order, by the States of Victoria, New South Wales and Queensland but with rapidly increasing numbers in Western Australia. Table B3 illustrates.

Table B3: State and Territory distribution of CASA certified UAS operators - As at 1 June 2014



The types of commercial activity being conducted by certified UAS operators is overwhelmingly focussed on aerial photography and aerial survey, however important sub business segments are developing in the categories of what CASA terms ‘aerial spotting’ and power transmission line inspection. Table B4 illustrates.

Table B4: CASA UAS certificate holder operations focus - Breakdown by all cited categories - As at 1 June 2014



ACUO contends that the number of operator certificates awarded by CASA is likely to continue to grow at the same upwards trajectory over the course of the next two to three years with micro and small businesses continuing to overwhelmingly dominating total numbers.

Part C: Key Issues Unaddressed by the Report of the ASRR

The report of the Aviation Safety Regulation Review as issued 3 June 2014 follows an extended consultation and engagement process involving a wide spectrum of the Australian aviation community. The review report assesses the position of the Australian aviation sector in the broad, this reflecting a desire to present a reasoned assessment which largely stepped outside sub sectorial ‘stovepipes’ whilst simultaneously seeking both breadth and depth in both exploration and findings terms.

ACUO welcomes the report as released by the Minister, but is concerned that overall review process has missed important issues emerging from the unmanned aircraft systems sector which have whole of aviation sector significance in risk and safety terms.

Specifically, ACUO is deeply concerned that whilst the ASRR report was in preparation, CASA developed and in May 2014 issued a poorly developed Notice of Proposed Rule Making – NPRM 13090S – which specifically proposes giving an exemption from regulatory certification or licencing for operators of Remotely Piloted Aircraft Systems (RPAS) up to a maximum weight of 2kg.

ACUO believes deregulation of an entire class of aviation – i.e. the sub-2kg category of RPAS – may have significant safety and risk implications for all aviation interests including Australian & International Airlines and General Aviation, particularly in already congested & controlled airspace over major & regional cities. This proposal also poses a serious risk to the integrity of the commercial UAV industry in this country and the excellent safety record achieved to date.

ACUO notes there is an increasingly common incidence of ‘near-misses’ between small RPAS and passenger carrying aircraft over urban areas not just in Australia, but also internationally.

The Australian Transport Safety Bureau (ATSB) has recorded a disturbing increase in the number of reported incidents between RPAS and manned aircraft in the last 18 months however, it must be understood these are only the incidents formally reported to the ATSB.

Prior to 2011	0
2011	2
2012	2
2013	7
Total	11

In the first quarter of 2014 already we have seen one RPAS accident involving an illegal UAV operator, resulting in a triathlete being injured during a sporting event at Geraldton, and two reported ‘near-miss’ incidents involving small RPAS.

The most recent near miss incident involved an illegal or unauthorized small RPAS at 1000ft AGL over Newcastle, intersecting a Westpac rescue helicopter returning to its base late at night ((ATSB incident No. AO-2014-056 – Newcastle - 22 March 2014
http://www.atsb.gov.au/publications/investigation_reports/2014/air/ao-2014-056.aspx)

A more chilling incident occurred days earlier where an illegal or unauthorized small RPAS had a 'near-miss' with a passenger aircraft passing through 4000ft AGL on descent into Perth airport.

(ATSB incident No. AO-2014-052) - Perth Airport - 19 March 2014

http://www.atsb.gov.au/publications/investigation_reports/2014/aair/ao-2014-052.aspx).

In both incidents the pilots observed the RPAS tracking towards them and both pilots took evasive action to avoid a mid-air collision. To our knowledge, neither of the RPAS pilots has yet been identified for their breaches of the regulations.

It must be stressed that of all the RPAS incidents reported to ATSB in the past four years, only one involved a CASA certified UAS operator and in that incident the commercial UAV operator was exonerated of any wrong doing (ATSB incident No. AO-2013-167 - Horsham] http://www.atsb.gov.au/publications/investigation_reports/2013/aair/ao-2013-167.aspx)

ACUO holds that the large majority of illegal or unauthorised RPAS incidents go unreported.

ACUO also holds that the bulk of illegal and unauthorized RPAS use in Australia originates from the recreational or hobby sector.

ACUO notes that CASA frequently compares the small sub-2kg RPAS sector with the recreational 'Model Aircraft' sector however this comparison ignores 3 key distinctions:

1. These small RPAS do not fit the true definition of a 'Model Aircraft' under Model Aeronautical Association of Australia (MAAA) rules. The MAAA is the administrative authority for model aircraft under current CASA delegated authority arrangements. ACUO notes that unlike traditional Model Aircraft which require direct visual & manual control of them at all times, small RPAS can be operated by complete novices well beyond the traditional limits of Model Aircraft pilots.
2. A large number of people buying these small RPAS are not from an aviation background, do not belong to the Model Aircraft association and have little or no concept of the dangers they pose to manned aviation or the general public.
3. These small sub-2kg RPAS are not contained to traditional MAAA flying fields anymore, but are being operated from suburban & city environments, from public parks & gardens, and in populous areas unsuitable for the errant recreational operation of these aircraft. This is precisely the same areas that CASA already stipulate as off limits to small RPAS, unless approved and certified by CASA to operate commercially.

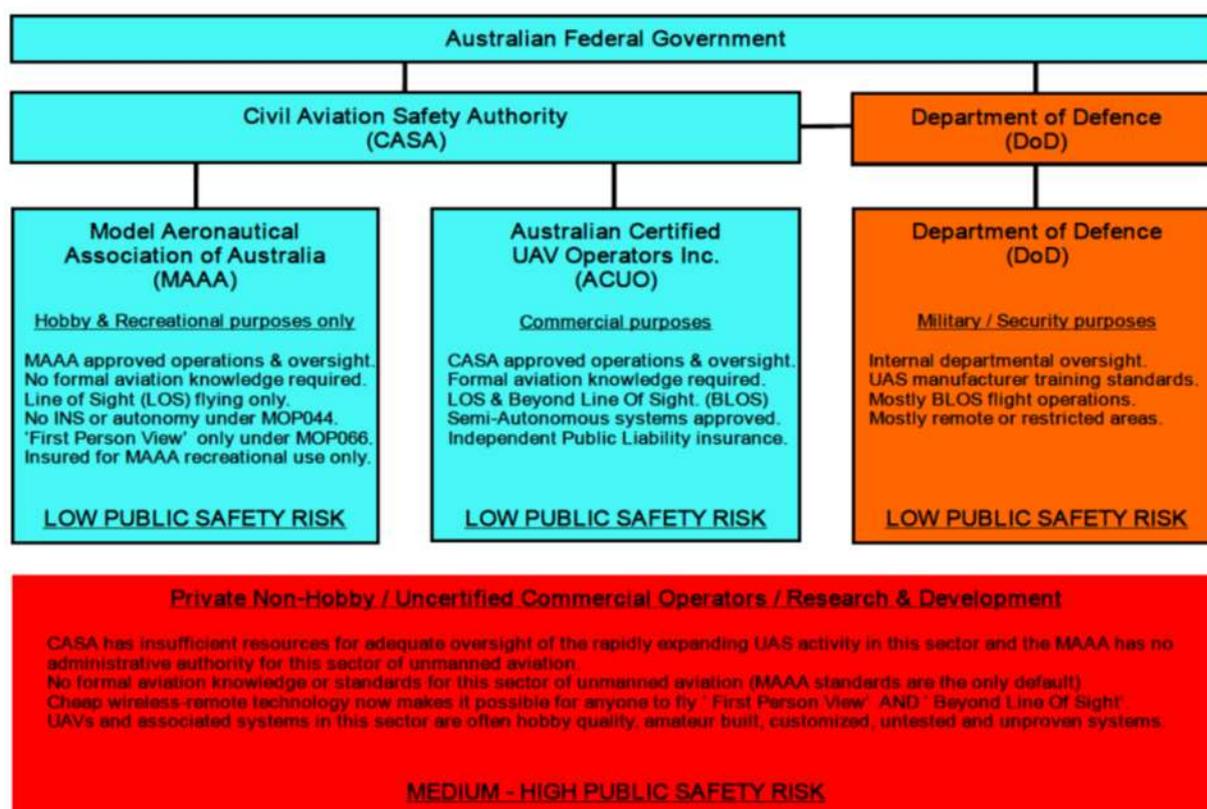
The sub-2kg sector of unmanned aviation is currently the most problematic to contain due to the huge consumer interest in these RPAS and the wide availability at a low price. More and more they are being operated at dangerous altitudes well above 400ft AGL, frequently over populous areas and often in controlled airspace.

No other regulatory authority in the world is currently seeking or proposing to deregulate an entire class of RPAS. Indeed, the sub-2kg category as identified in NPRM 1309OS are precisely the type of RPAS which continue to be the focus of extensive regulatory review and risk assessment by a number of civil aviation regulators globally, including the United

States Federal Aviation Authority (FAA), as they seek to find ways to safely integrate all forms of unmanned aircraft into the national airspace system.

At a time when certified UAS operators are being forced to undertake timely & expensive Area Approvals to operate in Controlled Airspace and within 3nm of an airport, aerodrome or HLS, there is no justification for deregulating the recreational use of these small RPAS. This small but troublesome sector of the unmanned aviation industry cannot be allowed to continue unabated, without adequate safety oversight and without effective enforcement of the regulations.

ACUO believes that the overall risk matrix associated with UAS operations in Australia can be defined largely in terms of regulated management structures and unregulated, as summarized as per the following table:



ACUO is specifically concerned that whilst the ASRR terms of reference made overwhelmingly clear that CASA's underpinning processes for development and implementation of safety regulations would be examined in detail, the regulator itself sought to fast track significant changes to CASR Part 101 with industry engagement restricted solely to the NPRM comments phase.

As the ASRR report clearly notes, there is widespread and deep seated concern within the Australian aviation industry regarding CASA's operational and cultural practices, with aspects of this being illuminated on an ongoing basis since January 2014 through the public release of a significant number of submissions to the ASRR by their respective authors, including ACUO. ACUO accordingly questions the motives of CASA in attempting to fast track reforms to CASR Part 101 in such a climate, and where a formal process of review of CASA structures, policies and processes was underway. ACUO further notes that the entire process associated with the preparation of revisions to CASR Part 101 and the release of

NPRM 1309OS is completely at odds with the recommended processes that the ASRR now holds up to Government as a preferable forward pathway. In that context, ACUO is of the view that were the policy structures put forward by the ASRR in place already, NPRM 1309OS would not have been issued as it would have been recognised internally within CASA as not being either compliant nor ready for progression to regulation status.

ACUO is of the belief that an overhaul of CASR Part 101 is timely and warranted given changes to unmanned aircraft capabilities and international guidance, particularly that of ICAO, since its initial promulgation. ACUO holds however, that such change must be evidence driven and closely involve industry in all phases leading up to issuance of an NPRM, particularly given the risk factors to be encountered with the sub 2kg class of RPAS.

ACUO holds that NPRM 1309OS is overly ambitious in its scope and content and requires significantly more work before it can proceed.

This current submission contains at Annex A, its full response to NRPM 1309OS. We note that our concerns are shared by a diverse range of aviation stakeholders, including the Airports Industry Association of Australia as well as commercial carriers, private pilots and other entities. Given the breadth of those concerns, the safety significance of the changes proposed by CASA, and the identification of a need for overhaul of how the regulatory development system operates by the ASRR itself, ACUO sets forward the following recommendation:

Recommendation: That the Federal Government and the Department of Industry and Regional Development direct CASA to suspend the current NPRM 1309OS process and relaunch the review of Part 101 as a test-case for revised regulatory reform procedures and processes in a manner compliant with the enhanced practices proposed by the report of the Aviation Safety Regulation Review.

Part D: Responses to specific ASRR Recommendations

The following table sets out ACUO’s specific responses to each formal recommendation of the ASRR as issued for public comment. We set out the following responses from a stand point of concern, the existence of the commercial UAS sector in Australia being overlooked completely within the ASRR report, this being significant regulatory activities being undertaken by CASA with respect to Part 101 before and during the review development period.

ACUO is more than willing to discuss each of the following response items in more detail with the Federal Government and the Department of Infrastructure and Regional Development as they review the findings of the ASRR and determine an appropriate forward trajectory for the entire Australian aviation sector.

#	Aviation Safety Regulation Review Panel Recommendation	ACUO Response
1.	The Australian Government develops the State Safety Program into a strategic plan for Australia’s aviation safety system, under the leadership of the Aviation Policy Group, and uses it as the foundation for rationalising and improving coordination mechanisms.	Strongly agree. ACUO believes such a strategy can provide the means for broad recognition of the regulatory issues associated with commercial UAS operations and assist in the development of appropriate future arrangements for harmonisation of UAS operations with all airspace users.
2.	The Department of Infrastructure and Regional Development plays a stronger policy role in the State Safety Program.	Strongly agree. ACUO notes the ASRR report findings that increased involvement of the Department can particularly support the “smaller end” of the domestic aviation industry (ASRR Report, pp.24). The Australian commercial UAS sector is overwhelmingly dominated by “smaller end” commercial entities with this unlikely to change. We note that the last Federal Government policy document to accord any recognition to UAS sector issues was the 2009 Aviation White Paper, with this specifically noting the need for priority to be given to resolution of air traffic integration issues.
3.	The Australian Transport Safety Bureau investigates as many fatal accidents in the sport and recreational aviation sector as its resources will allow.	Fully agree. ACUO urges the meaning of “recreational aviation” as used in the ASRR Report be understood as including recreational unmanned aircraft systems. Recreational types of UAS represent the largest overall fleet of UAS now being operated in Australia, with this also being the primary source of the increasing number of reported incidents. ACUO is concerned the number and type of incidents involving illegal UAS operators will result in a fatality or fatalities unless addressed as a near term priority by the regulator and the Department of Infrastructure and Regional Development. The abnormally high increase in UAV related incidents in the last 2 years warrants more serious attention than has previously been given by the ATSB. We note neither of the incidents this year warranted further investigation by ATSB,

		<p>however subsequent reports by that body provided no indication of its recommended forward approach to combatting this issue. Industry is unsure of the actual numbers of recreational UAVs in Australia. In 2010 there were just over 10,000 MAAA members and something like 30,000 recreational 'Model Aircraft' in regular use. Since then, the 'multicopter' fad has blown those figures out of the water. We can only estimate the number of recreational UAVs - as distinct from traditional 'Model Aircraft' - at somewhere between 30,000 and 80,000 units in total in Australia. This would include the popular DJI 'Phantom', the Parrot 'Consumer Product' and any number of online UAV makes & models.</p> <p>What is clear is that there is as large, or possibly larger, recreational UAV sector, as there is a traditional 'Model Aircraft' sector. ACUO is concerned that this new sector does not fit the traditional model of the recreational 'Model Aircraft' sector under the MAAA and needs to be formally recognized and managed appropriately, not abandoned to its own devices as is proposed by CASA under the current NPRM 1309OS.</p>
4.	The Australian Transport Safety Bureau and the Civil Aviation Safety Authority utilise the provision in their bilateral Memorandum of Understanding to accredit CASA observers to ATSB investigations.	<p>Fully agree. ACUO is of the view that the capacities of ATSB and CASA to investigate UAS-related incidents is significantly underdeveloped and may be the reason so little emphasis is placed on building experience and data in this sector. If the regulators do not understand the technology they are being confronted with it is a fair assumption that they will also fail to understand the importance of the technological-shift taking place. It is this technology-shift, now available at the public level, which poses the most challenging safety risk to face aviation regulators since the dawn of commercial aviation.</p> <p>We specifically urge development of a combined ATSB-CASA investigations strategy focussed on overcoming multiple unique elements of UAS incidents, where the air vehicle is part of an overall system dominated by ground infrastructure. Extant ATSB and CASA investigations of UAS-related incidents suggest significant new skillsets also need to be developed in both organisations with respect to tracking down illegal UAS operators.</p> <p>ACUO acknowledges the important need for industry itself to support CASA and the ATSB in addressing this ongoing challenge.</p>
5.	The Australian Government appoints an additional Australian Transport Safety Bureau Commissioner with aviation operational and safety management experience.	Fully agree. ACUO urges that the additional commissioner comes from the commercial air work market segment and has familiarity and preferably direct exposure to commercial UAS operations.
6.	The Civil Aviation Safety Authority's Board exercises full	Fully agree. ACUO urges that the selection

	governance control. The non-executive directors should possess a range of appropriate skills and backgrounds in aviation, safety, management, risk, regulation, governance and government.	processes for future non-executive directors on the CASA board include persons who have familiarity and preferably direct exposure to commercial UAS operations.
7.	The next Director of Aviation Safety has leadership and management experience and capabilities in cultural change of large organisations. Aviation or other safety industry experience is highly desirable.	Fully agree. ACUO strongly recommends the next CASA Director of Aviation Safety have extensive commercial experience within the private as opposed to the public sector so as to ensure sound understanding of business realities as affect the commercial aviation industry.
8.	The Civil Aviation Safety Authority: A: reinstates publication of Key Performance Indicators for service delivery functions B: conducts a stakeholder survey every two years to measure the health of its relationship with industry C: accepts regulatory authority applications online unless there is a valid technical reason against it D: adopts the same Code of Conduct and Values that apply to the Australian Public Service under the Public Service Act 1999.	Strongly agree. ACUO strongly supports each of these recommendations as being fundamental to sound management within CASA. With respect to Recommendation 8D, ACUO strongly recommends the compliance requirements with the Code of Conduct and Values also extended to all consultants and specialist advisors engaged and retained by CASA to support specific program offices, projects and tasks.
9.	The Civil Aviation Safety Authority develops a staff exchange program with industry.	Agree. Noting the ASRR reports comments regarding probity frameworks for any such exchange program, ACUO urges this specifically include preparation of explicit non-disclosure provisions to protect the intellectual property and business strategy of industry, this being in addition to the proposed adoption of the Australian Public Service Code of Conduct and Values as flagged by the ASRR as Recommendation 8D. ACUO's membership has longstanding concerns regarding the release and transmission to third parties of proprietary information given to CASA in good faith as part of applications for certification and approvals. Unlike the situation with manned aviation, where CASA inspectors are all experienced in their specific aviation sectors, in the unmanned sector, not one of the CASA staff or Inspectors in the UAS department has specific commercial experience. At best CASA's inspectors dealing with unmanned aviation matters have conducted 'manufacturer training' on the more familiar systems in commercial use. This does not make them experienced commercial operators. To amplify this point, we specifically note that no single member of the CASA UAS unit staff has any prior practical commercial UAS experience despite the sector being in existence for a decade.
10.	Airservices Australia, in conjunction with the Department of Infrastructure and Regional Development and the Civil Aviation Safety Authority, reconsiders the policy on 'Assessment of Priorities' that stipulates that air traffic controllers sequence arriving aircraft based on category of operation, rather than on the accepted international practice of 'first come, first served'.	Agree. ACUO accepts a need for review of standing air traffic control practices and alignment with international best practices. However, this must not come at the expense of safety and any revised arrangements must contain clear provisions for effective handling of emergency situations. ACUO would also like to point out an associated issue here: Australian certified

		<p>UAV operators currently have to ‘pay-as-you-go’ for the right to access airspace, whereas in the past they were given as much rights to controlled airspace as any other aviation interests, this facilitated by calling the nearest ATC tower for a clearance.</p> <p>In most cases, certified UAV operators and their pilots have undergone as much general aviation knowledge and training as a conventional private pilot or higher. Where a private pilot has certain privileges to access controlled airspace, UAV operators do not, yet we both are required to have the same level of general aviation knowledge.</p> <p>The crux of this problem lies in the prescribed separation standards to be used for UAS operating in Controlled Airspace. Industry is still waiting for CASA to agree the prescribed separation standards to be applied to UAS in Controlled airspace, despite Airservices making clear to industry it supports swift resolution of this issue.</p>
11.	The Australian Transport Safety Bureau and the Civil Aviation Safety Authority amend the wording of their existing Memorandum of Understanding to make it more definitive about interaction, coordination, and cooperation.	Agree. See ACUO comments with respect to Recommendation 4.
12.	The Civil Aviation Safety Authority delegates responsibility for the day-to-day operational management of airspace to Airservices Australia, including the designation of air routes, short-term designations of temporary Restricted Areas, and temporary changes to the classification of airspace for operational reasons.	Agree. ACUO notes this will require Airservices Australia to significantly enhance their level of engagement with the Australian civil UAS operators’ community. ACUO recommends Airservices Australia develop a strategy specific to guide it in this task. This strategy development process should also provide the starting point for development of appropriate policy, regulations and standards for safe operation of commercial UAS directly from Australian airports. As more sophisticated types of UAS enter into commercial service in coming years this issue will become increasingly important, particularly in the context of CASA’s proposed Part 102.
13.	The Department of Infrastructure and Regional Development and Department of Defence (and appropriate agencies) establish an agreed policy position on safety oversight of civil operations into joint user and military airports.	Agree. ACUO is clearly aware that the Australian Department of Defence is emerging as a major user of UAS in Australian airspace while Australian commercial UAS operator’s plans include potential operations from joint user airports.
14.	The Civil Aviation Safety Authority changes its regulatory philosophy and, together with industry, builds an effective collaborative relationship on a foundation of mutual understanding and respect.	Strongly agree. ACUO believes there is a significant need for CASA to enhance its approach to and understanding of industry with this required not only at the broad aviation level, but also at the specific sub-sectorial levels. ACUO is deeply concerned that the relationship of the Australian UAS community with CASA has been unnecessarily strained with extant consultation structures not resulting in regulator consideration of the concerns of industry as a whole. ACUO is of the view that the regulators current proposals for

		<p>revision of Part 101 as per Notice of Proposed Rule Making 1309OS reflects a systemic failure of CASA to meaningfully engage with the Australian aviation industry as a whole, not just the domestic UAS sector. As corollary to this issue is an emerging predilection within CASA to give priority to the interests of large, multinational aerospace companies seeking to enter into the Australian unmanned systems market with the lobbying activities of such entities actively dismissing extant operators as being insignificant and irrelevant to matters of ‘national interest’. ACUO notes that of the 109 current certified UAS operators in Australia, the overwhelming majority are small or micro commercial entities. Sound policy making by any government entity must give full cognisance to the realities of a given sector as created and sustained by market forces in the first instance. ACUO is deeply concerned that CASA is not prepared to acknowledge the realities of extant and prevailing market structures.</p>
15.	<p>The Civil Aviation Safety Authority continues to provide appropriate indemnity to all industry personnel with delegations of authority.</p>	<p>Agree. ACUO wishes to emphasise that the structures and conditions under which current and proposed future delegations of authority occur need to be specifically reviewed by an independent air safety auditor to ensure that delegated authority is only being exercised in areas where the delegate actually holds appropriate qualifications and expertise.</p>
16.	<p>The Civil Aviation Safety Authority finalises its Capability Framework and overhauls its training program to ensure identified areas of need are addressed, including:</p> <ul style="list-style-type: none"> a. communication in a regulatory context b. decision making and good regulatory practice c. auditing. 	<p>Agree. ACUO urges that CASA also ensure personnel engaged in making decisions which impact on commercial aviation activities hold appropriate skills in fundamental commercial sector business practices.</p>
17.	<p>The Civil Aviation Safety Authority publishes and demonstrates the philosophy of ‘just culture’ whereby individuals involved in a reportable event are not punished for actions, omissions or decisions taken by them that are commensurate with their experience and training. However, actions of gross negligence, wilful violations and destructive acts should not be tolerated.</p>	<p>Agree in principle. CASA needs to be more explicit in its explanation of the meaning and implementation of ‘Just culture’. However, ACUO remains concerned that CASA’s interpretation of a ‘just culture’ is resulting in an increase in air regulation violations with this directly at odds with the regulators prime responsibility to ensure airspace safety in the first instance. The definition of wilful violations needs to be clarified, with ACUO aware of entities that have repeatedly breached CASA regulations with no penalty other than repeat warnings and later, rewarded with a UAS operators certificate under Part 101 despite making no change in behaviours. CASA is not effectively resourced or empowered to pursue wilful violations or actions of gross negligence and needs both budget increases and changes to legislative powers. ACUO is deeply concerned at CASA’s ‘soft-policy approach to regulatory infringements. We hold that by failing to act</p>

		<p>against such infringements, CASA is steering the UAS industry to ruin by ignoring the safety implications of illegal operators and by further ignoring the future safety implications of illegal and unauthorized UAS training businesses. ACUO has raised this concern directly with CASA as part of its response to the Part 101 NPRM 1309OS, as attached to this submission as Annex A.</p>
18.	<p>The Civil Aviation Safety Authority reintroduces a ‘use of discretion’ procedure that gives operators or individuals the opportunity to discuss and, if necessary, remedy a perceived breach prior to CASA taking any formal action. This procedure is to be followed in all cases, except where CASA identifies a Serious and Imminent Risk to Air Safety.</p>	<p>Agree in principle; however ACUO notes that CASA already uses ‘discretion’ as its default position for dealing with the vast majority of illegal UAS operators. CASA must not allow ‘use of discretion’ to become its default position for dealing with repeated breaches of regulations. ACUO is aware of multiple examples where repeated breaches of Part 101 by the same entity or entities have continued for extended periods of time with CASA’s use of the discretion model having zero impact on the entity involved. ACUO holds that CASA must in fact be legislatively empowered AND prepared to take substantive actions against repeat offenders with this including automatic requirements to prosecute where more than two ‘discretionary’ actions have already been attempted. See also response to Recommendation 17.</p>
19.	<p>The Australian Transport Safety Bureau transfers information from Mandatory Occurrence Reports to the Civil Aviation Safety Authority, without redaction or de-identification.</p>	<p>Agree in principle. ACUO sees this as holding potential to significantly enhance investigations of incidents involving illegal usage of UAS.</p>
20.	<p>The Australian Transport Safety Bureau transfers its safety education function to the Civil Aviation Safety Authority.</p>	<p>Agree in principle with two specific reservations at this time. First, ACUO believes that CASA is not sufficiently resourced to solely support the safety education function in its own right and any such transfer would need to be accompanied by a comparable resource transfers from ATSB. Second, ACUO is concerned that the scale of cultural change required within CASA, as acknowledged by the report of the ASRR, is likely to result in substantive safety education activities being given lesser priority during the near to medium term. ATSB, on the other hand, has a largely stable culture and may be better placed to continue this role until such time as CASA has undergone requisite cultural change at an internal level.</p>
21.	<p>The Civil Aviation Safety Authority changes its organisational structure to a client-oriented output model.</p>	<p>Agree. ACUO believes this has potential to significantly enhance the overall level of understanding of UAS regulatory issues across CASA.</p>
22.	<p>The Civil Aviation Safety Authority establishes small offices at specific industry centres to improve monitoring, service quality, communications and collaborative relationships.</p>	<p>Agree. ACUO recommends that any implementation of this recommendation include detailed consideration of mechanisms to ensure that out-posted staff do not become isolated from mainstream organisational structures and decision making. ACUO also urges that any</p>

		implementation occur after wider structural changes as flagged by the ASRR are consolidated within CASA to ensure that subjective judgements made by out posted personnel do not become locked in by subsequent structural change at a centralised level.
23.	The Civil Aviation Safety Authority shares the risk assessment outputs of Sky Sentinel, its computerised risk assessment system, with the applicable authorisation holder.	Agree.
24.	The Civil Aviation Safety Authority provides full disclosure of audit findings at audit exit briefings in accordance with international best practice.	Strongly Agree. The Australian commercial UAS industry is in its developmental phases and operators highly value detailed guidance.
25.	The Civil Aviation Safety Authority introduces grading of Non-Compliance Notices on a scale of seriousness.	Agree
26.	The Civil Aviation Safety Authority assures consistency of audits across all regions, and delivers audit reports within an agreed timeframe.	Strongly agree.
27.	The Civil Aviation Safety Authority implements a system of using third-party commercial audits as a supplementary tool to its surveillance system.	Strongly agree. ACUO is of the view that establishment of such a program will provide CASA with the means to engage high level UAS technical and regulatory expertise not available within the organisation with this significantly enhancing the regulator's capacity to ensure safety across the entire Australian UAS industry.
28.	The Civil Aviation Safety Authority establishes a safety oversight risk management hierarchy based on a categorisation of operations. Rulemaking and surveillance priorities should be proportionate to the safety risk.	Agree. ACUO holds that a high priority for the UAS sector is to assess the relationship between UAS, model aircraft and illegal operations. ACUO further holds that CASA should be instigating detailed research activities into the overall level of risk posed by all classes of UAS, with extant research evidence as released by CASA also urging the same PRIOR to any significant reforms to Part 101. CASA has not acted on its own research findings in this regard.
29.	Recreational Aviation Administration Organisations, in coordination with the Civil Aviation Safety Authority, develop mechanisms to ensure all aircraft to be regulated under CASR Part 149 are registered.	Strongly agree. ACUO notes with concern however that CASA does not recognise the concept of 'recreational UAS', only 'model aircraft'. While model aircraft are subject to the oversight of the MAAA, ACUO does not believe that body would be able to demonstrate compliance with the three principles identified by the ASRR as the basis upon which to attain and retain self administration as an RAAO. Noting CASA's proposed revisions to Part 101, as outlined by NPRM 1309)S, do not address the complexity of issues associated with the concept of recreational UAS, ACUO urges that as part of the revised role of the Department of Infrastructure and Regional Development as proposed by the ASRR, it should instigate, as a priority, a full review of the relative status and definitions of model aircraft and small UAS as a joint policy initiative with CASA prior to any final decisions being made on NPRM 1309OS as currently formulated.

30.	The Civil Aviation Safety Authority changes the current two-tier regulatory framework (act and regulations) to a three-tier structure (act, regulations and standards), with: A: regulations drafted in a high-level, succinct style, containing provisions for enabling standards and necessary legislative provisions, including offences B: the third-tier standards drafted in plain, easy to understand language.	Strongly agree.
31.	The Civil Aviation Safety Authority structures all regulations not yet made with the three-tier approach, and subsequently reviews all other Civil Aviation Safety Regulation Parts (in consultation with industry) to determine if they should be remade using the three-tier structure.	Strongly agree. ACUO notes however that CASA has already started the process with CASR101 and done this also without the appropriate standards defined beforehand. That standards development effort was supposed to have been the main task of the Training Development Team (TDT) initiated by CASA in 2010, which instead delivered a pre-defined training syllabus based on what ACUO regards as an overly narrow set of parameters.
32.	The Civil Aviation Safety Authority reassesses the penalties in the Civil Aviation Safety Regulations.	Strongly agree. See point 4 of ACUO's submission to the CASA NPRM 1309OS, attached to this submission as Annex A.
33.	The Civil Aviation Safety Authority applies a project management approach to the completion of all Civil Aviation Safety Regulation Parts not yet in force, with drafting to be completed within one year and consultation completed one year later, with: A: a Steering Committee and a Project Team with both CASA and industry representatives B: implementation dates established through formal industry consultation.	Strongly agree. Development of regulations as apply to commercial UAS operations in Australia have become unnecessarily time and resource expensive for organisations attempting to work cooperatively with CASA. Pursuant to this, ACUO holds that the current Part 101 NPRM 1309OS process should be temporarily suspended pending establishment of the proposed revised process. The proposals of NPRM 1309OS do not reflect the inputs of the full spectrum of the Australian UAS industry as provided to CASA through a number of ad hoc structures. The formal UAS standards working group as established in April 2014 was NOT given effective prior-opportunity to discuss the proposals before the public release for comment. CASA's methodology for preparation and release of NPRM 1309OS is a direct example of why overhaul of the safety regulation development process is necessary in the first instance.
34.	The Civil Aviation Safety Authority's Director of Aviation Safety meet with industry sector leaders to jointly develop a plan for renewing a collaborative and effective Standards Consultative Committee	Strongly agree. The Australian UAS sector has greatly suffered from limited and indeed, selective process of engagement by the Director of Aviation Safety on an ongoing basis. There is a clear need for balance in CASA's engagement with the Australian UAS community as a whole with this including engagement with the commercial operators community.
35.	The Civil Aviation Safety Authority devolve to Designated Aviation Medical Examiners the ability to renew aviation medical certificates (for Classes 1, 2, and 3) where the applicant meets the required standard at the time of the medical examination.	Agree. ACUO notes that aviation medicine remains an undeveloped aspect of CASA regulations for UAS operations in Australian airspace. The proposed CASA Part 102 will need to address this issue, particularly if that new regulation extends to facilitating commercial operation of UAS of more than 150kg in weight.
36.	The Australian Government amends regulations so that	Agree with respect to airport operations.

	<p>background checks and the requirement to hold an Aviation Security Identification Card are only required for unescorted access to Security Restricted Areas, not for general airside access. This approach would align with international practice.</p>	<p>ACUO notes that little consideration has been given by CASA, as well as by Australian law enforcement entities, to the security structures as may need to be applied to UAS. This is an area needing closer attention in the near term from the regulator and industry, particularly given the rapid growth of not only certified UAV operators but also the parallel rapid rise in illegal & unauthorized UAV operators.</p>
<p>37.</p>	<p>The Civil Aviation Safety Authority amends the current Terms of Reference of the Industry Complaints Commissioner so that: A: the ICC reports directly to the CASA Board B: no CASA staff are excluded from the ICC’s jurisdiction C: the ICC will receive complaints that relate to both the merits and the process of matters D: on merits matters, including aviation medical matters, the ICC is empowered to convene an appropriately constituted review panel, chaired by a CASA non-executive director, to review the decision E: while all ICC findings are non-binding recommendations, the original decision-maker is required to give reasons to the CASA Board if a recommendation is not followed.</p>	<p>Agree. ACUO urges that Recommendation 37B be understood to incorporate consultants and contractors as engaged directly by CASA and empowered to act on its behalf. Agreement to be subject to the jurisdiction of the Industry Complaints Commissioner needs to be a standard condition of contract in any future engagement processes for consultants and contractors by the regulator.</p>

Annex A: ACUO Submission to CASA's NPRM 1309OS process

The following document comprises the full text of ACUO's comments to CASA regarding its NPRM 1309OS proposals.

The document is laid out and formatted using CASA's own response template and was lodged with the regulator on 16 June 2014, this being the deadline given for responses.

ACUO notes that the usual timeframe associated with an NPRM is 60 days. CASA allowed a total of 30 days for NRPM 1309OS. CASA has not provided a public explanation of the reasons for the haste associated with this specific process.

Response Form for NPRM 1309OS – Remotely Piloted Aircraft Systems

Please complete your response by
and return it by one of the following means:

Post (no stamp required in Australia)

CASA's Standards Development and Quality Assurance Branch
Reply Paid 2005, Canberra ACT 2601, Australia

E-mail (use the response format in this NPRM)

nprm1309os@casa.gov.au

Please provide relevant information below and indicate your acceptance or otherwise of the options presented in this NPRM by ticking [✓] the appropriate boxes.

Your details

Your name: Brad Mason (Secretary of ACUO) ARN* (if known): ██████████

Organisation: Australian Certified UAV Operators (ACUO) ARN* (if known):

* Aviation Reference Number, usually your CASA-issued licence or certificate number

Address: 72 Gordon Parade, Everton Park, QLD, 4053

Your telephone number#: ██████████

optional, to enable the Project Manager to contact you if necessary

Do you consent to having your name published as a respondent to this NPRM? YES NO

Signed: ██

Date: 16/06/2014

Key change proposals

(Complete this section in response to the NPRM 1309OS – Remotely Piloted Aircraft Systems).

CASA invites you to advise your comments on the subject matter in this NPRM by indicating your preference by ticking [✓] the appropriate box and commenting below:

Key Proposal 1: Bring the terminology in line with ICAO

- proposal is acceptable without change
- changes would make it acceptable (please provide details below)
- not acceptable under any circumstances

Comments or suggested changes (including an estimate of additional costs/impacts, if applicable):

.....

Whilst we accept the ICAO terminology is being adopted by Australia, the weight-breakdown of RPAS classes and the terminology being used does not really match industry needs & directions, and throws more confusion into an already jumbled and poorly understood industry.

ACUO strongly believes a more appropriate classification system would see the 'Small RPAS' class in a weight range of 100 grams-20kgs, rather than just 100 grams - 2kgs. The new 'Medium RPAS' class [2kgs-150kgs] is just as broad as the original 'Small UAV' class and doesn't factor the wide variability in RPAS types & requirements across class, and; an equally wide set of regulations & standards required to regulate for this broad class of RPAS.

A 2kg RPAS requires vastly different standards to a 150kg RPAS

A 'Medium RPAS' would be better classified as 20-150kgs [Rotary @ 20-100kgs]

Regardless of outcomes, CASA will need to initiate a very clear national public media campaign to educate & inform the general public as to the regulatory changes taking place; the new terminology across the technology; the new RPAS classifications and associated requirements.

.....

Key Proposal 2: Clarify the current requirements for remote pilot training and certification

- proposal is acceptable without change
- changes would make it acceptable (please provide details below)
- not acceptable under any circumstances

Comments or suggested changes (including an estimate of additional costs/impacts, if applicable):

.....

.....The extended capabilities and range of even the most simple & generic of RPAS today, demands that they be treated separately from 'Model Aircraft' and be more appropriately administered in line with the wider RPAS industry.

ACUO strongly believe all classes of RPAS be subject to certification and licencing. The sub-2kg class should not be exempt from certification & licencing.

ACUO recommend the following classes of RPAS:

- > Micro RPAS - up to 100 grams
- > Small RPAS - 100 grams - 20kgs
- > Medium RPAS - 20kgs-150kgs [Rotary-100kgs / Airships 100m³]
- >Large RPAS >150kgs

This makes the small RPAS sector better aligned with industry.

It also makes it more appropriate from a regulatory & standards point too.

Key Proposal 3: Remove redundant requirements and simplify the process for approval

- proposal is acceptable without change
- changes would make it acceptable (please provide details below)

not acceptable under any circumstances

Comments or suggested changes (including an estimate of additional costs/impacts, if applicable):

.....
.....
The Area Approval process for certified UAV operators is not workable in commercial reality and is not fair to commercial UAV operators.

21 days or more for processing simply makes the client [of a certified UAV operator] go somewhere else, usually someone uncertified and operating illegally.

ACUO question who you would rather have operating in controlled airspace; A certified UAV operator who knows the dangers and knows what they are doing, or an illegal operator who is ignorant to the dangers he presents to aviation & public safety?

ACUO recommend we revert to the original process for approval to operate in Controlled airspace whereby the UAV operator can contact the tower or ATC direct for a clearance.

This would be conditional on 2 things:

> CASA agree the safe separation standards to use for RPA is the VFR standards

> CASA establish a 'Rating' system for certified UAV operators to qualify for operating in controlled airspace and within 3nm of an aerodrome.

This 'rating' would be the minimum to operate in controlled airspace. All subsequent communications need only be with ATC for the given area, the same as it is for all other aviation interests using the airspace.

.....
.....
Key Proposal 4: RPA of gross weight of 2 kilograms and below, operating under the standard RPA operating conditions will not require CASA approval to operate

proposal is acceptable without change

changes would make it acceptable (please provide details below)

not acceptable under any circumstances

Comments or suggested changes (including an estimate of additional costs/impacts, if applicable):

.....
.....
Whilst the sub-2kg RPA themselves may present a low risk to the general public on the ground, they do not necessarily pose a low risk to aviation or the flying public. By the fact that there are tens of thousands of these systems in Australia, many of them operated by complete novices with no concept of airspace and aviation safety, the likelihood of an incident occurring is rising with every sale. The message that needs to be out there, isn't getting out there.

Pamphlets with main-street retailers is but one small part of the solution. A large majority of systems are actually purchased online, circumventing main-street retailers. These people don't get a pamphlet and many are still unaware of the dangers they pose to aviation & public safety.

Before any concessions might be granted to the sub-2kg sector, the sector needs to demonstrate that they can comply with existing regulations.

CASA frequently compares the small sub-2kg RPAS sector with the recreational 'Model Aircraft' sector however this comparison ignores 3 key distinctions:

1. These small RPAS do not fit the true definition of a 'Model Aircraft' under the MAAA rules. Unlike traditional Model Aircraft which require direct visual & manual control of them at all times, small RPAS can be operated by complete novices well beyond the traditional limits of Model Aircraft pilots.

2. A large number of people buying these small RPAS are not from an aviation background, do not belong to the Model Aircraft association and have little or no concept of the dangers they pose to manned aviation or the general public.

3. These small sub-2kg RPAS are not contained to traditional MAAA flying fields anymore, but are being operated from suburban & city environments, from public parks & gardens, and in populous areas unsuitable for the errant recreational operation of these aircraft. This is precisely the same areas that CASA already stipulate off-limits to small RPAS. (Other than those approved and certified by CASA to operate commercially)

The sub-2kg sector of unmanned aviation is currently the most problematic to contain due to the huge consumer interest in these RPAS and the wide availability at a low price. More & more they are being operated at dangerous altitudes well above 400ft AGL, frequently over populous areas and often in controlled airspace.

No other regulatory authority in the world is currently seeking or proposing to deregulate an entire class of RPAS. Indeed, the sub-2kg category as identified in NPRM 1309OS are precisely the type of RPAS which continue to be the focus of extensive regulatory review and risk assessment by a number of civil aviation regulators globally, including the United States Federal Aviation Authority (FAA), as they seek to find ways to safely integrate all forms of unmanned aircraft into the national airspace system.

At a time when certified UAV operators are being forced to undertake timely & expensive Area Approvals to operate in Controlled Airspace and within 3nm of an airport, aerodrome or HLS, there is no justification for deregulating the recreational use of these small RPAS.

This small but troublesome sector of the unmanned aviation industry cannot be allowed to continue unabated, without adequate safety oversight and without effective enforcement of the regulations. The information about this sector alone is vital for our understanding of where the industry might be steered in future planning.

ACUO stands ready to assist CASA in the administration of the small RPAS sector if required.

ACUO recommend CASA adopt certification & licencing for all classes of small RPAS including a new recreational class.

That the minimum standards applicable to Recreational RPAS [Distinguished from Model Aircraft administered by the MAAA] be:

- > Sit & pass a BAK level of aviation knowledge
- > Register with an approved administrative authority annually with pertinent details [MAAA/ACUO?]
- > Only operate RPAS in accordance with the regulations & conditions set by CASA [as now] and do not engage in non-recreational RPAS activities.

.....

Response to the draft Part 101 of CASR

Having read the draft Part 101 of CASR (Annex A), are there specific issues that you wish to see addressed? Please indicate by specifying the relevant CASR, suggested change to that regulation that you believe will add value to the draft, and a short explanation of your reason for proposing the change.

Regulation number	Suggested changes	Explanation
NPRM 9 101.045	101.040 & 101.045	These parts are already omitted from the regulations.
NPRM 12 101.026	<p>ACUO believe all RPAS pilots, including for small RPAS, should be subject to certification & licencing.</p> <p>ACUO recommend omitting 101.026. If CASA cannot omit this part, the following changes would make it better: 101.026(1)(c) – Omit all after ‘RPA’ 101.026(2) – Omit</p> <p>[see also, ACUO recommended changes to 101.252]</p>	<p>101.026 has been created to give pilot authorization to the small RPAS class. [100 grams – 2 kgs]</p> <p>This is not consistent with the intent of section 20AB of the Act.</p> <p>The significant increase in the number of aviation incidents involving RPAS in the last 2 years is only expected to continue rising unless enforcement policies are strengthened.</p> <p>There is no justification for abandoning pilot licencing or registration for this sector.</p> <p>The huge number of small RPAS pose a significant danger to aviation without basic aeronautical knowledge and more rigorous enforcement.</p>
NPRM 16 101.097	Change ‘must be’, to ‘is’	<p>What is the purpose of 101.097? Why ‘must be’, why not ‘is’?</p> <p>[ie For the purposes of these regulations, an unmanned aircraft is a...]</p>
NPRM 21 101.235	<p>Change : 101.235(1) This subpart applies to the operation of a large, medium or small RPA for non- sport or recreational purposes.</p> <p>Change: 101.235(2)(a) for the purpose of sport or recreation when operated in accordance with Part G only</p> <p>Change: 101.235(2) (b)(i)(ii)(iii) should all be removed for clarity and certainty of requirements.</p> <p>Make reference under 101.240 for a clear distinction between RPAS for sport & recreational purposes [ie Model Aircraft] under Part G, and all other RPAS uses under Part F.</p>	<p>This makes for confusing reading. Why not simply say, Part F applies to all RPAS for other than sport or recreational purposes.</p> <p>This rule has been the most widely misinterpreted & abused of Part 101.</p> <p>Uncertified & unauthorized operators cite this rule as an excuse not to become properly certified to operate UAVs for other than sport & recreation purposes.</p> <p>The premise is that if the UAV/RPAS is being operated in accordance with Part G, they don’t need to certify.</p>

		This rule needs to clearly differentiate between RPAS for sport & recreational purposes, and RPAS for all other purposes
NPRM 22 101.240	<p>ACUO believe the weight classifications do not align with industry. ACUO recommend the following change to 101.240: Micro RPA = <100 grams Small RPA = 100 grams-20kgs Medium RPA = 20-150kgs [etc] Large RPA = >150kgs</p> <p>The 'Small RPA' class is further sub-divided by CASA as follows: Group A = 100 grams 2kgs Group B = 2kgs-7kgs Group C = 7kgs-20kgs</p> <p>ACUO recommend: Group A be subject to a registration process including a BAK theory exam pass. Group B & C be subject to normal certification & licencing</p>	<p>Again, the convoluted wording does not readily identify the different classes of RPAS. As we do for a large RPA, why can't we simply put the actual weights to the classes/groups to avoid any confusion? This will align the RPA classes with what the industry produces and uses with respect to the weight of the technology. Making these classification changes, makes it easier to regulate and set appropriate standards.</p>
NPRM 23 101.245	<p>101.245(2)(a) ACUO does not agree to the change to 101.235(2)(a) Omit the words: 'if the RPA is a fixed-wing RPA' We also believe 101.235(2)(a) would read more accurately if it was worded: -'a person who stands behind the RPA pilot while it is taking off. [not just the RPA itself. The RPA pilot will normally be standing behind the RPA for take-off. All other persons should be behind the RPA pilot.]</p>	<p>We question why 101.245(2)(a) only applies to fixed-wing RPA? Traditional Rotary & Multicopter RPA can safely be flown 180 degrees away from any persons on take-off, the same as a fixed-wing aircraft.</p>
NPRM 27 101.252	<p>Change heading to: 101.252 Certain RPA – requirement for a remote pilot certificate or registration</p> <p>Remove the exemption for 'small RPA' from 101.252(1).</p> <p>Reword 101.252(2)(b) to read: 'For a Group A small RPA – the person is not registered with the approved administrative authority [either MAAA or ACUO] 'For all other RPA, the person is not</p>	<p>The profusion of RPA <2kgs in the country today, coupled with the sophistication of the technology and the increased risks to aviation & public safety, demands that they be regulated more tightly than they currently are. ACUO does not agree that small RPA [<2kgs] should be exempt from certification & licencing ACUO believe as a minimum that all pilots of Group A small RPA be subject to registration with an</p>

	<p>certified as a remote pilot under Division 101.F.3'</p>	<p>approved administrative authority, and that the registration be conditional on the applicant passing the Basic Aeronautical Knowledge (BAK) theory exam.</p> <p>If the BAK syllabus is considered not-appropriate, ACUO believe the SCC Working Group could modify the RA-Aus BAK, into a suitable RPA-BAK in a very short period of time.</p> <p>[Est. 3-4 months].</p>
<p>NPRM 29 101.270</p>	<p>Remove the exemption for small RPA' from 101.270(1)</p>	<p>If you exempt small RPA from this part [however described] there will be a ground-swell of people who will migrate to small RPA and will forget, disregard or abuse the standard RPA operating conditions. It is already happening. Putting exemptions to the 'small RPA' class throughout CSAR101 will be a licence to run amok.</p> <p>The huge difficulty then will be in enforcing the regulations on illegal small RPA operators.</p> <p>The exemption for small RPA is ripe for abuse and ACUO opposes the exemption for the small RPA class, from certification & licencing requirements.</p>
<p>NPRM 33 101.295</p>	<p>Change the references to a MOS, to references to the relevant ACs for the CASA approved RPA training standards. These CASA approved RPA training standards, along with the CASA approved standards for RPA training organizations, MUST be transparent & publicly available.</p> <p>This will remove any confusion & ambiguities in relation to:</p> <ul style="list-style-type: none"> What standards are promulgated What standards prospective pilots & operators require to fly What standards apply to RPA training organizations & businesses 	<p>The reference to a Manual of Standards (MOS) is disappointing because we are told there is no MOS and there will not be one for some time yet [2yrs?]</p> <p>Can we reference the ACs instead? [until such time as a MOS actually exists]</p> <p>NOTE:</p> <p>There has been a sharp increase in the number of unapproved RPAS training businesses appearing in Australia right now. Most are circumventing the regulations and formal CASA approval to secure market share before anything else. This is leading to sub-standard training and poor competency levels, and poor aeronautical knowledge in many RPA pilots & operators.</p>

		<p>It also leads to uneven standards across the industry.</p> <p>It is imperative that CASA does NOT allow the industry to be manipulated by illegitimate training businesses.</p> <p>CASA needs to thoroughly check the training credential on each & every application for licencing.</p>
NPRM 51 Part 1 Dictionary	<p>Retain the definition & establish a class of recreational RPA.</p> <p>Under this, all recreational unmanned aircraft would either be registered & insured with an administrative authority: The MAAA – as a Model Aircraft and abiding by Part G</p> <p>CASA or ACUO – as a recreational RPA and abiding by Part F</p>	<p>This definition should stay and CASA should acknowledge & establish a recreational RPA class. There is also merit in compelling all RPA pilots to be a member of a recognized association for insurance purposes.</p> <p>[either MAAA or ACUO?]</p>
ADDED Revise Part 101.G 101.400	<p>ACUO recommend this read:</p> <p>(1) A person may operate a model aircraft outside an approved area only if he or she: (a) keeps it in sight; and (b) keeps it below 400ft; and (c) keeps it clear of populous areas</p>	<p>To align with the regulations and stop any unsafe conflict with manned aircraft above 400ft AGL.</p> <p>(manned aircraft cannot see & avoid model aircraft operating above 400ft AGL and outside approved areas.)</p>
ADDED Revise Part 101.270	<p>Move 101.270(3) to 101.270(4)</p> <p>Re-write 101.270(3): A person must not give a public notice, by any means, to the effect that a person is willing to undertake any activities mentioned in (3) (a) or (b), if the last-mentioned person has not obtained a UOC authorizing the conduct of those activities. (3)(a) - activities defined under 101.235(1) (3)(b) – RPA training</p>	<p>No current regulation for this.</p> <p>There is only reference under CAR210 for manned commercial aircraft operations, making it an offence to advertise commercial aerial services without first holding an AOC. ACUO believe the same should be true for unmanned aviation. Uncertified UAV operators are being allowed to prosper, given room to gain unfair commercial advantage and are undermining legitimate commercial UAV operators by being able to advertise their services without formal certification.</p> <p>CASA should remove the opportunity to operate RPA illegally, or to provide RPA training illegally, without CASA authorization.</p> <p>This removes the propensity for poor training to infiltrate the industry.</p> <p>This will also create [for the first time] a level playing field for legitimate certified UAV operators</p>

Additional comments

Any additional comments

ACUO canvassed a large number of Australian industry UAV operators and other aviation professionals to gauge reactions and opinions to NPRM1309os.

On the whole there was widespread disappointment that CASA appears to be abandoning good management and giving into one of the most problematic sectors of unmanned aviation in the sub-2kg class.

The NPRM proposes some basic measures to strengthen the regulations but there was no mention of new or revised enforcement measures to support this and one without the other is not going to have the desired results. ACUO believe in fact that the proposed exemption to the sub-2kg sector will actually increase the risk to aviation & public safety.

Whilst we accept CASA is trying their best to bring the CASR101 regulations up to date and make them more easily enforceable, at the same time, some of the proposed changes appear to make the task of actually enforcing the regulations that much more difficult.

We understand this NPRM is more a placeholder for a future re-write of the regulations for RPAS but this NPRM could have gone further into bedding down some of the basics.

There was no opposition from ACUO 28 members to the recommendations made by this association. In addition, there were 25 non-ACUO members who also fully support ACUO recommendations via petition. [Individual petitions can be supplied on request from CASA] As of Monday 16th June ACUO has the full support of 53 certified UAV operators in Australia.

Some of the main points that ACUO wish to comment on are:

POINT 1 – THE NPRM

We applaud CASA for the work put into the NPRM but we question why it was necessary to include the Advisory Circulars. This appears to be a premature approach since the regulations still need to be finalized [after public comment and final revisions] before the guidance material can be finalized. ACUO believes the Advisory Circulars should have been retained until after the NPRM process was finished.

Also, the timeframe of 4 weeks to read, absorb and understand the changes proposed in this NPRM was too short. The size of the NPRM, including the AC's, was barely manageable in the 4 weeks allowed. CASA may want to consider in the future allowing more time for a more thorough appraisal of an NPRM and time to provide more fully developed responses.

POINT 2 – TERMINOLOGY [licences/certificates]

ACUO note with some concern the change in terminology throughout the NPRM documents from a Remote Pilot Licence, to a Remote Pilot Certificate. ACUO are not aware of any prior industry consultations or discussions to this effect and there is scant information in the NPRM documentation to explain this either.

As far as industry knows, Remote Pilot training is for a Licence, not a Certificate, and this is what industry is working towards. We also note the change from 'Licence' to 'Certificate' is inconsistent with ICAO Annex 1 and ACUO cannot see good reason why CASA would want to change this.

ICAO Annex 1 says: 'Licensing is the act of authorizing defined activities which should otherwise be prohibited due to the potentially serious results of such activities being performed improperly. An applicant for a licence must meet certain stated requirements proportional to the complexities of the task to be performed. The licensing examination serves as a regular test of physical fitness and performance ensuring independent control. As such, training and licensing together are critical for the achievement of overall competency.' The intent of the ICAO annex is to regulate [amongst others] the aviation personnel in command of an aircraft. Since this is also clearly the intent of the Part 101 regulations,

remote pilots should be issued with a Licence, not a Certificate.

A Licence is a privilege by permission to act. [In accordance with the Act & the regulations]

A Certificate is issued as a document of truth. [ie for registration purposes]

The changes to the Part 101 regulations demand the former, not the latter.

ACUO recommend the terminology in use for certification & licencing of remote pilots in Australia, be for Remote Pilot Licences, not Certificates.

Where ACUO calls for the recreational small RPA class to be registered, this could warrant a certificate be issued to identify the holder/pilot.

POINT 3 - RPAS CLASSIFICATIONS

ACUO believe the proposal to exempt small RPAS up to 2kg from certification & licencing presents an increased risk to aviation & public safety.

ACUO opposes Key Proposal 4 for that reason.

There are already a defined set of RPAS standard operating condition for RPAS operators and already we are seeing a disturbing increase in the number of reported aviation incidents & accidents. There is no safety case nor justification for exempting small RPAS under 2kgs from certification & licencing.

ACUO make the strongest recommendation that small RPAS operators and recreational RPAS operators be Registered with an approved administrative authority, as a minimum. Registration would be conditional on the applicant passing a Basic Aeronautical Knowledge (BAK) exam that provides pilots with basic information about airspace classifications, airspace rules and basic aeronautical information. It is considered that this basic knowledge will go a long way to improving aviation & public safety.

ACUO also question why CASA is changing the weight classifications & terminology again. The confusion of changing from 'small RPAS' to 'Medium RPAS' is likely to create more confusion than it might be trying to solve.

Also, the new weight classifications are not aligned with industry.

A 2kg RPAS is nothing like a 150kg RPAS and we question why CASA made the changes they did.

ACUO believe & recommend the RPA weight classifications would be better aligned with industry as follows:

Micro RPA – up to 100 grams

Small RPA – 100 grams – 20kgs

Medium RPA – 20kgs – 150kgs

Large RPA – Over 150kgs

POINT 4 – LAW & ENFORCEMENT

[Compliance with CASR101 regardless of proposed changes]

ACUO is deeply disappointed there were not more measures from CASA to tackle the problem of increasing illegal & unauthorized RPAS use.

ACUO believe the current enforcement policies are not robust enough, or if they are, not being applied rigorously enough, to maximize aviation safety.

We recommend the CASA enforcement policies be reviewed immediately to put in place new, more effective means to enforce the regulations for RPAS including:

> increased fines

> Licence suspensions [and embargo's on obtaining a licence if prosecuted prior to application]

> Equipment confiscations

Also, CASA should immediately start criminal proceeding against all illegal operators identified.

Illegal UAV operators do not hold an authorization under civil aviation regulations and we question whether current administrative & civil actions from CASA are legal & binding on

illegal operator where identified.

What should not be in doubt however is the existing CASR101 regulations. In all the mystery & intrigue and hopefulness leading up the NPRM, people seem to have forgotten that the existing regulations must still be complied with and enforced.

ACUO also strongly believe the revised Part 101 regulations should include a provision that makes it illegal for an uncertified UAV operator to publicly advertise their aviation business services, prior to obtaining a UAV Operator Certificate from CASA

A similar provision is written into CAR88 regulations [CAR210] making it illegal for anyone to advertise for [conventional] Aerial Work Operations without an AOC. The same should be true for commercial UAV Operators also

ACUO would be pleased to discuss how we might help develop some of the concepts recommended in our NPRM response, and this association stands ready to assist CASA should we be required to help in the administration of the unmanned aviation sector.

Thank you

Your response ensures balanced consideration by CASA of the interests of the aviation community and consumers.