



21 December 2016

Dr Jane Thomson
Committee Secretary
Senate Rural and Regional Affairs and
Transport Reference Committee

By email: rrat.sen@aph.gov.au

Dear Dr Thomson,

**SUBMISSION TO INQUIRY INTO REMOTELY PILOTED AIRCRAFT SYSTEMS (RPAS),
UNMANNED AERIAL SYSTEMS (UAS) AND ASSOCIATED SYSTEMS**

Summary

The Insurance Council of Australia (**ICA**) welcomes this opportunity to provide a submission to the RPAS, UAS and associated systems Inquiry.

The Insurance Industry is a leader in the commercial application of RPAS and UAS. Although the technology is still in its infancy, Australian Insurers are already using RPAS for assessing insurable risk, claims assessment and damage assessments following catastrophe events, leading to reduced insurance administration costs and faster claims processing.

The ICA supports a regulatory regime that promotes innovation in RPAS and UAS technology, such as the development of over-the-horizon/beyond visual sight capabilities for post-disaster assessment and relief, and the use of RPAS and UAS in underwriting risk monitoring and management.

Whilst wishing to encourage the further development and innovative application of this technology, the ICA is also aware of the risk of damage and injury that can arise with RPAS and UAS operation. Additionally, beyond the risks of physical damage that could occur, there may be future challenges regarding the operation of this technology through the lens of other legislation, for example statutes concerning privacy.

Whilst the ICA does not contend that any such issues currently exist, we submit that what will be required, to respond intelligently to these future challenges, is evidence based regulation that balances innovation with the need to mitigate the risks.

The ICA would welcome further opportunities to participate in that process.



INSURANCE INDUSTRY UTILISATION OF RPAS/UAS

Underwriting Risk Assessment

Insurers currently utilise RPAS technology for building assessments, particularly for commercial insurance purposes. For example, when insuring a large building or infrastructure, insurers require detailed assessment of existing wear and tear and structural integrity. Traditionally, assessments require physical inspections by specialist assessors, which is time and labour intensive. However, utilising RPAS significantly reduces the labour and time required to conduct assessments, which ultimately reduces the administrative costs of providing insurance.

In addition, developments in software in conjunction with RPAS is improving accuracy and effectiveness of building inspections. For example, insurers are beginning to utilise software programs which allow for high resolution 3D modelling of individual buildings, allowing assessors to quickly calculate the risk profile of individual buildings and infrastructure projects. Over time, this technology will also allow insurers and insureds alike to monitor wear and tear of an asset and identify potential degradations in structural integrity.

In addition, RPAS technology is increasingly being used in agricultural insurance for assessing risk profiles of land parcels and crops. For example, RPAS mounted optics and sensors allow for assessments of particular land parcel hazards, as well as rapid identification of disease and infestation within crops. This will ultimately reduce the administrative costs of assessments and improve affordability of agricultural insurance products.

Complex Claims Assessment

Insurers are also utilising RPAS for assessing loss following damage to insured property. For example, the impact of hail damage to a large commercial building can now be quickly assessed using RPAS technology, whereas previously a physical assessment was necessary.

In respect to agricultural claims, RPAS can also be used by insurers to understand the extent of loss and actual crop yield. Previously, it has been difficult to assess damage to crop given the size of the area and the fact a crop will be damaged to different extents as a result of an event. RPAS or UAS fitted with high-precision cameras can help claims adjusters determine the true health of a crop via colour or spectrum contrasts.

Large Scale Claims Assessment

The insurance industry is presently utilising RPAS to conduct rapid damage assessments of communities following catastrophe events. Prior to RPAS technology, it could take weeks for insurers to gain access to affected communities in order to assess damage to insured property. For example, following the Wye River Bushfires on 26 December 2015, fire agencies prohibited access to affected communities for approximately 2 weeks. However, an insurer was able to conduct damage assessments of its insured properties utilising RPAS, allowing it to begin processing claims despite not having physical access to the affected properties.



It is conceivable that, in the future, insurers utilising RPAS and UAS could settle claims following a disaster event without either the insurer or its insureds having physical access to the impacted properties.

CHALLENGES

Over-the-horizon / beyond visual line-of-sight

Given the geographic remoteness of some communities in Australia, the Insurance Council supports the development of over-the-horizon (OTH) and beyond visual sight RPAS capabilities.

The Insurance Council considers developing OTH and beyond visual sight RPAS and UAS capabilities can be utilised for large-scale rural hazard assessment, disaster mitigation and provide rapid post-disaster damage assessment to both emergency management and the Insurance Industry. Further, the technology can potentially be used to deliver critical aid to remote communities.

It follows that the insurance council supports the development of limited pre-designated RPAS/UAS routes to remote communities. The risks of OTH and beyond visual sight operations can be appropriately mitigated through designated flight routes, strict AGL separation, ATC and training.

The Insurance Council would welcome any opportunity to assist in developing OTH and beyond visual sight technology for use in post-disaster assessments.

Managing the Risk - Insurance for RPAS/UAS

RPAS and UAS can present a unique set of risks to both property and persons, for example should a mechanical or software system miscarry or the operator fail to operate the technology in a safe manner. Some examples:

- on 8 April 2014, a triathlete competing in Geraldton's Endure Australia Triathlon was struck by a RPAS after its operator lost control whilst filming the event. The athlete suffered a number of head injuries and required 3 stitches.
- on 26 November 2015, a toddler in Britain was partially blinded after a propeller of a RPAS, being operated by a family friend, sliced the child's eye.
- on 6 July this year an RPAS came within 50 metres of a Westpac Lifesaver Rescue Helicopter on the Gold Coast, Queensland.

It follows that RPAS and UAS operations have the potential for significant third party liability as a result of property damage or injury and this risk will only increase as innovation in battery technology leads to larger and heavier RPAS and UAS available for commercial and recreational use.



The insurance industry has maintained pace with the rapid development of RPAS and UAS and provides a range of competitively priced insurance products to cover both system and optical equipment, as well as public liability.

In respect to uptake of insurance, commercial RPAS and UAS operators in Australia are generally adequately insured for public liability insurance (most commonly up to \$20 million). Furthermore, clients of commercial RPAS operators usually ensure the operator has appropriate third party liability insurance before contracting the operator's services. Recreational RPAS operators may have cover available for loss or theft of their system under a general home and contents policy or a specialist drone insurance product. That said, very few recreational operators will have third party liability insurance to cover damage or injury caused by an RPAS or UAS under their control.

Amendments Allowing Recreational User to Operate for Commercial Gain

The Insurance Council welcomes recent deregulation allowing recreational users to operate RPAS under 2kg for commercial gain. However, the Insurance Council is concerned the changes may increase the potential third party liability risk for operators.

The changes will result in RPAS operators, with no recognised training or formal understanding of the potential risks of RPAS and UAS operations, operating systems in potentially crowded areas, near critical infrastructure and assets. Although recreational operators will need to acknowledge operating rules set by CASA, the Insurance Council considers the move away from professional operators to amateur operators will inevitably lead to an increase in incidents of third party damage and injury. Further, its possible these legal liabilities could be well in excess of most individual's financial capacity to meet a third party claim for damage or injury, which could easily be in excess of \$1 million.

Unfortunately, most recreational drone users do not appear to be aware of the potential liability and financial costs associated with system failure or operator error. Whilst the Insurance Council does not support mandatory insurance provisions, we believe greater consideration needs to be given to the potential liabilities that may fall on recreational operators utilising RPAS and UAS for commercial gain. This could potentially be rectified through greater education for recreational operators and CASA notifying these operators of the risks of liability.

If you would like to discuss this submission in further detail, please contact Karl Sullivan, the ICA's General Manager Policy, Risk & Disaster Planning Directorate, on (02) 9253 5121 or via email at ksullivan@insurancecouncil.com.au.

Yours sincerely

Robert Whelan
Executive Director and CEO