Development of a comprehensive national policy that will allow Australia to benefit from the considerable opportunities provided by drones and other emerging aviation technologies is complex and is the subject of the recent Policy Paper issued in Australia. Emerging disruptive technologies such as autonomous vehicles and drones create serious challenges as regulators must endeavor to assess sometimes novel and indeterminate risks and introduce a regulatory framework that is commensurate with that risk. The regulatory intervention ideally needs to tread a path that does not stifle innovation and is not so "heavy handed" as to unnecessarily impact the considerable opportunities provided by emerging aviation technologies.

Increasing deployment of drones in industrial and commercial contexts and particularly their foreshadowed usage in urban transport and delivery in high density population areas brings into sharp focus the insurance of various risks and associated liability issues.

Insurance industry

The insurance industry initially adopted an approach to drone insurance using standard aviation wordings on an annual basis, adapting those policies by removing coverages such as passenger liability, but effectively giving users a standard aviation policy at disproportionate cost of issuance. More recently, some very innovative products have been developed for the drone market. For example, in January 2018 Flock launched Europe's first app-based "pay-as-you-fly" drone insurance in conjunction with Allianz. Through a mobile app, commercial and recreational pilots are able to purchase customized equipment and liability insurance on demand (lasting from one to eight hours). The cost of cover is "exposure-based" as the risk is assessed on a per-flight basis and determined by combining real-time data with algorithmic risk assessments. That product has been followed in July 2019 by Flock's introduction of its "Enterprise" product to provide scalable exposure-based insurance for connected drone fleets.

These types of on-demand insurance will undoubtedly play a fundamental role in the future of the insurance industry generally. New research published by the International Underwriting Association (IUA) observes that pay-as-you go models of cover will allow customers to automatically activate policies when and where they need them(1). This obviously transcends drones insurance and there is potential for on-demand insurance models to access new markets and customers.

Compulsory insurance

In many jurisdictions, compulsory insurance requirements are already in place. For example, in the European Union, commercial drone operators have been required to have public liability insurance to protect against legal
liability for third party property damage or injury whilst using a drone since 2004. New Drone Regulations(2),
effective 31 December 2020, extend compulsory insurance requirements by adopting a risk-based approach with
the emphasis on the weight, specifications of the drone, and the purpose for which it is being operated, rather
than purely upon whether the application is commercial or non-commercial.

The Federal Aviation Administration (FAA), the Civil Aviation Safety Authority (CASA) and the Civil Aviation
Authority (CAA) do not presently require operators of drones in the United States, Australia and New Zealand(3),
respectively, to take-out third-party liability insurance, but such cover is strongly recommended. For example,
the Civil Aviation Safety Authority (CASA) does advise all commercial and recreational drone operators in
its ‘Advisory Circular on Remotely piloted aircraft systems – licensing and operations’ that:

CASA strongly recommends that operators discuss with an insurer the potential liability for any damage to third
parties resulting from RPAS operation [that is, drone operation] and consider taking out suitable insurance.

CASA recommends that commercial operators of drones take out two kinds of insurance:

1. third party public liability insurance; and
2. first party property insurance or UAV insurance (being a specialized insurance product for unmanned
   aerial vehicles).

In addition, CASA may impose a condition on a licensed commercial drone operator to obtain insurance as part
of that operator’s risk management procedures. For example, it is likely such a condition would be imposed
where the pilot seeks permission to operate the drone for commercial purposes at night. In addition, commercial
RPAS operators are typically expected to have public liability coverage as part of state and territory business
obligations.

**Law reform**

Consideration of compulsory insurance requirements for drones in Australia will be ongoing, not the least
because the implementation of a compulsory CTP insurance regime in relation to commercial drone operations
will resonate with the broader community interest, especially where personal safety is concerned. Moreover, the
benefits of public liability insurance cover extend far beyond individual compensation. Coupled with a robust
registration regime, operators with insurance cover would become more visible, accountable, and traceable in the
case of an accident or incident(4).

Numerous models exist to implement such a compulsory insurance regime, but it is suggested that an
adaptation, with appropriate modifications, of the relevant compulsory third-party motor vehicle scheme with
associated nominal defendant arrangements or of Accident Compensation arrangements could provide a tried
and extensively tested pathway to resolving problems flowing from unregistered and/or uninsured drones. The
South Australian privatization model is particularly useful as an example of a framework that could be replicated
in the drone context. The role of government is to mandate the CTP insurance, approve the standardized policy
coverage and approve the insurers authorized to offer the insurance product. The authorized insurers under this
competition model then compete on service, price and other policyholder benefits. A differential premium model
can be implemented taking into account considerations such as nature and location of the commercial
operations, and whether the operator is accredited to the relevant UAS International Standard (UIS) for its
operations.
In conclusion, the Policy Issues Paper emphasises that in relation to policy and regulation 'it will be essential that responses are coordinated and consistent across Commonwealth and State/Territory governments ... to achieve a nationally consistent and coordinated approach moving forward, facilitating industry compliance and interoperability' (5). To this end, regard should be had to the approach adopted by the National Transport Commission, in their Report "Automated Vehicle Reform Program Approach" (October 2019). This Report records that the Australian Transport Ministers have agreed that existing motor accident injury schemes expand to cover crashes caused by automated vehicles - an approach already enshrined in the United Kingdom in the Automated and Electric Vehicles Act 2018. When considering drones (that is, automated aerial vehicles) it is not, therefore, too much of a stretch to contemplate that they should be treated similarly to the proposed treatment of automated vehicles, especially when the drone is an aerial taxi, or aerial delivery vehicle operating in a high-density population area. It is, therefore, not unreasonable that the operator of such a drone should carry appropriate and adequate liability insurance to ensure that members of the public have recourse to compensation for death, injury or property damage.

For further information please contact Maurice Thompson in our Melbourne office and Dr Tony Tarr in our Brisbane office.

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(3) 2019/947 and 2019/945. Compulsory insurance requirements are also in place in Norway, Iceland, Costa Rica, Trinidad and Tobago, Brazil, Chile, Columbia, Guyana, Uruguay, Kenya, Nigeria, Rwanda, South Africa, United Arab Emirates, China, Hong Kong, Philippines, Thailand, and Liechtenstein.

(4) Note that in New Zealand the no-fault accident compensation scheme (ACC scheme) governed by the Accident Compensation Act 2001 provides compensatory cover for those who suffer a personal injury in New Zealand, including by drones.

(5) Submission 51, p.2; Senate Standing Committees on Rural and Regional Affairs and Transport, Regulatory requirements that impact on the safe use of Remotely Piloted Aircraft Systems, Unmanned Aerial Systems and associated systems, 31 July 2018.

Ibid., footnote 13, p.54.