

☞ **Do you agree with the proposed core principles for the National Emerging Aviation Technologies policy?**

No. The proposed core principles<sup>1</sup> should focus on the users, whether commercial operations or hobbyists. Everything in this policy should be focussed on providing them with ways to operate easily and safely, with a minimum of interference, regulation, licensing and the associated bureaucracy.

Below are my suggestions for re-writing the core principles to focus on the drone industry instead of the government departments that are trying to regulate and licence drone operations.

*New core principles*

*Provide a simple streamlined service that focuses on the users, and enhances and encourages this emerging industry.*

*Elements of this policy include:*

- *A nationally consistent approach;*
- *Simple guidelines for safe operations;*
- *Straightforward rules for operations around built up areas, aerodromes, etc.;*
- *An optional process for Drone registration; and*
- *No licensing requirements for civil drone operators.*

Regarding the “market management approach”<sup>2</sup> after reading this draft policy, I concluded that none of this approach was true, particularly the statement “free from unnecessary red-tape “.

A better summary of the approach market management approach might be:

*We will achieve this by focussing on the needs of the users, i.e. commercial operators and hobbyists, taking into account the needs of the community, operating environments and international best practices.*

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<sup>1</sup> Page 6 Emerging Aviation Technologies NATIONAL AVIATION POLICY ISSUES PAPER

<sup>2</sup> Page 6: Emerging Aviation Technologies NATIONAL AVIATION POLICY ISSUES PAPER

To a great extent, my submission disregards eVTOL operations, because as the proposed policy issues paper states, they do not exist yet<sup>3</sup>. I also followed the references to find out about the future eVTOL trials for Melbourne and was unable to find the reference to any Melbourne trials<sup>4</sup>. While the paper is meant to encompass “emerging technologies” I think eVTOL operations should be looked at in a separate policy document because of they are likely to focus on passenger carrying operations. The development and growth of the drone industry in Australia should not be impeded by regulations etc. that will apply to eVTOL operations. This proposed policy paper concentrates on the drone industry and operations, with few policies proposed for eVTOL operations.

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<sup>3</sup> Page 9 Emerging Aviation Technologies NATIONAL AVIATION POLICY ISSUES PAPER

<sup>4</sup> End Note 6 of the Emerging Aviation Technologies NATIONAL AVIATION POLICY ISSUES PAPER

☞ **Will the proposed approach to policy development adequately allow for the future direction, operations and investments of your business/organisation?**

Not in a million years.

One of the source documents cited in this proposed policy document refers to the operation of the Drone Sector in Europe<sup>5</sup>. In Section 6, Conclusions it states:

***“The biggest barrier to the industry’s development is regulation, which limits the use of drones based mainly on two different reasons: safety and security/privacy. “***

**Airspace integration proposed policy approach.**<sup>6</sup>

Does the drone industry want or need:

- The development of a new system of traffic management for unmanned and autonomous aircraft (UTM) that includes drone operations outside controlled airspace?
- A flight information management system (FIMS), managed by Airservices Australia for drone operations?
- A remotely piloted aircraft systems (RPAS) Digital Platform, managed by CASA, for drone operations?
- A digital drone registration system, managed by CASA?
- A drone accreditation system, managed by CASA?
- A new National Airspace Policy to provide clarity and a future direction, including the integration of drone operations, managed by the Department of Infrastructure, Transport, Regional Development and Communications?

Why is CASA, as the aviation regulator, involved in the day to day operations of drones? Their mission statement is “To promote a positive and collaborative safety culture through a fair, effective and efficient aviation safety regulatory system, supporting our aviation community.”<sup>7</sup>

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<sup>5</sup> End Note 10, Page 11, Emerging Aviation Technologies NATIONAL AVIATION POLICY ISSUES PAPER, De Miguel Molina, B. & Ona, M. (2018). *The Drones Sector in Europe*.

<sup>6</sup> Page 19 Emerging Aviation Technologies NATIONAL AVIATION POLICY ISSUES PAPER

<sup>7</sup> <https://www.casa.gov.au/about-us>

### **Safety proposed policy approach.**

The current regulations are too complicated and over-prescriptive for drone operators and users. They are difficult to navigate and understand. They need to be revised to meet the needs of the drone industry and users. They also need to be re-written in plain language so that users can understand them.

The Manual of Standards<sup>8</sup> 2019 developed by CASA for drone operations over-regulates the operations of drones.

An “effective regulatory oversight”<sup>9</sup> does not have to be as prescriptive as the rules, regulations and standards that have been developed by CASA.

Many of the current drone operating rules<sup>10</sup> are over-prescriptive and unnecessary. The drone industry is likely to be killed before it gets off the ground.

### **Licence requirements, registration and accreditation proposed policy approach.**

Licensing requirements and safety accreditation requirements for unmanned drones should not be required, or minimal at best. Commercial drone operators can self-regulate, and hobbyists should not be required to obtain a licence at all. CASA is over-regulating again, to the detriment of the entire drone industry.

CASA intends to mandate registration and accreditation requirement for the majority of drone operators, both recreational and commercial, progressively from 2020. The reasons given are incentivising safer operations, better information for security matters, and a database to support communication of safety messages or updates to legislation. Mandatory registration and accreditation is not required to achieve those outcomes. It is another unnecessary intrusion into drone operations by CASA.

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<sup>8</sup> [Part 101 \(Unmanned Aircraft and Rockets\) Manual of Standards 2019](#)

<sup>9</sup> Page 26 Emerging Aviation Technologies NATIONAL AVIATION POLICY ISSUES PAPER

<sup>10</sup> Page 26 Emerging Aviation Technologies NATIONAL AVIATION POLICY ISSUES PAPER

### **Security proposed policy approach.**

The proposed policy approach<sup>11</sup> is sensible, although consultation with the drone users or industry is not directly mentioned. It is referred to in the second last bullet point.

The existing approach of CASA's accreditation scheme is not mentioned in the final proposed policy approach; hopefully it will be removed.

### **Noise proposed policy approach.**

A national Drone and eVTOL Operations Noise Policy Framework<sup>12</sup> is a sensible outcome, provided it is kept simple. Drones are quiet now compared to other flying objects, and are unlikely to require any noise certification or standards.

### **Environmental proposed policy approach.**

A national approach should be developed, although it is not explicitly mentioned in the proposed policy approach<sup>13</sup>. A national approach is mentioned in the explanations.

The current location strategies, including the use of Commonwealth and State National Parks across Australia, and permit strategies are confusing, conflicting and in many cases time consuming for drone operators to comply with. They inhibit the growth of the drone industry. An example of this is the development of drones as personal rescue devices for people who are lost or dis-orientated in national parks and other remote areas. With a personal drone linked to their mobile phone they can find their location and not require the services of search and rescue. Removing the need for permits will allow this area of the drone industry to develop.

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<sup>11</sup> Page 33 Emerging Aviation Technologies NATIONAL AVIATION POLICY ISSUES PAPER

<sup>12</sup> Page 37 Emerging Aviation Technologies NATIONAL AVIATION POLICY ISSUES PAPER

<sup>13</sup> Page 37 Emerging Aviation Technologies NATIONAL AVIATION POLICY ISSUES PAPER

#### **Privacy proposed policy approach.<sup>14</sup>**

I wish the Australian Government all the best in the development of a nationally consistent approach for managing privacy concerns, including trespass, nuisance and surveillance issues.

#### **Electric Vertical Take-Off and Landing Vehicles proposed policy approach.**

The proposed policy approach<sup>15</sup> separates eVTOL operations from drone operations. Although eVTOL operations do not exist commercially yet, they are coming. As they are likely to carry passengers, different considerations will apply from those applying to drones.

Deakin University, in September 2020, have published a comprehensive paper on eVTOL aircraft operations in Australia<sup>16</sup>.

#### **Infrastructure proposed policy approach.**

Infrastructure must be a national approach<sup>17</sup>.

While I agree that communication, navigation and surveillance systems need to be developed as the drone industry develops and expands, the decisions in these areas must be made in consultation with the drone industry and should be the minimum required for the industry. Warehousing and site management should remain the with the industry operators.

#### **Technology trials<sup>18</sup> proposed policy approach.**

Sand box areas for trials may be applicable for some drone operations. Regulatory approaches should not be required for the testing and trialling of all new drone operational and vehicle concepts.

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<sup>14</sup> Page 46 Emerging Aviation Technologies NATIONAL AVIATION POLICY ISSUES PAPER

<sup>15</sup> Page 49 Emerging Aviation Technologies NATIONAL AVIATION POLICY ISSUES PAPER

<sup>16</sup> [https://www.deakin.edu.au/\\_data/assets/pdf\\_file/0010/2213794/Deakin-University-Mobility-Whitepaper-Advanced-Aerial-Mobility-and-eVTOL-aircraft-in-Australia.pdf](https://www.deakin.edu.au/_data/assets/pdf_file/0010/2213794/Deakin-University-Mobility-Whitepaper-Advanced-Aerial-Mobility-and-eVTOL-aircraft-in-Australia.pdf)

<sup>17</sup> Page 51 Emerging Aviation Technologies NATIONAL AVIATION POLICY ISSUES PAPER

<sup>18</sup> Page 53 Emerging Aviation Technologies NATIONAL AVIATION POLICY ISSUES PAPER

### **Central coordination proposed policy approach.**

No mention is made of the Department of Infrastructure, Transport, Regional Development and Communications including the drone industry or operators in this proposed policy approach<sup>19</sup>, but regular inter-departmental forums will be included. The focus must be on the industry and operators, not the government departments that are there to assist the industry to reach its full potential.

### **Are there any other approaches that could benefit the sector?**

Yes.

Employ people from the drone industry or drone users to develop the policies in this paper. Ensure the people developing the regulations, licensing and other controls are current drone operators and users.

Step back and look at the minimum government inference that is required, rather than developing rules, regulations, licences etc. that inhibit industry innovation and growth.

### **What level of service and regulation do you expect from the Government?**

Minimum levels of service and regulation. The drone industry has many potentially and unknown applications. It should not be over-regulated by government departments. Consider the constraints on other similar industries. An example is the bicycle industry in Australia. Because it has been allowed to develop with minimal government interference, like rules, regulations, databases, and registrations, it is flourishing. The future growth of the industry is determined by the bicycle industry and the users.

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<sup>19</sup> Page 55 Emerging Aviation Technologies NATIONAL AVIATION POLICY ISSUES PAPER

☞ **What are your expectations of the Government's role and responsibilities in the management of drones and eVTOL vehicles?**

Provide the required infrastructure, develop national approaches where possible, and stop the over-regulation etc. that is occurring, particularly by CASA.

☞ **What are the key opportunities that these new technologies could deliver for Australia?**

There will be many economic benefits if the drone industry is allowed to develop. Looking at the bicycle industry again, the sale of bicycles is only one part of the economic benefits. Repairs, maintenance, parts, accessories, and clothing make up a lot of the indirect revenue generated by the bicycle industry and its users.

The proposed policy paper references the commercial trials of drone deliveries in, Canberra<sup>20</sup>. Their packages are lowered on tethers that are then unclipped by the drone<sup>21</sup>. There is the market potential for the installation of drone delivery landing pads being installed outside homes in the future. This is an example of the economic benefits of the drone industry that could flow into other industries.

The Segway industry, in Australia, is an example of an industry that has not reached its full potential due to over-regulation.

☞ **What are the most significant barriers to realising these opportunities?**

Government departments smothering the industry in unnecessary rules, regulations, operating procedures, licensing standards and restrictions.

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<sup>20</sup> [https://wing.com/en\\_au/australia/canberra/](https://wing.com/en_au/australia/canberra/)

<sup>21</sup> [https://wing.com/en\\_au/how-it-works/](https://wing.com/en_au/how-it-works/)



☞ **What issues or actions should the government prioritise to facilitate the growth of emerging aviation technologies?**

Look at all the regulations etc. in consultation with industry and reduce them to the minima required.

Consult directly with the drone industry and users, and listen to them. I am sure there has been “consultation” with industry groups but I doubt they agreed with some of the over-zealous regulations etc. that have been implemented.

☞ **To what extent should Australia’s approach be harmonised with approaches taken in other countries?**

This very much depends on the countries that we wish to harmonise Australia’s approach with. Our role models should be countries that are assisting in the expansion of their drone industries.

Germany is an example of a country with a growing civilian drone market. In Germany, the drone market is estimated at a total of 574 million euros<sup>22</sup> but two of the weaknesses for the market are identified as “the state aeronautical authorities’ non-harmonized special permit processes and long approval processes”, and “ legal framework conditions limiting the efficient/flexible use of drones”.<sup>23</sup>

☞ **Are there other issues that the Australian Government should consider?**

Yes. Stop government departments over regulating the drone industry. The industry potential is great but unnecessary rules, regulations etc. will stop it reaching its potential.

Have people who work in the industry or use drones develop the rules etc. governing their use. Like the road rules for cars, non-drivers should not be writing them. Based on the over-regulation of the industry proposed in this policy paper, I think most of them are not drone users.

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<sup>22</sup> <https://www.bdl.aero/en/publication/analysis-of-the-german-drone-market/>

<sup>23</sup> <https://www.bdl.aero/en/publication/analysis-of-the-german-drone-market/>