Time submitted: 28/04/2020 03:20:52 PM

Submission Number: NND.001.01104

Submission Of: [redacted]

Your Details

Email address:

Phone:

Preferred means of contact: Email

What is your submission based on? I am making this submission based on my professional knowledge, qualifications or experience or on behalf of a group or organisation

What is your area of professional expertise? Application of drones in emergency / disaster response

If you are lodging your submission on behalf of a group or organisation, what is the name of the group or organisation? Australian Association for Unmanned Systems (AAUS)

Your Submission

In your experience, what areas of the bushfire emergency response worked well?

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In your experience, what areas of the bushfire emergency response didn't work well?

Intentionally left blank

In your experience, what needs to change to improve arrangements for preparation, mitigation, response and recovery coordination for national natural disaster arrangements in Australia?

The Australian Association of Unmanned Systems (AAUS) expresses its deepest condolences and message of support to all those communities impacted by the 2019/20 bushfire crisis. We add our voice to the chorus of others recognising the amazing job our firefighters, first responders, Australian Defence Force, and community members have done in the face of such adversity.

While watching this disaster unfold, AAUS cannot help but ask why States and Agencies are not readily actively deploying drones, also referred to as Remotely Piloted Aircraft Systems (RPAS), as part of routine capability? They present a here and now opportunity to enhance bushfire and associated agency capability across bushfire preparation, response and recovery efforts, and can also help reduce the risk to first responders in high risk missions and conditions.

Small, and relatively low capability drones, were deployed by individual agencies during the 2019/20 bushfire season. However, there is significant potential for use of larger and more capable drones as a supplement to existing aerial assets in a wide and beneficial array of applications across bushfire preparation, response, and recovery phases. Internationally, large fixed wing and rotary wing RPAS have been deployed to great effect in support of fires and other national disasters.

The potential benefit of the use of RPAS is well known. However, it is not industry readiness or the capability of the technology preventing their uptake. Australian industry has significant capability at a high level of technology readiness, with a number of companies offering capability in support of the 2019/20 fire response. Some of the key issues facing the uptake of the technology:

1. Current safety regulations limit the availability and deployment of RPAS. Industry, CASA, NAFC, State Air Desks and tasking agencies need to proactively and collaboratively develop the general safety case for RPAS deployments ahead of a likely tasking period/season. Streamlined regulatory approval and enhanced readiness can be achieved through the use of template safety cases (SORA Standard Scenario templates) and defined operational procedures for high risk bush fire areas. Consideration should also be given to the issuing of "blanket operational approvals" to pre-approved operators, which are not specific to particular locations but general environmental factors. There should be recognition that typical bush fire deployments occur over rural areas and in airspace environments that are under the coordination of a State Air Desk. These factors significantly contribute to the safety case for RPAS deployment.

2. The current tasking and contract model is not compatible with the current regulatory approval process and does not provide the RPAS industry a viable business case. The various levels of "call when needed" contracts used by State Authorities use, work for rotary and fixed wing platforms that can be freely used for other airspace tasks when not deployed for fire response. It is not possible for RPAS operators to obtain the necessary regulatory approvals in a timeframe necessary to respond to a "call when needed" tasking. This makes them a low readiness asset, which only get limited tasking. Under this contracting model, operators are only paid when tasked. Consequently, RPAS operators end up spending significant money having remote pilots and assets on stand-by, which, unlike conventionally piloted aircraft, cannot be easily deployed to other commercial tasks. This is not viable. There are a number of potential solutions, including having NAFC as the single body contract a limited number of RPAS companies/capabilities that will be paid to be present for the fire season, in a similar manner to the contracting of large strategic air tankers. This would provide the sustaining funding needed to support pilots and assets on standby. States can then bid for these assets as they would for the large aerial firefighting aircraft. This model could be supported through making leased RPAS assets available to other agencies outside of the fire season.

3. Capability Integration. There remain integration activities that need to be undertaken to safely and efficiently incorporate RPAS capability within existing agency frameworks. This includes technical integration of communication and sensor data feeds into existing Agency infrastructure, as well as the development of operational procedures and the training of personnel. These should be standardised across States and Territories. However, industry lacks opportunity to engage with agencies to identify and solve these integration challenges. This requires the dedication of personnel and resources by both industry and agencies.

4. Legal. State and Commonwealth land authorities have imposed various requirements on the operation of RPAS. These rules are intended

for small drones operating from within a State Park or National Forest, however, these rules have also been assumed applicable to more capable RPAS supporting firefighting activities. As a consequence, the RPAS operator must determine the various land areas overflown, the applicable rules, and if necessary, contact and seek approval from each land authority it intends to operate over. This adds significant and unnecessary administrative burden to the deployment of RPAS and reduces mission operational flexibility. It should be noted that conventionally piloted aircraft are not required to seek similar approval.

Universal to addressing the above challenges is a national capability roadmap, capability development and implementation plan. This capability roadmap should establish national capability readiness milestones and outline the regulatory, contractual, technical and operational capability gaps and activities that need to be undertaken in order to realise them.

This initiative should be adequately resourced and involve active participation of industry, CASA, NAFC and Agencies.

AAUS strongly believes that RPAS can save lives and significantly enhance Australia's bushfire and emergency response capability. The Association welcomes the opportunity to further expand on these issues and the potential solutions towards addressing them.

Is there anything else you would like to tell the Royal Commission?

Intentionally left blank

Do you agree to your submission being published? Yes I agree to my submission being published in my name

Supporting material provided:

AAUS Submission Royal Commission National Natural Disaster Arrangements 20200428.pdf

Australian Association for Unmanned Systems (AAUS)

Submission to

Royal Commission into National Natural Disaster Arrangements

28/4/2020

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About AAUS

The Australian Association for Unmanned Systems is Australia's oldest and largest industry advocacy group for drones and the emerging urban air mobility sector. AAUS represents drones across all three domains: land, sea, and air. AAUS' objective is to promote a professional, safe and commercially viable unmanned systems and urban air mobility industry. AAUS achieves this through its industry advocacy and promotion, education and outreach, and networking activities.

AAUS provides a single representative voice for the full breadth of the drone and urban air mobility industry. AAUS' 2,300 membership spans small-to-large enterprise, manufacturers, licensed and unlicensed operators, training providers, academic institutions, Government, and other supporting technical and professional services to the Australian drone industry.