NSW SBIR Koala Count Challenge: Q&A Transcript

Topic: Eligibility criteria

Is a non-NSW based SME eligible to apply if they partner with a NSW based university and conduct the majority of the R&D in NSW?
Live answered at 35:23

Are universities eligible to apply?
Live answered at 36:48

If the SMEs are headquartered outside of NSW but conduct the majority of their operations/delivery in NSW, and are able to shift relevant operations to NSW to deliver the SBIR project are they eligible to apply?
Live answered at 54:24

Topic: Application process

Will there be an interview process as part of the application process?
Live answered at 32:29

How will the DPIE staff interact with the OCSE staff during the assessment process?
Live answered at 33:35

How much emphasis will be placed on the quality of the video presentation?
Live answered at 34:48

Will the video presentation be a proof-of-concept demonstration (like an animation presentation)? Or an oral presentation with a PowerPoint?
Live answered at 51:45

How many projects are expected to be supported for each problem at each stage of the process?
Live answered at 48:59

Topic: Funding

Can the grant cover 80% of the Project Budget?
Live answered at 52:40

Topic: Current DPIE approach

Can you confirm that you already have an Azure cloud solution, or is this part of your wish list?
Live answered at 42:48

How developed is the AI for spotting Koalas?
Live answered at 47:51

Is your AI thermal or RGB based?
Live answered at 58:00

Do you cost the drone operator/observer time into your 'Drone costs'?
Live answered at 41:52

How far are you into the hardware development for the acoustic sensors?
Live answered at 55:20, reference to Law et al (2018) paper and Audio Moth acoustic devices.

How do the different teams share insights from each of their projects?
Live answered at 44:00

Why do you go for a smaller drone (Mavic 2 Enterprise drone) compared to the Matrice 600 Pro? Any consideration for that why the big drone is not good enough?
The M600 Pro will work fine. We have used an M200v2 extensively. We have found the Mavic 2 Enterprise Advanced (M2EA) offers better thermal performance than the XT2 at a fraction of the cost and with less complexity. We can operate 4 M2EA for the same cost as one M200.

From the Witt et al (2020) paper, the methods for surveying described were carried out between 3am and noon. Is there a reason the surveys did not begin earlier? Say dusk, 10pm or 12am (when the sun would still not be disruptive for thermal imaging)?
We start earlier if weather conditions permit, this particular stud was in Port Stephens, NSW.

How large were the teams deployed to carry out the surveys (described in the Witt et al (2020) paper)?
Two for the drone team, others for capturing animals including vets. The drone team may be two pilots flying simultaneously or a pilot with a spotter.

How often were these surveys carried out?
We have at least one pilot operating each week through most of 2021.

One what basis has the drone currently been chosen? Are there specific characteristics or reasons?
Cost per hour of battery life per night and performance are what were considered.

In the presentation Adam Roff mentioned that there were six pilots who control the drones. Are they flying the drones during the survey sweep or are they programming the drone's autonomous parallel-linear transect pattern?
DPIE have six pilots with CASA and DPIE certification. In some cases, the pilots will be flying simultaneous missions.

Do the audio capture devices currently deployed require retrieval before being processed by the software?

To gain access to the data you need to either retrieve the acoustic device or remove the SD card. If one survey at a site is all that is required, the researcher would usually collect the devices and bring them back to the lab for processing. If more than one survey is required, the researcher would collect and replace the SD card and batteries and leave the devices in the field for the next survey. At this stage, the data is not streamed from the field site to the cloud for retrieval back in the office, it is done manually.

Topic: Access to information

Will it be possible to work with DPIE and OCSE staff and the commercialisation panel during the feasibility study? Will there be interviews with agencies and the commercialisation panel during the feasibility study?

Live answered at 33:00 and again at 33:36

Will data already collected by the government be made available to successful applications for the feasibility study? Can we get access to the koala drone thermal data?
Live answered at 46:10

Can you please share the link to the research papers and documents mentioned in the presentation?
Please refer to the following links:
Witt et al (2020) paper
Law et al (2018) paper
Koala Habitat information base technical guide (2019)
NSW Koala Monitoring Framework 2021
NSW Koala Strategy

Topic: Solution requirements

As the challenge mentions the requirements around distinguishing between sick and health koala, will be able to team up with a koala vet? If so, will NSW Government provide a vet or do we look for an expert ourselves to include in our team?
Live answered at 37:40

When you say scale what do you have in mind in terms of square kilometers?
Live answered at 39:40, refers to NSW Koala Habitat Information Base.

The objective is state-wide but surely drones only cover a tiny fraction of that area?
Live answered at 39:54

After we get through Phase 1, are we able to access the recorded data that you have to apply ML to give predictions? If we have drones and AI technologies, can we provide better solutions and services compared to the current ones?
Live answered 49:30

Will the sound of the drones impact the habits of the koala? At what distance could we fly the drone from the possible hot-spot (i.e. in some studies they are about 25-30m from the top of the tree)?
Live answered 53:04

Would a successful grantee be able to utilise DPIE's ethics approval to fly drones to test koala survey techniques?
Live answered at 57:30

How frequently do you need this data sampled? How strict is the boundary for the NSW count (e.g. terrestrial overlap with VIC)?
Under the NSW Koala Monitoring Framework, surveys for koala monitoring occur at different periodicities depending on the partners we are working with across the state. They range from yearly to every 5 years. Further, a survey might take several years to complete if it is conducted over a large area such as a state-wide or at a regional scale. Please refer to the NSW Koala Monitoring Framework, which details this information.

As we work for NSW Government, our koala monitoring work is only done in NSW. We may consult with other states and share data but would not fund work in other states.