Client Questions:

1. When you say install the app, do you mean mobile app?

* Android or IOS? Or both?
* Given that developing apps for both increases development time and

resources, if you had to pick one as a Minimum Viable Product, which

would it be?

**Both OS – requirement of project. Prototype proof of concept but do want cross platform for Android and iOS.**

2. Can you elaborate on how you expect the app to work?

* My guess:
* App accesses phone’s location, if it is within a certain radius of a detected

Dropbear it will create a notification on the person’s device

* If you were forced to name the bare minimum of what you would expect the app

to do, what would it be?

**App just for public. Guess is not what they want (perhaps in future).**

**Only shows how many sightings in last 24 hours in a postcode area.**

**Can get push notifications on how many sightings (with option to turn on or off).**

3. What machine/s have you been processing the images on? What is the operating

system your technology is built on?

**Tensorflow framework (developed in house), using on Linux. Will be providing us with prediction model in Tensorflow to be deployed on AWS (cloud).**

4. Where/on what machine will the images be processed? Is the machine currently setup

to receive data from external sources? Do you have an existing api/software for this

purpose?

**We are deploying on AWS, using the provided prediction model to integrate into our system (consider services needed).**

5. Are the camera traps an off the shelf model?

* If they are, what is the model
* If not, what are the components of each camera trap by functionality, e.g. motion

sensor, camera, storage, transmission device, power source?

* What file format are the images?

**All off-the-shelf, all the same model with motion sensor/camera/SD storage/3G using email/battery + solar panel.**

**JPG 750x750 res, 500kb size. Three images taken with each trigger, sent via email.**

6. How are you currently receiving the images from the camera traps?

**One camera sent to client for testing. Other cameras currently saving to SD card and needs to be hand collected.**

7. How exactly do the cameras send the images, and to where? Is it sms or email or

what?

**Over email, can send to any email we like.**

**Email address for each camera trap.**

8. Do you have/who is your network service provider for image transmission from the

camera traps?

**Telstra network, no need to worry about reception issues.**

9. How do you know which image came from which camera? Metadata on the image

files?

**They will give us ID number and GPS co-ords for each trap. We should create email for each trap so we know which camera it’s from using database.**

10. What metadata is currently attached to each captured image? Timestamps, location

etc?

**Timestamps only (date and time).**

11. So have you already set up a website for dropbear sightings or are you expecting us to

do that?

* If you already have a website, how is the website built, i.e. what framework, is it a

Saas modular website etc

* If you don’t, does the university have a similar/analagous website for another

purpose that can be leveraged?

* Does the university have an existing website building Service Provider that
* can be leveraged for this website creation?
* What would be the functionality you expect for a Minimum Viable Product for the

first release of this website?

**We are expected to create/setup website (app AND website needed). Not worried how to set it up as long as it’s on AWS (as per funding guidelines). No university infrastructure that can/will be leveraged. Same thing as app (sightings in last 24 hours/postcode with database for general public/researchers).**

**Would like ability to sign up using postcode and email for notifications – no user signup needed.**

**Can access all raw data but only after requesting access (for researchers). Need to be able to log in and query database: Time/date, image, GPS and trap ID, classification - sighting or not, accuracy in confidence.**

12. Do you have a system already setup for storing images for researchers, or would that

need to be built?

* If it exists, please describe it; is it cloud based, or maybe a singular machine that

can be accessed on the university network etc?

* If it doesn’t yet exist:
* How do the researchers expect to be able to access the images? Website,

cloud storage service, over the university internal network?

* How do researchers at the university currently access data collected in a

fashion similar to this?

* Does the university currently provide a service that could provide storage

of and access to these images that we can leverage?

**Must be part of the build, stored on cloud service. Does not exist. Researchers access through website – need to create API to store. Again, no uni infrastructure.**

13. Regarding automated sorting of captured images:

* How do you want to sort the images? Location, timestamp, etc? Can your

technology detect certain things like age, quantity, health etc of the bears, or

environmental conditions (e.g. level of sunlight) that would be useful for image

categorisation?

* Do the metadata in the image files contain all the information that you would like

to categorise?

* Is there an existing/analogous categorisation methodology used by researchers in

the university that would be preferred?

**Stored by camera trap. Stored in folder with all images (positive and negative detections). No other details needed – just whether one is detected or not. Can add ability to note if day or night (using greyscale/rgb values).**

14. For the website, do you want different levels of access for the dropbear images for the

public and researchers? Do you want the appearance/functionality of the website to be

the same for these user groups?

* Do you have an existing authentication service that can be leveraged for this

purpose?

* Do you have an existing user database/directory that can be leveraged for

determining researcher level access? If so, what data is there per user that

you can use to determine researcher level access? Is the data reliable in its

current state?

**Levels of access mentioned above (general public or researcher). No authentication servers at the moment and no current user base. Everything done basically from scratch.**

15. Are there contractual milestones/outcomes that are required of UNE to justify/retain

their funding? What are they? Are there outcomes UNE wants to achieve for this

purpose that are not clearly specified?

**One year project. Milestone dates every three months to sit down with Dr Client and discuss with him. Would like to know our timeline/plan and organise milestones around that. Last three months of project will be a trial using all cameras.**

16. Regarding the federal funding for reducing dropbear fatalities:

* What does UNE want from this project to contribute to this outcome? Are there

specific data requirements UNE thinks will help? What are they?

* Are there any expected metrics/KPIs to measure the success for this outcome?

What are they, and how does UNE expect to measure them?

**Success of project is decided by stakeholders, Dr Client will deal with them only, not up to us. UNE not taking active role in project. Just want to see that system is viable by using only 12 cameras before scaling. Commercialisation if all goes to plan.**

17. Regarding the state level funding:

* How will you use the output of this system to estimate the NSW dropbear

population and demographics? Do you have an existing model?

* Assuming such a model exists, do you want the system to automatically

calculate the estimation based on data gathered and the model? If yes,

what is the specific intelligence you want to generate?

* How often do you want these generated? Live, monthly, on demand etc? In

what format? How do you expect these reports to be delivered (email,

online dashboard, in the mobile app etc)?

**Collecting information on sightings only. No calculations needed, only if a drop bear is sighted or not. Done every 24 hours with push notifications/emails.**

18. Is there any project deadline? If yes then do you have deadlines for individual part of

the project?

**Yes, one year project, three monthly milestone reporting.**

19. Is there any budget for this project?

**$300,000 development budget for the one year.**

20. What is the process of acquiring this project Do you want us to participate by

submitting the tender?

**Want to see a pitch from the team before choosing.**

21. Do you require register / sign up process at the end user / customer? Do you require

end user database?

**Not at this point. Only researchers can sign up if we want to add that to database. No general info collected.**

22. Will there be any requirement of maintenance the app after deployment such as

update app, fixing bugs time to time?

**Secured hosting funding for three years, anything over the one year can be re-negotiated or new negotiation for updates/etc.**

23. Will there be any subscription for the end user or will it be free for the end user as you

mentioned commercial deployment? If there is a subscription then do you require

payment options provided in the app?

**All free, no current commercialisation.**

24. Do you require push notification of the warning through the app based on GPS

location?

**Yes, based on postcode.**

25. Will there be any emergency warning options for the end user for communicating

with the relevant authority/department for immediate actions?

**Not at this time.**