**Camera Trap Information**

* Camera locations?
  + 6 in New England, 6 in Northern NSW, for 12 in total.
* Camera traps handling images?
  + Will send 3 images via 3G to separate email addresses (one per camera) using SMTP. Project team has access to these email account. Each email will only contain the images, and time of day (the location is already determined by the camera trap/email address).
* Camera trap image storage?
  + Each camera trap has an SD card where images are stored before being sent. Each SD card has a 2-4GB capacity, but not required to store images only send to email.
* Image information?
  + Each image is JPEG format, 750x750 pixels and 500kb in size.
* Limit of images per day?
  + No limit. But we want to find out how many sightings there are for research purposes.
* How are camera kept operational?
  + They are solar powered and considered reliable.

**App and Website Information**

* Website information?
  + Website has two parts, one side for the public that operates identical to the app with email sign-ups, and another side for researcher who can sort/find various information.
* App information?
  + Public only and should only be updated with positive sightings depending on the confidence level.
* How should the app categorize sightings?
  + Postcode only. Last 24 hours.
* Public functionality?
  + Find positive sightings based on postcode. Get notifications on phone about sightings at specific postcodes. Email sign-up on website for same phone notification functionality.
* Researcher functionality?
  + Should be able to sort and filter results based on specific information required. Sort/filter functionality should be done through the database level. Some data is already pre-sorted (positive or negative sighting).
* What information is required for researchers?
  + The time/date image was taken, the GPS location of the camera trap, the image itself, the classification of the sighting (binary positive or negative), and a confidence value that the classification is a positive sighting. Researchers should be able to sort by fields from this information.
* Is downtime of the app/website acceptable?
  + App/website must be accessible 24 hours a day.
* Maximum users on the app/website?
  + 5 test users. The main user is Dr Klein.
* User accounts?
  + Public requires no accounts; however, they can sign up to email alerts. Researchers can sign up through a web-form which will then be verified on a case-by-case basis.

**AWS and Database**

* Database structure?
  + A central database for all data. There is no storage of public information.
* Time delay between detection and updating app/website?
  + Unknown how long it would take, but as fast as possible. Ballpark is a couple of minutes.
* Hosting environment?
  + Cloud based hosting using Amazon Web Services (AWS).
* Database information?
  + Stores all images whether they be positive or negative as negative sightings are useful to the researchers. No storage limitations and storage should be permanent.

**Machine Learning Model**

* Machine learning model information.
  + ML model uses the TensorFlow API which is a prediction model. No training data as research is not published at this time.
* Dropbear classification?
  + Machine learning model developed by the research team. Binary classification of dropbear (either positive or negative sighting).
* Machine learning capabilities?
  + 3 images are taken per trigger, ML model can predict within 2 seconds of trigger whether a dropbear is spotted or not. ML model does require retraining (outside of scope of this project). It can only detect a dropbear and no other animal.
* What is the threshold for a positive sighting?
  + A confidence level 75% or above would be considered positive from the ML model.

**General Project and Development Information**

* What is the budget ballpark for this project?
  + 300k for project development.
* Project development timeline?
  + 1 year with 3-month milestone reporting, and a final 3-month field trial.
* Point of contact for research team?
  + Only Dr Klein as he is the main stakeholder for the project.
* Project updates and milestones
  + Team required to report to Dr Klein every 3 months.
* Development platforms?
  + iOS and Android for the app (latest builds of the OS) and should be cross platform. Website is web development.
* Overall order of execution upon camera trap triggered?
  + Camera sends 3 images to email address, solution must then send these images to AWS and save some metadata, which will then be stored in a database and processed by the machine learning model for classification. Upon classification, app/website is updated.
* Documentation?
  + All code for the solution must have proper documentation. Dr Klein needs to fully understand the solution to communicate and demonstrate it to other stakeholders. Documentation should be available on AWS.
* Security concerns?
  + Only within typical security methods (app/website/database vulnerabilities, typical account encryption for researchers).
* Public safety?
  + Not applicable for this project.
* Maintenance and support?
  + There is funding for cloud hosting for 3 years. However, your project is only 1 year and will not be required to support the software past this date.
* What should the final handover be?
  + A prototype, proof-of-concept. Support a maximum of 5 users, with the main user being Dr Klein.