**Existing Architecture**

1. How many cameras are currently installed in field collecting data?

12 cameras, 6 in two locations.

1. At full scale how many cameras are expected to be collecting data?

Can start with 1, moving up to 12 at the end of the project.

1. How many images are taken by the cameras when motion is detected and what are the image file types & sizes/quality?

3 images for every motion, jpg, 750x750, 500kb each.

1. Confirm the cameras are internet capable through the 4G network and will send an email with image attachments when motion is detected.

Using 3G. Sending via email.

1. What other data will the email include (e.g. location & date time tracking information) and how is this information formatted? (Sample data would be useful).

Email only includes the image and time of day it was sent.

1. How long does it take for the image recognition to process a single image? (Used to estimate real-time data lag).

ML can predict within 2 seconds.

1. Will the described Dropbear Machine Learning Model be made available to use/replicate by our development team? If so, when can this be made available?

The model is called TensorFlow and you will access to it. You can deploy and use it easily. Won’t have access to code or training data due to not being published yet.

**Project scope**

1. Confirm the following project scope (for my team) is accurate as per your requirements and highlight any additional requirements that you see:
2. Create a receiver system to collect & catalog received images

Cloud based system (AWS) will save and receive images.

1. Pass received images for processing by automated image recognition technology (developed by your team) (integration between the two systems required)

After receiving image, needs to be added to the database, and then processed by ML model.

1. Create a database to store positive results and tracking information

Store any incoming images, including negative or positive sighting results.

1. Create a website with separate Public / Research interface for tracking of processed data

Yes, we need a website that has a public and research side.

1. Create a phone application for public use to track real-time data of positive sightings.

Mobile app only for the public.

1. Store positive results in database and up-date website/phone application with information in real-time

Store both positive and negative but update app with only positive sightings.

**Required Architecture**

1. Will the receiver system/processing software and recorded data be stored on the University server or do you require database storage as part of the provided solution?

No, just on AWS.

1. Will the website and phone application be hosted on the University server or do you require a hosting platform as part of the provided solution.

Yes, require hosting platform. None will be hosted by the Uni directly. Will be AWS.

1. Do you require on-going support past Operational Roll-out, if so what level of support do you envision you would require?

Dr Klein needs training only. Support not within scope of this project.

1. Will the all image and captured data be open to the public or does it require auth provider such as oauth to be integrated.

We only need a researcher portal that researchers can login into. Case-by-case basis access by a web form.

1. Is an JSON/XML API also required so that other services can interact with the detection system?

Only internal to your own system. Not required for other systems to access. But recommend a JSON API anyway.

**Priorities & schedule timeframe**

1. What if any required timeframes does your project have, including Initial Operating Capability for the cameras already in place and Final Operating Capability for the roll-out of additional camera networks?

Cameras already out and receiving images from 2 camera (rest checking via SD cards manually). Project is 1 year, 3 months for milestones. Final 3 months is a field trial with all cameras operating.

1. Is the real-time tracking a higher or lower priority to the collecting and sorting for research data and are there any required timeframes of each?

Prioritise collecting data, secondary getting tracking working.

1. Are there any more timeframes, funding or otherwise, that my team should be aware of?

Not particularly. Dr Klein will manage that. Be aware of the 1 year limit and milestones.

**Research**

1. How do you require the information to be sorted, what variables do your customers want to track and record. Examples include:

We want the time image received, image itself, GPS location, classification (positive or negative), confidence value. Researchers should be able to sort by any of those fields.

1. What is the expected lifespan of the dropbear research and detection project? Is this devised early warning and research image system intended to be implemented permanently or for a set duration? Concerns to raise

1-year development, but 3-years funding (2 years outside of scope for this project). Possibility that could be extended.   
  
All images are permanently saved.  
  
Maximum storage has no upper limit.