



# AI Hackathon

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AI for the Environment Hackathon Festival

Problems to solve



# Detailed Problem



## Te Korowai o Waiheke

TOWARDS PREDATOR FREE WAIHEKE

### **Making Waiheke Island the world's first predator-free urban island**

*Imagine Waiheke Island being a haven for unique and ancient species of birds, lizards, insects and plants, a place of exceptional beauty for both current and future generations!*

*Te Korowai o Waiheke is a charitable trust established by the local community to eradicate predators from our beautiful island. The first stage of the Te Korowai o Waiheke project is a stoat eradication island-wide. The second is a series of rat pilot operational trials to understand how to remove rats from the whole of Waiheke.*

<https://tekorowaiowaiheke.org/>





# Problem Statement

As the Te Korowai o Waiheke project (*and other **Predator Free 2050 Projects***) progress – it is important to measure the ‘impact’ of the work to remove predators.

The Key Outcome to be measured is the impact on the presence and abundance of native wildlife – especially birds.

There are a number of initiatives that try to do this – including the New Zealand Garden Bird Survey, The Great Waiheke kākā count and The Great Kererū count.

All of these depend on people getting outside and listening at set times of the year. This is good for community involvement but brings a number of issues:

- The Counts depend on the ‘skill’ and ‘experience’ of whoever is trying to identify birdsong. Which brings a lot of variation.
- The time people can be outside is limited – and weather dependent
- It’s resource-heavy, taking people from the project’s core work.



# Desired Outcomes

- Remote Monitoring of birdsong with microphone/recorder.
- Automatic identification of the bird species via AI – added to a count.
- Priority would be 'Indicator Species' which could help simplify the project's POC. An indicator species is one that is directly affected the most by the presence of predators.
- Indicator Species : Kākā, Kererū, Ruru, Pīwakawaka, Tūī
- Consistency of counts enabling year on year comparisons.

## Source Data

- Currently confirming access to sound recordings from The Cacophony Project which is open source. <https://cacophony.org.nz/>
- Sample sound files can be found at <https://nzbirdsonline.org.nz>



# CRITERIA

Your pitches will be judged against the following criteria:

## **Meeting the innovation brief:**

1. You must be solving an environmental problem that is aligned to the 5 key areas outline in this brief
2. Your pitch must involve a technology innovation – this includes innovative use of existing technology.
3. The technology used must include elements of AI. You must explain what these are and how they are used.
4. If you have completed any work prior to the event, you must disclose what work was and your starting point.

## **Problem and Solution:**

1. Demonstrate that you understand the problem you are solving
2. Explain how your solution solves it
3. Be clear and concise

## **Will your solution work?**

1. Is it technically feasible?
2. Will it solve the problem?

***Our judging panel are very experienced practitioners from business and academia and will not hesitate to disqualify teams for non-compliance.***

# Rules of Engagement

We are inclusive organisations, we welcome people from all genders, ethnicities and backgrounds. We ask that you:

- **Be welcoming** to each other and treat everyone with respect
- **Be open** to learning new things and form new friendships
- **Be fair.** You can pre-plan with your team, but keep to the spirit of the event by collaborating and developing your ideas at the event itself
- **Be respectful.** Our hosts are welcoming you into their environments, please follow their guidance and rules

## Intellectual Property

Neither the AI Forum nor any of the sponsors have any interest in IP created at the event – whatever you create is your own.

Please be mindful of what others have created – legally you must comply with the terms and conditions of any IP ownership rights that exist regarding the things that you use. Any rights infringements are at the participants' own risk.