

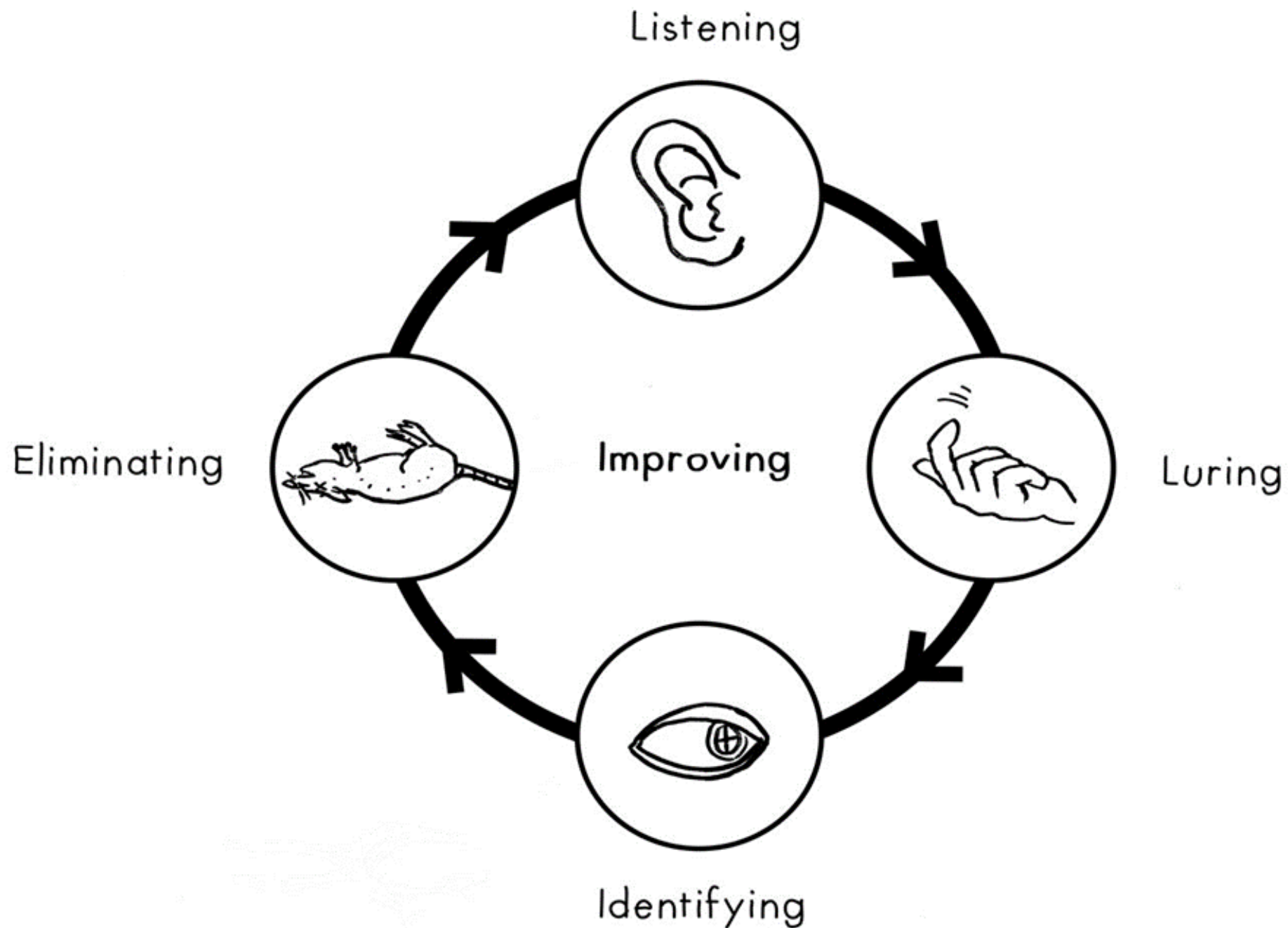
The Cacophony Project

Tim Hunt



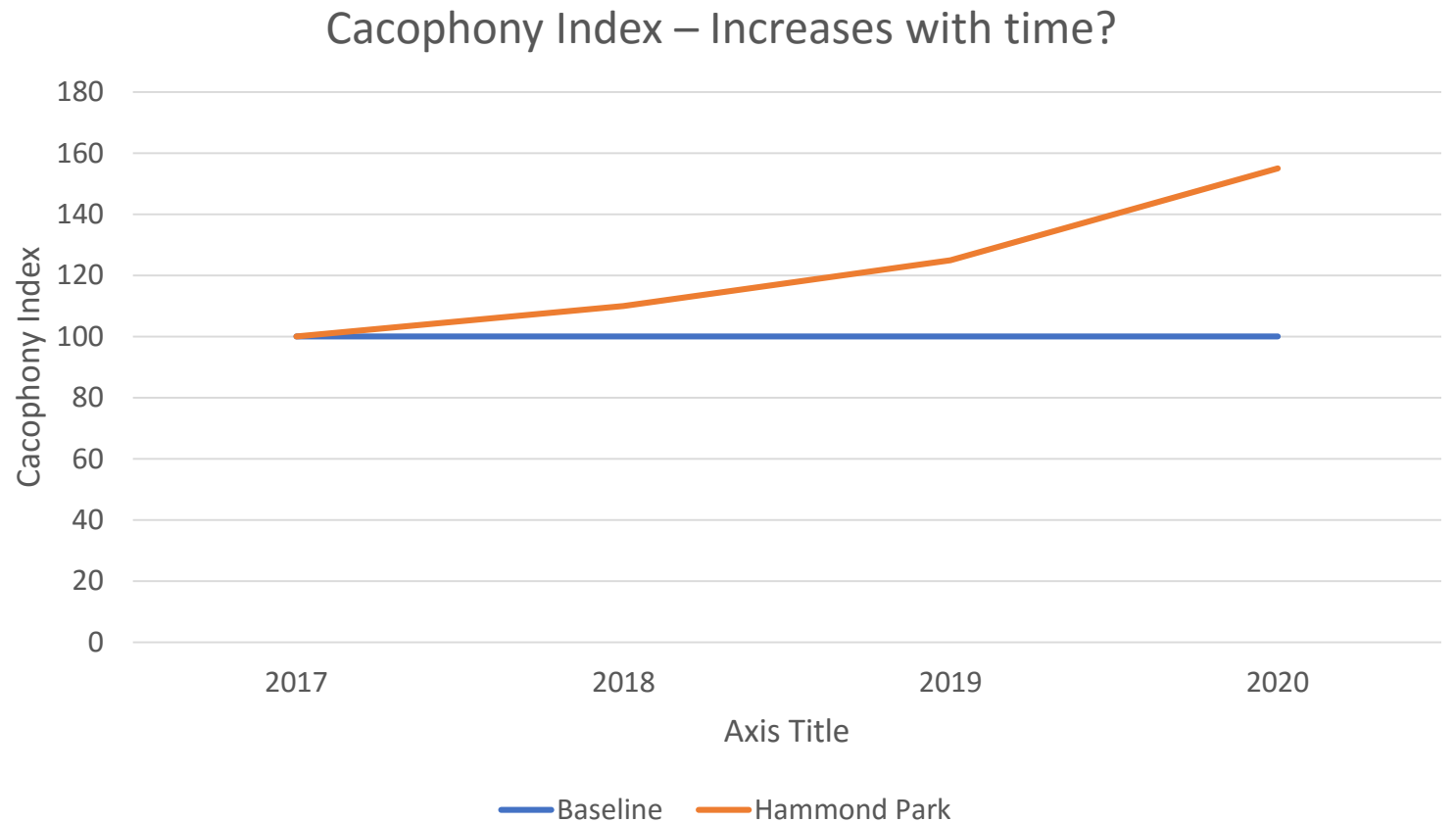
<https://cacophony.org.nz/>

“The Cacophony Project will turn birdsong into data and use the best of breed IT technologies to dramatically improve our trapping ability.”



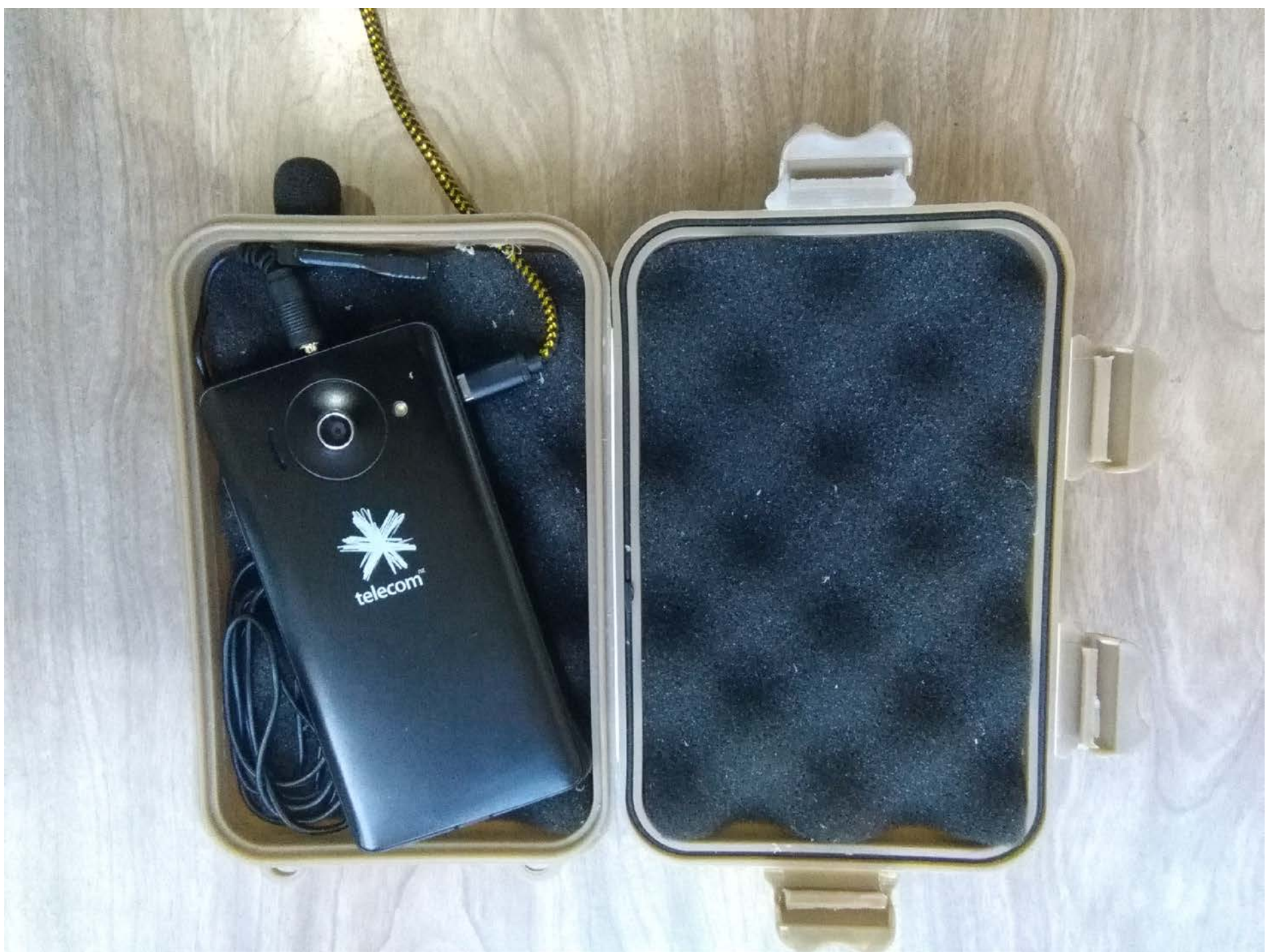
Why listen?

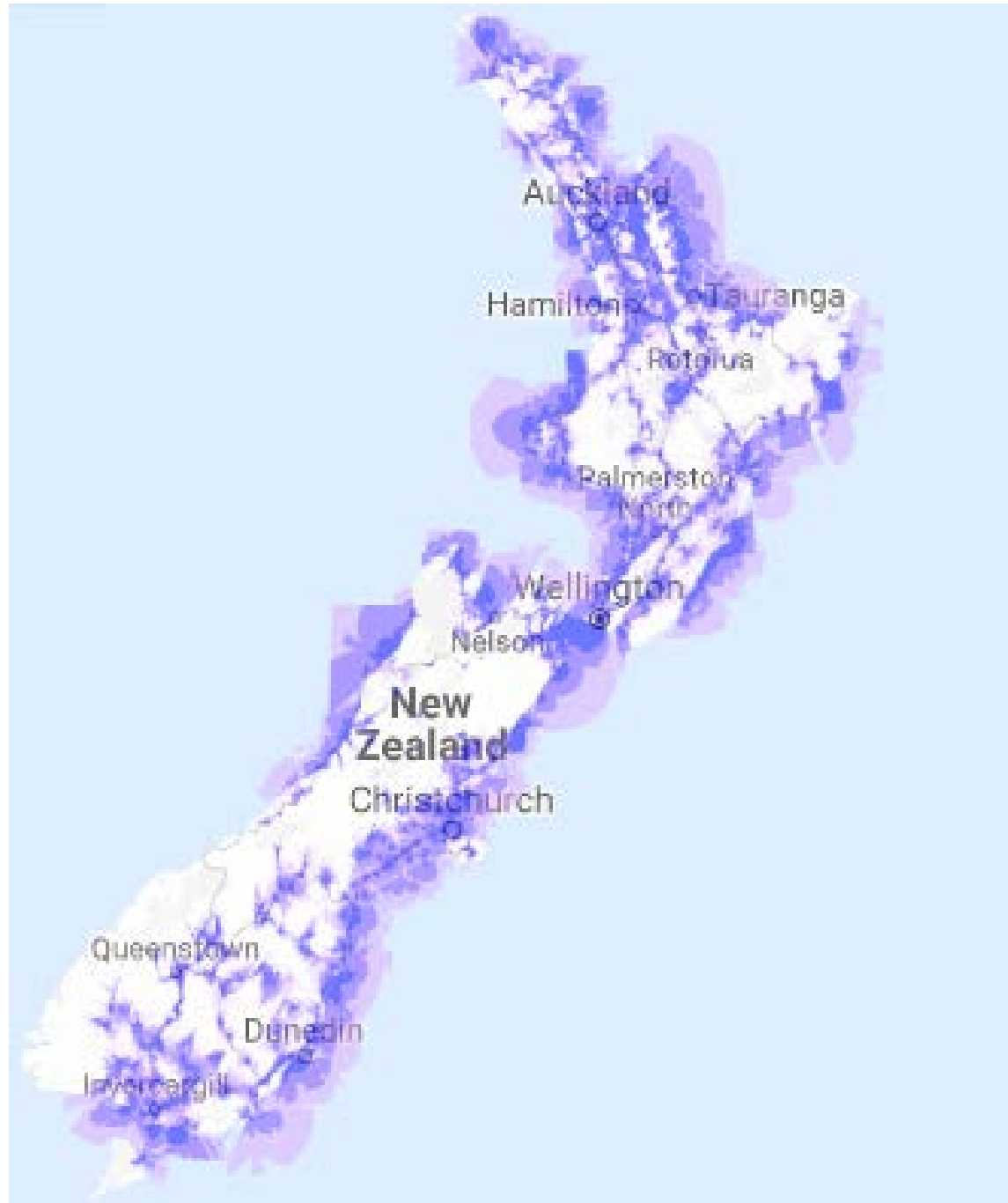
- Obtain a baseline 'cacophony index'
 - Use any change from baseline to help determine if an intervention has had an effect?



The Cacophonometer







Spark mobile coverage (3G)
<http://www.spark.co.nz/coverage>

Results – Hammond Park

- Recording commenced in Hammond Park on 22 June
 - Recording for 1 minute approximately once per hour
 - Extra recordings around dawn and dusk



Morepork? 2-25am Thur 29 Jun 2017 v2.mp3



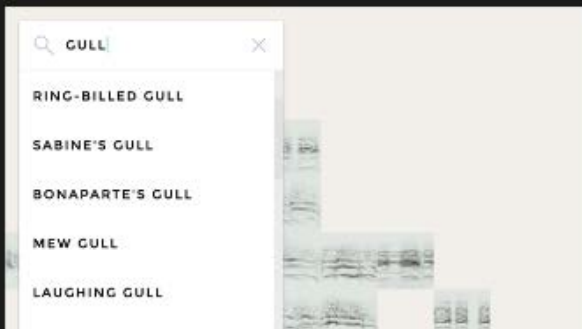
Bird Sounds

Thousands of bird sounds visualized using machine learning.

BY MANNY TAN & KYLIE McDONALD

LAUNCH EXPERIMENT

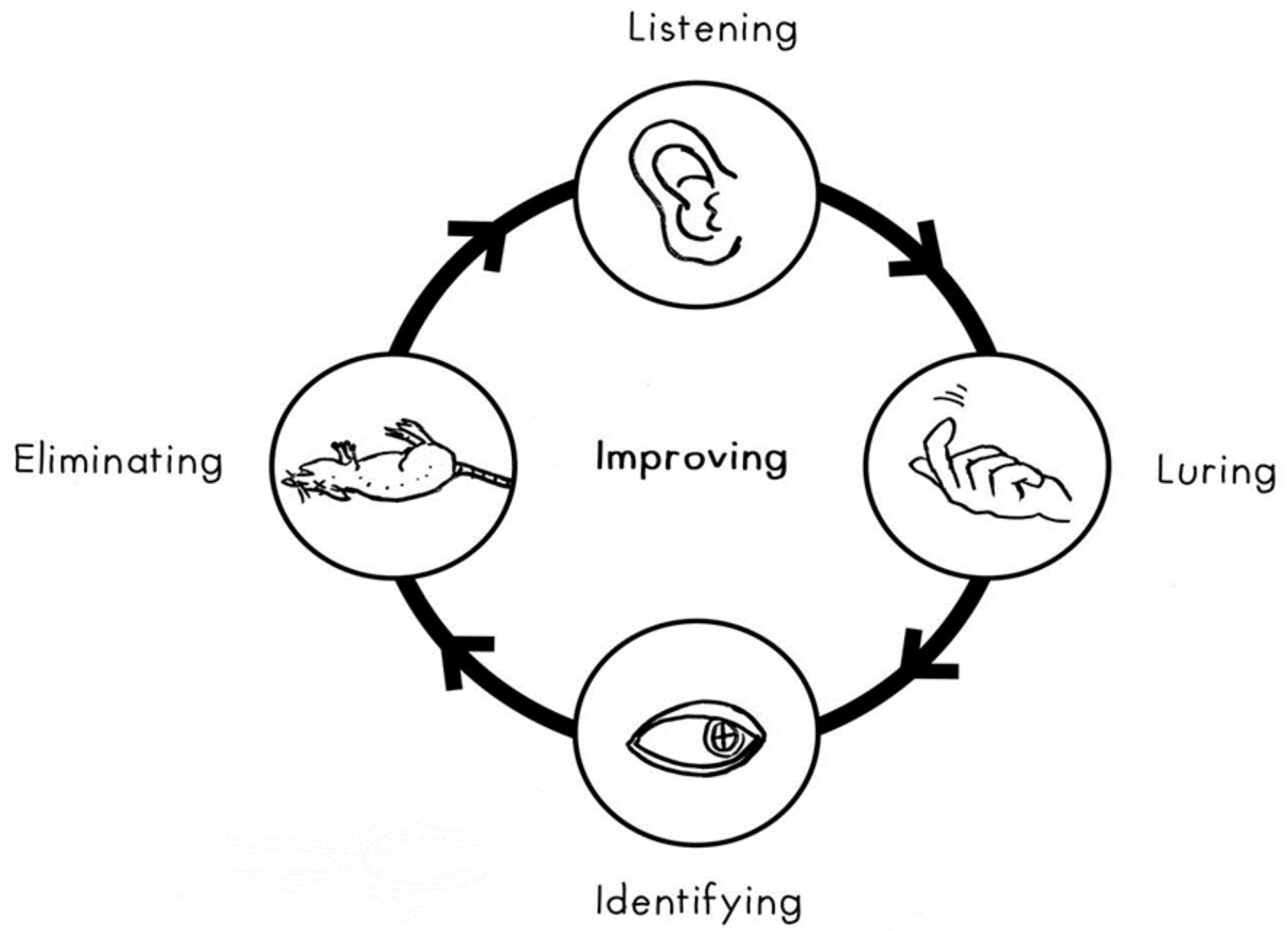
GET THE CODE



<https://aiexperiments.withgoogle.com/bird-sounds>

Bird sounds vary widely. This experiment uses machine learning to organize thousands of bird sounds. The computer wasn't given tags or the birds' names – only the audio. Using a technique called t-SNE, the computer created this map, where similar sounds are placed closer together.

Built by Kyle McDonald, Manny Tan, Yotam Mann, and friends at Google Creative Lab. Thanks to [Cornell Lab of Ornithology](#) for their support. The sounds are available in the Macaulay Library's [Essential Set for North America](#).



Acknowledgements – The Team

- Menno Finlay-Smiths - Project Manager/lead developer
- Cameron Ryan-Pears - Main engineer for project
- Tim Hunt (Wintec) - Cacophonometer lead developer
- Dave Lane - Open source design and Drupal CMS integration
- Grant Ryan - Project initiator/coordinator
- Jessica Lyons - Social media (Concentrate Ltd)
- Matthew Aitchison - Machine Learning
- Brent Martin - Machine learning (University of Canterbury)
- Elaine Murphy (DOC) - animal behaviour
- Roger McKenzie - Hardware technical advice
- Finn Maunsell - Cacophony Index - bird song analysis
- Gray Rathgen - Designer
- Kate Haley - Supporter
- Paul Campbell - Electronics design
- Tim Sjoberg (ZIP) - animal behaviour
- Mark Nikoria (Wintec) - data visualisation
- Michael Busby - Website design and development
- Max Johns - Content
- Matt Kavermann - Digital lures
- Alex James and Michael Plank (University of Canterbury) - Modelling and statistics
- Stephen Marsland (Massey University) - Bird song analysis
- Shaun Hendy - Science supporter

Friends of the Project

These kind folks and organisations have provided their support, promoted us to their networks, or have generally helped us along the way!

Main financial contributors

[NEXT Foundation](#)

[Zero Invasive Predators](#)

[Jasmine](#)

[Spark Foundation](#)

Other companies offering services for free for the project

[Spark](#) - providing free use of high speed mobile network, data hosting, mobile phones and high quality technical support!

[Balanced Accounting](#) - all accounting services

[Concentrate Ltd](#) - excellent social media services

[Anderson Lloyd Lawyers](#) - legal advice

Other supporters

[PurePods Ltd](#)

[That Quirky Foundation](#)

We're pretty sure that if you listen hard enough, you can hear the birds thanking our supporters.

Hamilton City Council
Riverlea Environment Society