# Platforms EOI: Acoustic Workbench

20 September 2019 at 11:35

## Project title

Acoustic Workbench

## Field of Research code(s)

- 01 MATHEMATICAL SCIENCES
- 05 ENVIRONMENTAL SCIENCES
- 06 BIOLOGICAL SCIENCES
- 08 INFORMATION AND COMPUTING SCIENCES
- 19 STUDIES IN CREATIVE ARTS AND WRITING

## EOI Lead Name

Paul Roe

## EOI lead Research Group

Ecoacoustics Research group

## EOI lead Organisation

QUT

## EOI lead Email


## Collaborator details

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Monitoring wildlife is fundamental for conserving threatened species and understanding biodiversity; passive acoustic monitoring is a promising approach for monitoring vocal species. Many research groups and management organisations are now harnessing this technology, and it is an area in which Australia is a world leader. The ecoacoustic workbench is one of the few open-source toolsets for collecting, managing, analysing and visualising long-duration environmental sound recordings. This toolset supports the Australian Acoustic Observatory: a unique network of sensors which are collecting sound from around Australia for biodiversity analysis ($1.8M ARC LIEF grant). Unfortunately, the toolset is old which limits its adoption, use, customisation and embedding in other applications and websites. Australian researchers and managers urgently require a more effective and efficient platform to help understand and halt species population declines. We wish to adapt and update the system to a micro-service and containerised architecture, enabling greater flexibility, customisation and scalability, to promote ecoacoustics and conservation research in Australia and around the world.

Existing technology

Adapt

The ecoacoustic workbench comprises a set of audio analysis tools, a data management website and visualisation tools. It is all open source and is built with Ruby on Rails, Postgres and Javascript:

https://github.com/QutEcoacoustics

We wish to re-architect the system to use a modern containerised architecture, with web components, Node and a pure Angular web application which can be embedded in any web page, and to swap our custom analysis job engine for a standard open-source one.

This change will allow others to run, embed or customise the workbench for their own applications.

Anticipated requirements

Annual funding

$100,000 - $199,000

Proposed length

3 years

Terms

I agree to the terms

Yes