



BUSINESS AREA: MOBILE APPS & IT

Case Study

Frog Census

Spatial Vision was contracted to create the Frog Census App for Melbourne Water in mid-2016, to harness the power of citizen science to digitize and streamline Melbourne Water's Frog Census.

Melbourne Water's Frog Census program was established in 2001. Previously, volunteers recorded frogs at their local waterway or wetland using various audio recording devices and then sent them to Melbourne Water via email. These submissions were then independently verified by consultants.

To streamline the process, and put data collection power into the hands of the public, we created the Frog Census app.

The app includes robust data recording features, allowing users to record not only the location of frogs within the Melbourne region, but also audio recordings of the frog callings and other useful information. This information is then made available to the public, benefiting management authorities, researchers, the Melbourne Water Frog Census program and students.

This information is used in waterway management and is also shared with DELWP Victorian Biodiversity Atlas and CSIRO Atlas of Living Australia.

"With the launch of the app, we're making it even easier for the community to be part of the important work we do monitoring Melbourne's frog populations. Every record helps improve conservation efforts."

Richard Akers

Waterwatch Coordinator, Melbourne Water

Customer Profile

www.melbournewater.com.au

Company

Melbourne Water

Location

Victoria

Industry

Government and Environment

Products

Frog Census App

Solution

We created an application that worked across all devices with a robust offline mode that ensured the user's functionality didn't deteriorate in rural areas. The data collection process was intuitive for the casual nature-goer, but contained a powerful suite of features to provide the greatest value for our communal research.

Benefits

- Streamlined processes reduce the chance of error and time it takes to update the database
- The data informs planning and decision making on waterway health as well as knowledge about endangered species

The Issue

The use of old devices for recording audio and creating reports of these sightings to be submitted via email created a barrier for new volunteers.

After a survey of participants, it was clear to Melbourne Water that the participants would like an easier process of submitting reports, better feedback on results and a mobile app. Melbourne Water's priority was that they attract new volunteers to their program, increase the number of submitted reports, reduce staff time and provide frog knowledge as an educational tool to the community.

The Solution

Our solution was a mobile application that worked across all devices, with a robust offline mode that ensured the user's functionality didn't deteriorate when they were in rural areas.

Great care was taken to ensure the data collection process was intuitive for the casual nature-goer, while maintaining the powerful suite of features that our citizen scientists have come to expect and provide the greatest value for our communal research.

Key features include:



Application that works across Android and iOS



Automatically checks for data updates published by the client



Application's encyclopedic data can be downloaded and stored offline



Client's recordings can be stored offline and uploaded later

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The Benefits

- ✓ Assists in the creation of a robust database of reported and verified frogs that will assist Melbourne Water with their waterway management
- ✓ Powerful updating allows the client to push new data to the application as needed
- ✓ An engaging encyclopaedia of local frog species complete with attractive photos and audio of each frog
- ✓ Weather data tagging using client location, time of submission and the closest Bureau of Meteorology (BOM) weather stations data
- ✓ Works offline on both Android and iOS which recognises the inconsistent reception available in parts of rural Victoria
- ✓ Admin portal for expert review of submitted reports, making it quicker and cheaper to verify the frog report and provide feedback to the volunteers

The Results

Over **600** reports have already been published since the launch of the app

1100 individual species locations have been recorded

User ratings average **4.46** out of a possible 5 stars through in-app feedback

85% increase in volunteers

The Frog Census app democratised the scientific data capture process - and captured a few imaginations in the process.

If you'd like to know more, [please get in touch.](#)

**Spatial
Vision**