



BUSINESS AREA: MOBILE APPS & IT

Case Study

Algae Scum Identification App

University of Technology Sydney (UTS) wanted to develop an Algae Scum Identification Resource Kit which would primarily be used for identifying potentially toxic freshwater algal that may be forming scums or colouring the water and then monitoring the algae status.

The Scum App provides users with a dichotomous key to help with identifying the algal types, and then allows users to report sightings of algal blooms, upload photos and record the location of the bloom.

UTS engaged Spatial Vision to design, build and host the Scum App. Spatial Vision worked closely with Associate Professor Simon Mitrovic, a UTS Freshwater ecologist, who has been dealing with algal blooms, and their impacts, for 20 years.

The Scum App developed by Spatial Vision leads the user through a series of Yes/No questions to identify the algal bloom easily and determine whether it may be a potentially toxic blue-green algae. The Scum App also provides educational background information on algal blooms allowing the user to gain a better understanding of the algal bloom they are reporting.

“The aim of this initiative is to raise awareness of algal blooms and highlight the need for ongoing monitoring of NSW rivers, lakes and reservoirs.”

Simon Mitrovic
Associate Professor, UTS Freshwater Ecologist

Customer Profile

www.uts.edu.au

Company

University of Technology Sydney

Location

New South Wales

Industry

Education

Products

Algae Scum Identification App

Solution

Algae Scum Identification Resource Kit is an app developed by Spatial Vision in conjunction with UTS. It enables users to identify and report potentially toxic freshwater algal blooms that may be forming scums or colouring the water. The app also has some background information on algal blooms.

Benefits

- An app to help citizen scientists identify harmful algal blooms is a first for Australia
- Helps to raise awareness of water monitoring and the need for early bloom detection



The Issue





Although algae are a natural part of water ecosystems when conditions are right they can grow in large numbers, turning the water green or blue-green, or sometimes even red, and resulting in the formation of unsightly, and potentially toxic, floating scums. These blooms are of concern because the cyanobacteria that cause some of them can also produce toxins that affect human, stock and wildlife health.

The blooms and the scum that forms are visually unappealing which has an impact on tourism and also may result in the need for costly water treatment. Algal blooms are a serious issue for Australia's waterways and for the communities that rely on them for their livelihoods.

The Solution

UTS engaged Spatial Vision due to our Citizen Science experience with designing and developing apps which allow users to report sightings including adding a location and photos, that run on both iOS and Android devices. The Scum App educates the community about algal blooms as well as helping users to identify the algal blooms that could potentially be toxic and have a major impact on human, stock and wildlife health. The app also provides links to useful information and resources.

Key features include:

	Application that works across Android and iOS
	Provides an ability to report the harmful algal bloom
	Provides easy to use and intuitive identification feature with photos and textual information
	Algal bloom identification process available offline for remote areas

The Benefits

Climate change and increased demands for water will mean that algal blooms will likely be a feature of many freshwater systems into the future. However, with the introduction of the Algae Scum Identification App, every day citizen can contribute to cleaning up our waterways and reducing the spread of algal blooms.

The app enables users to:

- ✓ Provide information about algal blooms including photos and textual information
- ✓ Identify if the bloom is toxic or harmless
- ✓ Report on the harmful algal blooms
- ✓ Develop a better understanding of algal blooms and how they form

The Algae Scum app allowed users to easily report a sighting and learn more about the blooms.

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

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