



NEW ZEALAND  
OPEN SOURCE AWARDS  
2018

*Celebrating New Zealand's contribution and  
advocacy for free and open source software*

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## Celebrating New Zealand's contribution and advocacy for free and open source software

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# FOREWORD

The 2018 New Zealand Open Source Awards takes place in an environment where, after many decades, open source has gained a pre-eminent status in the software world and beyond. Open source powers the Internet, our phones, the cloud, the Internet of Things and is increasingly the default choice in enterprises around New Zealand and the rest of the world.

The range and quality of this years' nominations is testament to the vibrancy and diversity of our communities. This depth and breadth of achievement is nothing short of impressive. We are fortunate to have so many people here using open source technology and philosophy to deliver amazing technical, social and creative projects.

As is the case every year, the quality and consistency of those nominations presented the judges with a welcome problem: how to decide which of these projects and people to acknowledge as particularly deserving of singling out for the prizes. While the judges reached consensus on all of the Awards, we feel that every one of the finalists deserves recognition for the positive contribution they have made to New Zealand's open source community.

A handwritten signature in black ink, appearing to read 'Don', followed by a long, sweeping horizontal line that extends to the right.

**Don Christie**  
NZOSA Panel of Judges

# *Open Source use in Business*

## **Sparks Interactive**

*for Sector.org.nz open source product platform*

In 2015, Dave Sparks made a commitment to bring the web development and consulting work done by his company, Sparks Interactive, into the open source community. Sparks decided to publish their Drupal base install profile, Sector, as a Drupal distribution.

The Sector D8 distribution published in 2018 is an excellent example of how working in the open and contributing back to the open source community can improve both open source products and business processes. Becoming an active contributor in an existing community - in this case Drupal.org - advances the community as a whole. Many of the issues resolved by Sector are published as patches and available to other Drupal projects, or have been committed to the code base of Drupal modules.

[sector.org.nz](http://sector.org.nz)

[sparksinteractive.co.nz](http://sparksinteractive.co.nz)

## **SilverStripe Ltd**

*for The Common Web Platform 2.0*

The Common Web Platform (CWP) provides a feature-rich content management system, hosting, backup, disaster recovery, online code repository, 24/7 Service Desk, co-funded development pool and proactive security patching.

CWP is introducing cutting edge technologies into the government landscape and helping to raise the bar on customer focused websites and greater web accessibility. There are now more than 50 government agencies and over 230 websites and intranets using CWP. This is delivering enhanced agility to agencies, improved procurement processes to the sector, and is allowing agencies to create new sites quickly and roll out changes continuously. It also leads to cost savings as technology, designs and legal contracts are shared.

[cwp.govt.nz](http://cwp.govt.nz)

[silverstripe.org](http://silverstripe.org)

## **The Catalyst Cloud team**

*for major new developments in the Open Stack community*

The Catalyst Cloud team lead an open source project called Qinling that is now the official Serverless/function as a service for OpenStack. They have also improved the integration between Kubernetes and OpenStack, making it easy for people to launch and manage Kubernetes clusters on the Catalyst Cloud.

Function as a Service is one of the most exciting advancements of cloud computing, but it is often associated with vendor lock in due to proprietary APIs. The work done by the Catalyst Cloud allows people to run a service similar to AWS Lambda on infrastructure of their own choosing.

All these services are open source and have an open standard API.

[catalystcloud.nz](http://catalystcloud.nz)

[openstack.org](http://openstack.org)

# *Open Source use in Government*

## **The Ministry of Social Development**

*for moving to the open source test automation framework; Cubano*

The partnership between the Ministry of Social Development (MSD) and Concordion in developing Cubano, an open source software testing automation framework that puts people and readability first, and improves the quality of life for developers, testers and business users. The move to open source by MSD is indicative of the Ministry's commitment to deliver quality digital services whilst being responsible with taxpayer money. Building the test automation framework and enabling external contributions moves the framework into an arena where repeatable use creates durability and quality. Avoidance of proprietary solutions means the framework will be enhanced with time rather than degraded or requiring costly upgrades.

[github.com/concordion/cubano](https://github.com/concordion/cubano)

## **The New Zealand Electoral Commission**

*for the Election Management System redevelopment*

The Electoral Management System is critical to the conduct of general elections and by-elections. It provides Electoral Commission staff at the national office and at electorate headquarters around the country the ability to manage and administer a wide-range of functions required to conduct elections, by-elections and referenda.

The nearly twenty year old system that administers every aspect of an election, from recruiting staff and payroll, through to the vote count and publication, was completely rewritten in open source tools. Delivering a modern, usable platform that supports the Commission's ability to continue to evolve and deliver the core functionality for our democracy.

[electionresults.govt.nz](http://electionresults.govt.nz)

## **The Service Innovation Lab**

*for the Rates Rebates Alpha, Family Services Directory API and for working openly & collaboratively*

A collaborative project across central and local government led by the Department of Internal Affairs, this project moved the Rates Rebate act into an accessible modern form - reducing the time needed to access the service.

This was an example of government working entirely openly. The project re-used existing tools and systems, it opened it's APIs to the general public (and ran hackathon events and blog posts to show this to people), and the project released all code to github in real time. The end product reduced the time needed to get a rates rebate, and also made the system accessible to disabled people who previously could not read the paper forms required in the process.

[ratesrebates.services.govt.nz](http://ratesrebates.services.govt.nz)

# *Open Source Software Project*

## **Ackama**

*for the Online Dictionary of New Zealand Sign Language*

New Zealand Sign Language is an official language of our country. Like Te Reo Māori it is important for our nation to foster understanding and use of the language to be an inclusive society. Victoria University of Wellington have stepped forward as the provider of NZSL Dictionary - an online dictionary website for NZSL with signs in English and Te Reo Māori with image and video references for how to make each sign.

The open nature of the project will allow others to contribute bug fixes and new features as well as enabling other countries to take the website, apps or both and use them for their own systems. There have been significant inquiries from other countries into the dictionary and web app and this enables reuse in a generous manner.

[nzsl.vuw.ac.nz](http://nzsl.vuw.ac.nz)

[ackama.com](http://ackama.com)



## **Radomirs Cirskis & Roshan Pawar**

*for the New Zealand ORCID Hub*

ORCID is the Open Researcher & Contributor ID, a global non-profit foundation. Their mission is creating a world in which all who participate in research, scholarship, and innovation are uniquely identified and connected to their contributions and affiliations, across disciplines and borders.

The New Zealand ORCID Hub has open-source principles at the core of its ethos and its design. It has been created in a fashion that enables it to be adopted and used by any other research consortium in the world.

Taking an open-source approach has enabled significant collaboration throughout the New Zealand Research, Science, and Innovation system, and directly with the ORCID Foundation and other international partners.

[royalsociety.org.nz/orcid-in-new-zealand/new-zealand-orcid-consortium/who-is-involved-with-the-new-zealand-orcid-consortium/new-zealand-orcid-hub](https://royalsociety.org.nz/orcid-in-new-zealand/new-zealand-orcid-consortium/who-is-involved-with-the-new-zealand-orcid-consortium/new-zealand-orcid-hub)

## **The Faucet Foundation**

*for the Faucet SDN Controller project*

Faucet is an OpenFlow controller for multi-table OpenFlow 1.3 switches.

REANNZ has been instrumental in the initial code base creation and ongoing improvement, utilisation, testing and deployment of FAUCET in New Zealand. They have not only been the drivers of the code base with an internal development team but have worked with an international team including Google, Tokyo University, ESNNet and many others to share Faucet globally.

REANNZ uses FAUCET on its internal network and this allows them to manage and deploy a very efficient and cost-effective network but also supports the NZ Government as genuine world leaders in this disruptive Software Defined Network technology.

[faucet.nz](https://faucet.nz)

# *Open Source Contributor*

## **Desley Simmonds**

*for community management of the  
Totara Government User Group*

Since starting the Government Totara User Group in 2012, Desley has run the user group without any formal authority but with the full support of the community. She has successfully balanced the incorporation of competing vendors to contribute to the community without ceding control or permitting the group to become a sales platform. She effectively encourages individuals to develop further, directly and through the community, and has been particularly successful in supporting women entering this field.

## **Neil Cresswell**

*for development of the Portainer  
Software solution*

Neil is the driving force behind the development of the Portainer software solution, an open source management toolset for adopting, deploying and managing Docker container technology.

In just two years Portainer has been downloaded in excess of 380 Million times from the Docker repository and has more than 8200 stars on Github. It is a fantastic Kiwi open source solution, with a substantial global reach, meteoric user growth and a highly supportive user community.

[portainer.io](https://portainer.io)

## **Robert Lyon**

*for contributions to the Mahara Project*

Robert has worked on the Mahara project for over 5 years now, starting first as a developer and for the last few years as the project Technical Lead. Under his steady hand the project has released 4 solid feature releases.

Robert also takes a lot of time to mentor newcomers, both at his place of employment and in the wider community. He is generous with his time and gives great constructive criticism when reviewing patches. Previous to his work on Mahara, Robert has also contributed to other open source projects such as Koha, Kete and Kea. Robert has spent over 10 years working on or with open source software, which is a remarkable achievement in itself.

[mahara.org](http://mahara.org)

## **Victoria Spagnolo**

*for contributions to the Drupal Project and Drupal Migrate*

Victoria is a major contributor to Drupal's core migration support and is the lead maintainer of the Commerce Migrate and Commerce Export modules, both open source projects in the Drupal ecosystem.

Victoria has been a contributor to the Migrate projects for some years now, to the benefit of a large number of sites worldwide. As well as being a code contributor, Victoria has shown a commitment to supporting users of the Migrate toolkit through her presence in the Drupal community, and through effort in contributing to documentation of the Migrate projects and related tools.

[drupal.org/u/quietone](http://drupal.org/u/quietone)

# *Open Source use in Education, Social Services and Youth*

## **Amber Craig, Brenda Wallace & Hīria Te Rangi**

*for Whare Hauora sensors*

An Aotearoa where your home does not make you sick.

Whare Hauora has a purpose to measure the housing environments for New Zealanders, to empower and educate residents on how they can make changes to their environment for a healthier home. Through using open source software and hardware they aim to empower communities to create their own Whare sensors and to support them to understand the effects their home may be having on their health. For free.

They have developed a consumer version of a Whare sensor kit, with a social good model of "buy one, gift one."

They also aim to provide aggregated, non personal data that shows the need, or not, for change in New Zealand's building standards.

[wharehauora.nz](http://wharehauora.nz)

## **Auckland University of Technology Library**

*for Tuwhera*

In 2016, AUT launched Tuwhera, an open access scholarly publishing platform built using Open Journal System. Tuwhera has become host to eight peer reviewed journals, most with strong indigenous connections and kaupapa. It has also become an incubator to nurture emerging academics and provide alternative avenues for publishing research.

Their ongoing efforts, both in providing a quality platform and in offering training, support, and metadata provision, make them a powerhouse in the New Zealand open access scene. Within the University, the philosophies of openness demonstrated in Tuwhera have been recognised and championed by the Library Executive and made their way into principle strategic documents. This leadership in openness resonates throughout the communities behind the publications Tuwhera supports.

[tuwhera.aut.ac.nz](http://tuwhera.aut.ac.nz)

## **Lillian Hetet-Owen from the Hetet School of Māori Art**

*for giving women prisoners the opportunity  
to weave their way to Freedom*

Lillian Hetet-Owen's had a vision of giving opportunities to the women prisoners of New Zealand through access to their online weaving courses so they could have tradeable skills when they were released.

To achieve this, Lillian had to create an online membership site that an organisation with the highest levels of security consciousness, Corrections, would accept into its facilities.

Using Drupal as an integrated platform for content management, e-commerce and customer relationship management, Lillian's online school has been able to partner with a significant government organisation and achieve some of their social and educational objectives. The trial for the Corrections Department of New Zealand began some months ago with 30 students.

[hetetschoolofmaoriart.com](http://hetetschoolofmaoriart.com)

# Open Source use in Science

## David Winter

*for contributions to open source software  
and open science*

Reproducibility is central to the scientific method, but results are not often reproduced. This is particularly true in areas of research which process very large data sets as is the case with a typical billions of DNA bases in genomics science. To have reproducible analyses one needs to have access to data (open data), the source code of the software (open source) and all of the information regarding how the software was run (open methodology). Proprietary software generate results which are not necessarily reproducible by other scientists / other tools.

David has contributed to the reproducibility of computational analyses by: developing software under open source licenses, contributing to open source projects, publishing under Creative Commons licenses, and teaching others how to do the same.

david-winter.info

## Kea Sightings Project

*for the Kea Database*

The Kea Sightings project has created a system - keadatabase.nz - for tracking the well being of individual Kea, (the threatened native NZ alpine parrot). It is designed to support citizen science, through data APIs, and public engagement in the plight of this amazing, beloved, cheeky, and sadly, endangered, bird.

This is an excellent example of free and open source software being used to advance conservation in New Zealand, a natural combination, leveraging one community to help build another, with mutual benefit.

keadatabase.nz

## **MetOcean Solutions**

*for Wavespectra: an open source library for processing ocean wave data*

MetOcean has recently released this scientific processing library as open source to encourage science and community around ocean wave analysis.

Wavespectra is a powerful collection of tools to ingest, process and write spectra in common formats. It allows robust calculation of common integrated spectral wave parameters such as wave height, period and direction, as well as partitioning the wave spectra using different methods to separate wind sea from swells.

[metocean.co.nz/news/2018/4/12/new-open-source-library-for-processing-ocean-wave-spectra](http://metocean.co.nz/news/2018/4/12/new-open-source-library-for-processing-ocean-wave-spectra)

## **The Software Carpentry Project**

*for Software Carpentry Communities across New Zealand*

The Carpentries is an internationally active non-profit organization that brings skills workshops to research communities around the world. They train researchers to teach computational skills needed to do data intensive research using open source lessons. They have 2,000 instructors from 39.

The Software Carpentry workshops is aimed at raising awareness and developing software skills in the research community. This is crucial to bring researchers' ability to produce the code associated with their research and understand the advantages of Open Source programming as part of their research cycle. The intention is that tools for research can be shared within and outside the research community to increase the openness, transparency, integrity, and reproducibility of research.

[software-carpentry.org/lessons](http://software-carpentry.org/lessons)

# *Open Source use in the Arts*

## **Matt McKegg - LoopDrop Js**

*for contribution to open source music tools and performance*

Matt McKegg has been working on a range of open source tools and learning resources for making music in the browser and connecting to popular MIDI interfaces. He's gained a following in the international JavaScript community through not only his software but his teaching and his live DJ performances using his own creations. He recently performed around Europe. His main software is called LoopDrop.

Matt has been exploring the cutting edge of what can be done in browser with audio for many years. He's able to bridge the gap between code and creativity bringing a unique open source based musical performance to many events locally and internationally.

[loopjs.com](http://loopjs.com)



## **Wellington Independent Arts Trust**

*for Urban Dream Brokerage*

The UDB utilised the networks of the brokers and advisors for the benefit of hundreds of theatre, art, community and social enterprise projects in order to allow for free or very cheap access to city sites that would otherwise have required rental. This was a novel and unique offering for both the projects, the property owners and the city or a town. Projects run from between two days and 5 years.

For the last 5 years UDB provided a physical open sourcing service of vacant city sites; creating spaces for 61 art and community projects in Wellington; 26 projects in Dunedin; 12 in Porirua and 6 in Masterton. The UDB gave reassurance to property owners about the safe care of their properties while freeing up the city to those who wouldn't otherwise gain access to CBD retail and office sites.

[urbandreambrokerage.org.nz](http://urbandreambrokerage.org.nz)

## **Wellington Irish Session**

*for preserving and opening traditional Irish music*

Irish traditional music is community-based music. The Wellington Irish session has built a website of resources for learning Irish music. Many of the of the resources are licensed under a creative commons licence, and the framework has been made available under an open source licence, so that other groups are able to use it. It provides a basis where beginners are able to play the tunes in a public environment. This supportive and inclusive approach has encouraged the diversity of participation, with an increase in women and younger players.

The website was conceived of as an open source project, to ensure that the intellectual property could not be captured, and to encourage the development of similar websites by other groups. It was also important to allow for the reuse of creative commons content.

[wellington.session.nz](http://wellington.session.nz)

# People's Choice Award

## **Clemens Zeidler**

*for Fejoa: The Portable Privacy-Preserving Cloud*

Fejoa is a data storage and data sharing solution that allows user to store their data locally or in the cloud. Fejoa gives users the flexibility to store their data at a service provider of their choice and doesn't lock them to a single provider. Users can share their data with other users at the same or a different service provider.

Moreover, Fejoa makes it easy to migrate data between different providers without affecting data accessibility for other users, i.e. friends can transparently access shared data after it has been migrated to a new service provider. Fejoa is fully open source and is based on peer reviewed research conducted at the University of Auckland. Privacy is a key aspect of Fejoa and all data is stored securely and encrypted in the CloudEFS file system.

[fejoa.org/fejoapage](http://fejoa.org/fejoapage)

## **Danny Adair**

*for ongoing leadership and support of the Python community in NZ*

Danny founded the NZ Python User Group and has invested a significant amount of time and effort over the intervening years in promoting Python and its community in NZ. He has been a key contributor in organising conferences and committee meetings to ensure that Python has been able to flourish here.

[python.nz](http://python.nz)

## **Kesara Rathnayake**

*for the Deep Dreamer artistic AI project*

Deep dreamer is a free open source command line program that can be used to artistic AI generated images. It's a computer vision program which generates images based on how a certain neural network visualizes a given image. The project was based on and inspired by Google Deepdream. Deep dream enables artists to generate deep dreams easily, based on two popular ANN models and gives artists ability to generate Animated GIF creation and video creation in MP4 format.

[deepdreamer.fq.nz](http://deepdreamer.fq.nz)

## **Michael Proper Chairman of ClearFoundation**

*for ClearOS by ClearFoundation*

ClearOS is a Linux-based and open source operating system for IT professionals that is based on CentOS and enhanced to make it easier to manage IT resources by combining Cloud, Server, Network and Gateway layers into one system. In the past, running IT for a small organization required the purchase of multiple servers or appliances then paying to license software from multiple vendors. ClearOS allows consolidation of all IT services and software from one vendor onto a single server. ClearOS was built by the ClearFoundation to be a simple, secure, and affordable way for small businesses, schools, and non-profit organisations to manage IT resources.

[clearfoundation.co.nz](http://clearfoundation.co.nz)

# People's Choice Award (continued)

## The Stencila Project

*for The Stencila software enabling reproducible research*

Stencila provides a set of open-source software components enabling reproducible research within the tool of your choice. Stencila allows you to write reproducible documents containing interactive source code using the interfaces you are most familiar with. Stencila components can be combined in various ways and plugged into existing reproducible infrastructure.

Nokome Bentley is working on the bleeding edge of researcher collaboration. Closing the gap between 'coders' and 'clickers' (spreadsheet users). This has deep implications for inter-researcher, and inter-lab, collaboration, as well as shining a light on the future of research communications in publishing, and the holy grail of reproducibility.

stenci.la

## Whare Hauora sensors project

*for Whare Hauora Sensors*

An Aotearoa where your home does not make you sick.

Whare Hauora has a purpose to measure the housing environments for New Zealanders, to empower and educate residents on how they can make changes to their environment for a healthier home. Through using open source software and hardware they aim to empower communities to create their own Whare sensors and to support them to understand the effects their home may be having on their health. For free.

They have developed a consumer version of a Whare sensor kit, with a social good model of "buy one, gift one."

They also aim to provide aggregated, non personal data that shows the need, or not, for change in New Zealand's building standards.

wharehauora.nz

# *Clinton Bedogni Prize for Open Systems*

*Endowed by the Bedogni family, the Clinton Bedogni Prize recognises world-class work in open systems and open source projects and research. It is designed to reward the New Zealander from industry or academia who has made the greatest contribution to open systems in the past two years.*

## **Dr. Richard Lobb**

*University of Canterbury*

Richard is a computer science teaching bedrock in NZ, having taught at Canterbury and Auckland for decades. His most famous open source project is Coderunner, a web-based tool used to teach programming. Tens of thousands of computer science students in NZ and overseas use it each year to enter and test their code before submitting it for automated assessment.

## **Eion Robb**

*Optometrix*

Clemens is a former Bedogni Fellow and now works as a Research Fellow at Unitec. He is a major contributor to the Haiku OS, with a user community in the hundreds of thousands, and has had a significant hand in a number of other open source projects (e.g., Fejoa and Lablet), in particular in the area of user and hardware interfaces.

## **Dr. Hilary Oliver**

*NIWA*

Hilary is a Senior Research Software Engineer at NIWA. He leads the development of the open source Cylc package, which orchestrates jobs on large distributed computer systems where tasks need to be run in a cyclic fashion, such as in weather forecasting. It is now in use at over 20 high profile meteorological and climate science sites on five continents.

## **Dr. Clemens Zeidler**

*Unitec*

Eion is a Senior Developer at Optometrix in Christchurch. His specialty is in reverse engineering and opening closed source protocols so they can be used by open source software, leading to a number of Facebook, Skype and Mattermost plugins, which have had tens of thousands of users.

## Previous winners

Award category	2010	2012	2014	2016
<b>Business</b>	Ponoko	Totara LMS	DiamondAge & MindKits for DiamondMind	Catalyst Cloud
<b>Government</b>	IRD use of Moodle	GNS Science	Common Web Platform	DigitalNZ and National Library of NZ for DigitalNZ
<b>Education</b>	Albany Senior High	Manaiaakalani	Catalyst Open Source Academy	
<b>Software project</b>	SilverStripe	Piwik	fyi.org.nz	OneRNG
<b>Contributor</b>	Tabitha Roder	Grant McLean	Andrew Bartlett	Eileen McNaughton
<b>Community Organisation or Social Service</b>		Soup Hub and WCC Computer Hubs	UC CEISMIC	
<b>Education, Social Service &amp; Youth</b>				WCC Computer Hubs
<b>Science</b>		GNS Science	Auckland Bioengineering Institute	The Cacophony Project
<b>Arts/Creativity</b>	Ghosts in the Form of Gifts	Whisper Down The Lane	Birgit Bachler	Make/Use
<b>People's Choice</b>	Amie McCarron	Sofa Statistics	Rob Elshire	Brent Wood Priv-O-Matic
<b>Special Award</b>	Andrew & Susanne Ruthven	Warrington School		Michael Kerrisk

***Congratulations to all of  
this year's finalists and  
many thanks to the judges  
and sponsors.***



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