

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



expert open source solutions



















NZRîse

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

1	Foreword
2–3	Open Source use in Business  For the outstanding use of free and open source in the private sector in New Zealand.
4–5	Open Source use in Government For the outstanding use of free and open source in the public sector in New Zealand.
6–7	Open Source Software Project Recognises the free and open source software project that has made the biggest positive impact for New Zealanders in the past three years.
8–9	Open Source Contributor Recognises the outstanding contributions by a New Zealand individual or organisation to one or more free and open source projects.
10–11	Open Source use in Education, Social Services & Youth For the outstanding use of free and open source in education, social services, charities, youth and community organisations.
12–13	Open Source use in Science Recognises the outstanding use of free and open source software to make scientific research and data accessible to all.
14–15	Open Source use in the Arts For the outstanding use of free and open source for creative endeavours and the arts in New Zealand.
16–19	People's Choice Award Recognises the individual or organisation that the New Zealand free and open source community at large feels is worthy of public acknowledgement.
20	Previous winners
21	Acknowledgements
22	Award sponsors

# Schedule for tonight

6.30pm	Drinks and canapés
7.00pm	Mihi
7.05pm	Starters
7.30pm	Welcome
7.40pm	Keynote
7.55pm	Main course served
8.30pm	Awards presentation commence
9.10pm	Dessert served
9.30pm	Awards presentation continue
10.00pm	Awards conclude

#### **FOREWORD**

The 2021 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. It's use under the shadow of the global Covid-19 pandemic has helped build trust in government systems, from Covid-19 Tracer apps to General Elections and delivering important information and support to our fellow citizens.

The range and quality of this year's 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 always, 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 finalists and winners. While the judges reached consensus, we feel that all of the finalists deserves recognition for the positive contribution they have made to New Zealand's open source community.

Like many events, these awards have been postponed. But the judges and organisers remain determined that the importance of our open communities is critical and that achievements should be lauded and promoted.

**Don Christie** 

NZOSA Panel of Judges

### Open Source use in Business

Whakamahi Pūmanawa Herekore i te Pakihi

#### **Shane Alcock**

for The OpenLI Project

OpenLI is the world's only open source software for Lawful Interception (LI). LI is the process where law enforcement agencies with a warrant or court order can require telecommunications operators to selectively wiretap individual subscribers and pass the subscriber's communications to the law enforcement agency. This project has enabled all ISPs to be able to meet requirements of New Zealand's TICSA (Telecommunications Interception Capability and Security Act ) legislation without the need to spend massive amounts on vendor specific solutions. Using Open Source provides confidence to network operators and their subscribers that the system is doing what it should. OpenLI is developed by the WAND network research group at the University of Waikato. The project has been sponsored by a range of Internet Service Providers and related companies in New Zealand. The project is run by Richard Nelson. Lead developer is Shane Alcock.

https://openli.nz/



#### Te Hiku Media

for Whare Korero

Whare Korero is an API, website, and now an app built and used by Te Hiku Media to make te reo Māori and Māori content available to all. Whare Korero allows a way for Māori content to be created, curated, and delivered to people that would otherwise be unable to access it. It gets local stories out, and keeps local mita (dialects) alive. It is all built on open source software and is now being used by other iwi radio stations. Using this technology, Te Hiku have recently released an app that allows people to listen to and watch content from all the lwi radio and TV stations in one place. A significant step towards helping to nurture the taonga that is te reo Māori.

https://tehiku.nz/ https://wharekōrero.nz/

#### **Thom Toogood**

for Lagoon

Lagoon is an Open Source delivery platform for Kubernetes, developed by amazee.io.
Lagoon equips developers with better deployment processes, the freedom of local development, and the flexibility of a Dockerbased environment. The platform continuously evolves with new features, functionality, and contributions from the open source community.

Thom has been instrumental in growing amazee.io into a global Open Source company and he is a founding member of the DrupalSouth committee. Thom truly understands open source, and has spoken of his belief that though we in the open source world may work for different companies, we're actually all on the same team. He brings his enthusiasm for the movement to every project and works to guide and promote open source adoption throughout the APAC region.

https://www.amazee.io/aboutus/people/thom-toogood https://www.amazee.io/lagoon/

### Open Source use in Government

Whakamahi Pūmanawa Herekore i te Kāwanatanga

#### **Department of Internal Affairs**

for the Covid-19 Foreign Nationals Assistance Tool

In mid-June 2020, as the Covid-19 pandemic took hold, the New Zealand Government announced a programme to provide in-kind assistance to stranded foreign nationals experiencing serious hardship. The DIA was tasked with implementing this initiative in association with New Zealand Red Cross. The responsibility for designing and delivering the online tool fell to the Life Events team, that had in the previous four years designed and delivered a range of "Life Event Services" including SmartStart, Birth Registration Online, Bereaved Parents and End of Life, all using open source technologies. The assistance tool was designed and built after the first lockdown within two weeks. The Foreign Nationals Assistance Tool ran for five months with just over 12,000 people provided with various forms of assistance.

https://www.dia.govt.nz/COVID-19#Foreign-nationals

https://www.redcross.org.nz/stories/new-zealand/visitor-care-manaaki-manuhiri-release/

#### Ministry of Health

for the NZ COVID Tracer application

The NZ COVID Tracer is an app that New Zealanders can use to keep a private, digital diary of where they have been to speed up Covid-19 contact tracing. Users scan QR codes to record where they've been and can enable Bluetooth tracing to anonymously log who they have been near. Public trust is key to the uptake of the app; it is designed to preserve privacy and was open sourced in December 2020. The Ministry of Health used the NZGOAL-SE framework to guide the selection of license and settings, and engaged with the open source community to ensure that they were going about it the right way. They have also made contributions upstream to the international open source projects that made the Bluetooth tracing feature possible.

https://www.health.govt.nz/ourwork/diseases-and-conditions/covid-19-novelcoronavirus/covid-19-resources-and-tools/nzcovid-tracer-app/about-nz-covid-tracerapp/open-source-release-nz-covid-tracer



### Nicholson Consulting in partnership with EECA and BEC

for NZ Energy Scenarios TIMES-NZ 2.0 Data Visualisation App

This application showcases two climate action scenarios (Kea and Tūī) which were identified from the results of the EECA (Energy Efficiency & Conversation Authority) and BEC (BusinessNZ Energy Council) New Zealand Energy Scenarios (TIMES-NZ 2). It makes this detailed information accessible to the public with an open-source dashboard built in R Shiny, so every person in Aotearoa can access these 'what if' scenarios.

This interactive data visualisation tool gives people information they need to understand how climate change may affect them in five year timestep, across business sectors and communities between now and 2060, and demonstrates how prioritising renewable energy across sectors can help address climate change.

Thanks to open source tools, anyone can find this important and detailed information in a simple, interactive, and engaging way. This open-source dashboard was codeveloped by Nicholson Consulting, Energy Efficiency & Conservation Authority and the BusinessNZ Energy Council.

https://www.eeca.govt.nz/insights/new-zealand-energy-scenarios-times-nz/

### Open Source Software Project

Kaupapa Pūmanawa Herekore

#### Mahara

for Mahara Project

The Mahara ePortfolio project celebrated its 15th anniversary in 2021. The project has grown into an open source project in use around the world by institutions of learning and increasingly other organisations who support the project with new features. The Mahara project is an example of an open source platform created and still largely maintained in Aotearoa New Zealand that has travelled the world and can be found on all continents (except Antarctica). In Aotearoa, Mahara is used in the tertiary sector in at least four major universities (Massey University, University of Waikato, AUT, University of Auckland), several polytechnics, e.g. Open Polytechnic, Weltec Whitireia, Wintec, Otago Polytechnic, and numerous district health boards. Internationally, the Mahara project has been in use for many years in secondary and tertiary institutions in Europe, Canada and the U.S.A., Japan, Australia, South Africa, and many other countries.

https://mahara.org/



#### Silverstripe CMS

for the Silverstripe CMS

Silverstripe CMS continues to be the pillar for many digital channels across the private and public sector in New Zealand. Its open source and free to use software means it can be used to create a website in a matter of hours for a small or not-for-profit organisation; while it's also trusted by enterprise-sized companies like a number of NZ banks. Since 2013 it continues to be the first choice for the public sector in NZ - now making up over 200 websites, serving the needs of NZ citizens. This software is responsible for a lot across the New Zealand government's Common Web Platform, including over half a million published pages, 850,000 form submissions, supporting the shift to digital channels throughout the Covid-19 pandemic, and allowing over 13,900 authors to publish to the web.

https://www.silverstripe.org/

### Toitū Te Whenua Land Information New Zealand

for LINZ Basemap

Toitū Te Whenua Land Information New Zealand is the public service department of New Zealand charged with geographical information and surveying functions as well as handling land titles, and managing Crown land and property. LINZ is developing a free, open source, high quality basemap service providing an authoritative source of up-todate New Zealand aerial imagery, as well as soon-to-be-integrated NZ Topo50/250 maps. The code is released under an MIT licence. and all of the content is released under Creative Commons, The code is being developed 'in the open' using modern code management tools to mitigate vulnerabilities and security issues.

https://basemaps.linz.govt.nz

### Open Source Contributor

Kaikoha Pūmanawa Herekore

#### **Evonne Cheung**

for contributions to the Mahara project: Graphically designing an open source project

Evonne is the longest serving Mahara team member and has worked on the project for close to 15 years. She established and shaped the brand, keeping it contemporary and relevant. We often celebrate open source from the coding perspective, but Evonne is an equally critical contributor to the project because graphic design is incredibly important for any modern web application. Evonne has adapted the brand and given it a major refresh. She also creates additional graphic visualisations, and Mahara themes that follow modern guidelines of responsiveness and accessibility. Evonne also creates the actual CSS and performs a lot of the front-end work for Mahara. This synergy between graphic design and front-end has been working very well for the Mahara project because Evonne knows how far she can push a design.

https://mahara.org/



#### **Samuel Williams**

for contributions to the Ruby programming language

Samuel's contributions to the Ruby programming language and the Async toolkit will enable Ruby developers to continue using their favourite language in new ways, where in the past they might have left the ecosystem. In addition to providing Ruby core language improvements and a suite of open source tools, Samuel's advancements with his open source async toolkit and concurrency primitives in the Ruby ecosystem make Ruby suitable for highly scalable web development. One of his recent achievements was the release of Ruby 3.0 with native support for Fibers.

https://www.codeotaku.com/index https://github.com/socketry

#### Steve Purcell

for contributions to MELPA; The most widely used Emacs package repository

For close to a decade, Steve Purcell has developed, maintained and stewarded the MELPA project. MELPA is a package repository for extensions to Emacs, one of the two most popular code editors in existence. Steve's work on MFI PA shows astounding dedication and humility. Along with his fellow maintainers, Steve provides code review for all packages submitted to the repository, often going so far as to collaborate with new package authors and to help them maintain packages he has no stake in. This also provides a level of security and reliability far above what is normal of public package repositories in any context, and reflects Steve's selfless dedication to the Emacs community. His work is a large part of why Emacs has a reputation as one of the most powerful and flexible operating systems in the open source world.

https://melpa.org https://sanityinc.com

# Open Source use in Education, Social Services and Youth

Pūmanawa Herekore i te Mātauranga, ngā Ratonga Pāpori me te Rangatahi

#### **Deaf Studies Research & Ackama**

for NZSL Share

The Deaf Studies Research Unit and Ackama designed and developed a solution to the need for the New Zealand deaf community and sign language users to communicate new and previously undocumented signs. NZSL Share is an open source software project, operating alongside the NZSL online dictionary, free NZSL e-learning material and other online initiatives that support the New Zealand Sign Language Board's strategic objectives. NZSL Share was developed in response to a need for a communitycontrolled online space where the Deaf community can discuss newly emerging or previously unrecorded signs. NZSL Share allows access to up-to-date language developments, by enabling people to view the discussion, save selected signs in folders, or upload their own signs to a private space.

https://www.nzslshare.nz/

#### **OER Foundation**

for Higher education built on Open Educational Resources

The OER Foundation coordinates a global network of 40+ higher education institutions and funding provider partners, which together form the Open Education Resource universitas or OERu. The OERu offers tertiary or university level open source courses to any learner, worldwide, if they have access to an internet connected device. The courses are free to take. The only cost for learners is incurred by those who want formal academic credit for their mastery of course materials, payable to an OERu partner institution for assessment-only services. The Foundation's terms of reference require that its staff use Free and Open Source software where-ever possible: internally, to build its courses and their resources, to deliver all of its courses to learners, as well as to support learner and educator collaboration.

https://oerfoundation.org/



#### **Somar Digital**

for designing and building the Citizens Advice Bureau NZ website and intranet

Somar Digital designed and built the Citizens Advice Bureau's public website backed by a powerful knowledge base search, along with a full intranet for their 2,600 trained volunteers using the open-source Silverstripe CMS. These help to make sure all New Zealanders know what their rights are and how to access services they need no matter what the issue is. Somar Digital utilized the Silverstripe CMS to its fullest potential to bring this highly complex and multi-tiered solution to the Citizens Advice Bureau. As a not-for-profit, CAB's digital offerings are free to anyone who wants to use the website in order to understand their rights, or who just want to find some information about any issues they are having specific to New Zealand.

https://www.cab.org.nz/

#### **University of Canterbury**

for Analytics for Course Engagement (ACE)

Launched in April 2020, the Analytics for Course Engagement (ACE) initiative is a collaborative endeavour between IT and the Student Success programme, combining technology with proactive outreach. Focusing directly on first-years, ACE takes a variety of information about students, combines this with data directly related to engagement in the online learning environment. Using open source and Artificial Intelligence, ACE predicts and proactively supports students at risk of disengaging, via an organisation wide response plan. A personalised dashboard (embedded in the Learning Management System) enables self-direction in study behaviour, as students can monitor their own engagement relative to their peers in the same course. This level of transparency has been shown to be a powerful tool, in particular with our Māori, Pacific, low decile and First-in-Family students.

https://www.canterbury.ac.nz/news/2020/ace -system-supports-success-of-all-first-yearstudents-at-uc.html

### Open Source use in Science

Whakamahi Pūmanawa Herekore i te Pūtaiao

#### **AviaNZ**

for Making Sure Our Birds Are Heard

The AviaNZ project is a collaboration between mathematicians, data scientists, and conservation biologists, to enable acoustic recordings of birdsong to be turned into reliable estimates of abundance. The free open source software is designed to let the user analyse birdsong either manually or automatically. AviaNZ works with many groups, from Ngapuhi, through the Department of Conservation and Nga Whenua Rahui, to local community groups in many areas. The software has been trained for NZ species, but can be readily adapted for any other birds, and those filters can be contributed back to the project for use by anyone, anywhere. The project combines ecology and conservation, working with tangata whenua and local communities, and is powered by open source software.

https://www.avianz.net/



### Centre for Computational Evolution

for BEAST 2

BEAST 2 is an open source cross-platform program for inferring family trees (phylogenies) from molecular sequences.
BEAST 2 used by scientists all over the world in diverse fields, but particularly in genomic research. Having open source code means results can more easily be verified and errors can be reasoned about. Results can more easily be reproduced independently. BEAST 2's analysis of the family trees of viruses has come into its own over the last two years, to the point that New Zealand is recognised as a world centre of phylogenetic research.

https://www.auckland.ac.nz/en/science/our-research/research-institutes-and-centres/centre-for-computational-evolution.html
https://www.beast2.org/

#### **Irene Wallis**

for development of the fractoolbox Python library

Irene Wallis has developed an open-source Python library for researchers and engineers to performed advanced fracture analysis in deep geothermal wells. The library, called Fractoolbox, helps reservoir engineers to visualise data from very deep geothermal wells, allowing them to operate these renewable resources in a sustainable and economic manner. Although proprietary versions of this kind of software have been around in the Oil & Gas industry for a while, they are generally priced out of reach of geothermal companies. Irene's open source library is helping to mainstream advanced fracture analysis in geothermal wells.

https://github.com/ICWallis/fractoolbox

### Open Source use in the Arts

Whakamahi Pūmanawa Herekore i Ngā Toi

#### **Julian Oliver**

for Electromagnetic Geographies

With Electromagnetic Geographies, Julian Oliver invited artists to a one-week workshop in which he introduced open source tools to reveal the invisible electromagnetic spectrum in Wellington. The workshop was followed by an exhibition in an inner-city space to create a wider awareness of the spectral infrastructures being used to study us, and how this domain can be employed as a material in creative and critical practices. At the heart of the workshop and the exhibition sits the Linux-based operating system "Electromagnetic Geographies" that allowed the participants from a diversity of backgrounds to engage with highly complex material in an accessible manner, celebrating open-source technology as a means to advance artistic production and activism in the radio spectrum.

https://www.urbandreambrokerage.org.nz/electromagnetic-geographies



#### **Tristan Bunn**

for PYDE.ORG

PYDE.ORG hosts a collection of code examples and other resources for the popular Processing Python Mode (Processing.py) creative coding environment: a static website generator that transpiles Python examples into JavaScript for display in any web browser. This innovation means that users can view and run example code online without copy-pasting it into the Processing IDE. Tristan also created the first Processing Python Mode 'cheat sheet'—a printable document to assist beginner-to-intermediate users—using open-source design software and releasing the source files for anybody to modify.

http://portfolio.tabreturn.com/ http://pyde.org/

#### Vicki Smith

for Breathe, an Artist contribution to urban waterway engagement

Breathe is an art, science and technology collaboration which takes the form of a visual representation of the temperature of water along the length of Te Wairepo (York Stream), via a series of internet-connected fish replicas displayed in a public venue. The project seeks to encourage the groups involved to practise kaitiakitanga (guardianship) of their part of the waterway, taking direct action to reduce the temperature and therefore improve fish habitat. Breathe engages the health of New Zealand freshwater streams and the wellbeing of its connected ecosystems. The project combines a participatory approach that is suitable for children, using open source software to create a networked art project that is available to be developed for other streams.

https://www.nelson.govt.nz/assets/Environment/Downloads/project-maitai/te-wairepo-york-stream/Te-Wairepo-Breathe-Resource-document-17-Jan-2018-A1898678.pdfhttp://artecology.net/

### People's Choice Award

Te Kōwhiri a te Iwi

#### **Ingo Schommer**

for A pillar of the open-source Silverstripe CMS

You can't have a discussion about the force of people behind the creation and custodianship of Silverstripe CMS without giving significant credit to Ingo Schommer. Ingo has always had a significant passion for fostering the open source community. He authored the first book on using Silverstripe CMS in 2009 and even had a sabbatical to return to his home country of Germany where he, in his words, "applied my skills in the local market and expanded Silverstripe's reach into the European community". Whether he's monitoring the health of the community through identifying trends in the millions of interactions points over the past decades, hosting Silverstripe CMS Meetups, or spending time to catch a beer with a Silverstripe CMS community member to hear their feedback, he pours his heart into this open-source software.

https://www.chillu.com/ https://www.silverstripe.org/



#### Joseph Sutton

for contribution to the Samba Project

Joseph Sutton joined the Samba project as a developer in early 2021; by June he had contributed 74 complex patches to the open source file and printer sharing protocol. Samba is a large and complex open source software project, and it takes years to learn it well. Likewise the protocols that Samba implements, for example the infamous Kerberos, are complex and interwoven. Joseph has not allowed this to daunt him, instead he has thrived on carefully and deliberately adding tests and fixing issues he has found. Joseph works well with the upstream Samba Team, and has the eye of an experienced Samba developer; when finding issues he is always looking to fix them properly.

https://gitlab.com/jsutton24

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https://www.urbandreambrokerage.org.nz/el ectromagnetic-geographies

### People's Choice Award (continued)

Te Kōwhiri a te Iwi

#### Kolovai Library, Kingdom of Tonga

for their use of Koha in providing community access to information and knowledge

Kolovai Library use Koha Library
Management System to provide materials
and services to help community members
gather information and knowledge to meet
their personal, educational, and cultural
needs. The library is dedicated to enriching
the lives of its community by fostering the
spirit of exploration and lifelong learning for
all ages. Over the span of 2 years, Kolovai
Library founders turned an unused village
fale into a public library and sourced,
collected, and shipped over 20,000 items
(including donations of laptops, bikes for hire,
paint, and hands-on help from local people).

https://kolovailibrary.mykoha.co.nz/ Blog; https://kolovaicpl.wordpress.com/



### Manawatū-Whanganui Local Authority Shared Services Ltd

for Archives Central

Archives Central is a physical and digital repository for a consortium of central-North Island councils. The site was recently rebuilt onto Islandora 8, an open source digital repository system. Over 200,000 records were migrated. The new system showcases digital records to make them more discoverable and enjoyable. The records have been modelled as a knowledge graph (linked data) using the new Records in Contexts (RiCO) ontology. Archives Central is one of the first applications of RiC around the world, and is particularly noteworthy because it is using "commodity" applications to implement data standards that have the potential to transform data use and reuse throughout the Galleries Libraries Archives and Museums sector. The combination of open data standards backed by open software is a powerful strategy for ensuring the long-term integrity and viability of the archive.

https://archivescentral.org.nz/ Presentation about AC migration to Islandora https://archivescentral.org.nz/about

#### Nicholson Consulting and Te Rourou, Vodafone Foundation Aotearoa

for Thriving Rangatahi Population Explorer This work is about democratising data, so communities can access the information they need, for free, when working to support rangatahi in Aotearoa. This mahi used R to compile Stats NZ Integrated Data about the drivers of youth wellbeing. Nicholson Consulting led the work in partnership with Centre for Social Impact, Vodafone Foundation and Deloitte, who together thought long and hard about this use of open source data and technology to ensure it was undertaken in a way that upholds and uplifts the mana of young people. This was informed by te ao Māori approaches to data analysis, in particular, the Principles of Māori Data Sovereignty. The thinking about open source extended far beyond technology, to engagement and partnership with Māori community organisations and the care and protection of the rangatahi and whānau represented in the data.

https://foundation.vodafone.co.nz/thriving-rangatahi-population-explorer/

### Previous winners

Award category	2012	2014	2016	2018
Business	Totara LMS	DiamondAge & MindKits for DiamondMind	Catalyst Cloud	Dave Sparks and Sparks Interactive
Government	GNS Science	Common Web Platform	DigitalNZ and National Library of NZ for DigitalNZ	The Service Innovation Lab
Education	Manaiakalani	Catalyst Open Source Academy		
Software project	Piwik	fyi.org.nz	OneRNG	The Faucet Foundation
Contributor	Grant McLean	Andrew Bartlett	Eileen McNaughton	Victoria Spagnolo
Community Organisation or Social Service	Soup Hub and WCC Computer Hubs	UC CEISMIC		
Education, Social Service & Youth			WCC Computer Hubs	Auckland University of Technology Library
Science	GNS Science	Auckland Bioengineering Institute	The Cacophony Project	Kea Sightings Project
Arts/Creativity	Whisper Down The Lane	Birgit Bachler	Make/Use	Wellington Independent Arts Trust
People's Choice	Sofa Statistics	Rob Elshire	Brent Wood Priv-O-Matic	Whare Hauora sensors project
Special Award	Warrington School		Peter Gutmann	Brenda Wallace Lillian Hetet-Owen



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silverstripe.com

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ackama.com

nzrise.org.nz

internetnz.nz





nzoss.org.nz

amazee.io