"Undoubtedly, the amount of data and the complexity of analysis will continue to grow in the future. This makes it very important to have such computational resources as NeSI."

"Using a large number of computational cores allowed us to run analyses in one week which otherwise would have taken maybe 100 years of computational time."

"The technical and consulting support provided by NeSI staff was extremely important and, in some cases, crucial for our project."

Maksim Struchalin LIC, Livestock Improvement Corporation







The Power Behind Researchers

Growing the computing capability of New Zealand researchers to ensure our future prosperity

CUSTOMISED GENOMICS SOLUTIONS FOR NEW ZEALAND SCIENTISTS

www.nzgenomics.co.nz

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NEW ZEALAND GENOMICS LIMITED



@ eResearch NZ 2016

New Zealand eScience Infrastructure

NeSI Board

Crown Observers

As the Crown is a key partner supporting NeSI, the Crown appoints observers to Board discussions :



Rick Christie





Murray Poulter





Stephen Whiteside







Rick Christie Chair

Moving from local to national

Organisation re-design

... defining how we collaborate

Then: 6 teams working in 5 locations

- » Functions replicated at each site
- Local approaches to delivering services and supporting researchers

Soon: 1 virtual organisation across 5 locations



- » National teams around common functions
- » Delivering common services with consistent delivery model to all institutions
- » National governance over future investments

Next steps:

» Recruitment for / appointment to new positions



NeSI Senior Leadership Team



Georgina Rae



Brian Corrie



Michael Uddstrom



Aleksandra Pawlik



Robin Bensley



Mike Ladd

Development of infrastructure





HPC Compute & Analytics



New national governance mechnasism rolled out – **National Platforms Framework** review

Cloud-bursting pilot underway, working with Microsoft Azure & Nimbix

Platforms Framework revised:

- replacement HPC platforms commissioning and go live July 2017
- scope incorporates core Data Analytics technologies & tools
- recruit a data analytics leader

Development of infrastructure



Research Data Review of current offerings – and



our future directions: data analytics & workflows

Support for National Research Data Programme, via eResearch 2020

Research Data Alliance





Growth in skills







Leadership in instructor training: Software Carpentry & Data Carpentry 20 Instructors trained (2016)

++ increase in workshops in 2016

3 training events (2016): first (2) Research Bazaars in NZ 200+ researchers trained







Training Strategy - Phase 1 (2014 ~)





Basic skills

- Mostly directly delivered or led by NeSI
- Local instructors/helpers if available
- Very positive feedback : 4.34/5.0 overall rate



Training Strategy - Phase 2 (2016 ~)





Train the trainer

- Support communities to lead the basic skill training
- Build partnerships to sustain capabilities over time



Training Strategy - Phase 3 (2017 ~)





Advanced topics

- Research applications and methods
- Existing training continue as BAU





Advanced skills in applications and methods

NeSI 'Tuesday' at eResearch NZ 2016



11:15 (Queenstown)	NeSI Update	Nick Jones
11:45 (Remarkables)	Growing NZ's Researcher's Computing Capability	Georgina Rae & John Rugis
14:30 (Queenstown)	An HPC Implementation of the Finite Element Method	John Rugis
16:00 (Queenstown)	The NeSI National Platform Framework	Michael Uddstrom
16:30 (Queenstown)	Early Experiences with Cloud Bursting	Jordi Blasco
16:30 (Remarkables)	NeSI NZGL Alliance	Dan Sun & Nic Mair (NZGL)
17:00 (Queenstown)	Acceleration Made Easy	Wolfgang Hayek





Research Reference Group

New Zealand eScience Infrastructure

02/22/2014

Research Reference Group



Sam Dean



Cristin Print



Susan Wells



Ian Foster



Barbara Chapman



Blair Blakie



Joseph Lane



Nauman Maqbool



Growing research which computes

Nick Jones Director New Zealand eScience Infrastructure



Data from Google Ngrams "American English" collection

Data from Google Ngrams "British English" collection

