How Scientific Programmers at NeSI are growing researcher capability

NeSI
New Zealand eScience Infrastructure

The Power Behind Researchers

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

Delivering value through eScience services

High Performance Computing – computation and analytics

Consultancy
Training

Data transfer

MINISTRY OF BUSINESS, INNOVATION & EMPLOYMENT
HĪKINA WHAKATUTUKI

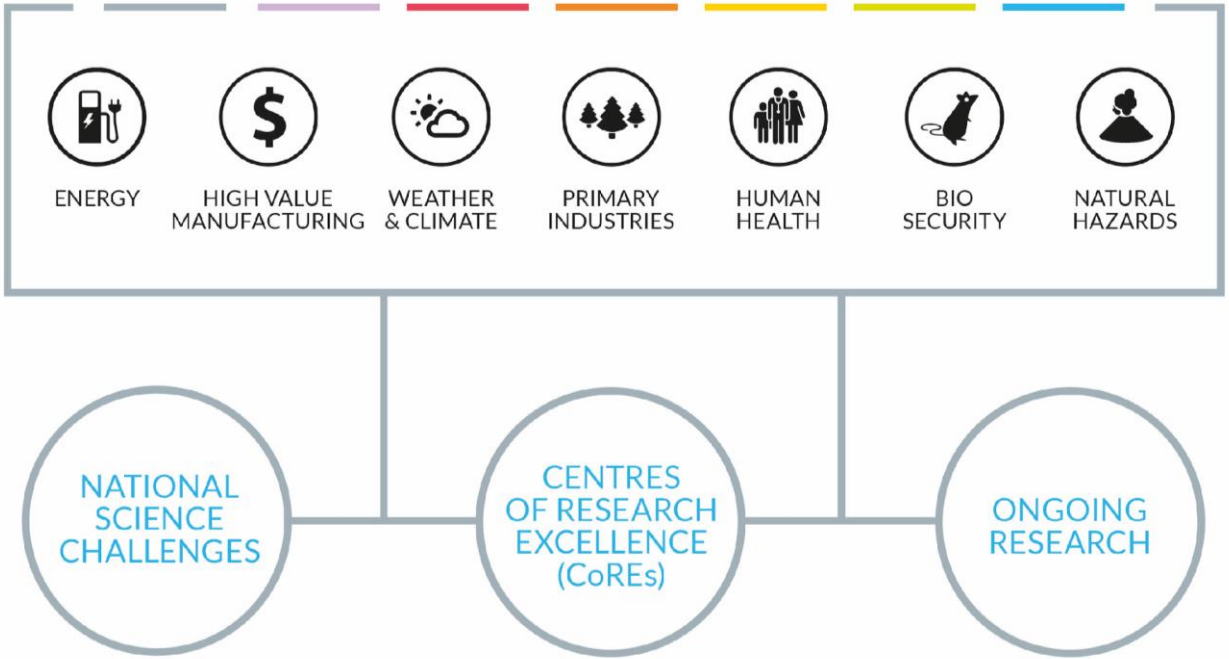
LANDCARE RESEARCH
MANAAKI WHENUA

UNIVERSITY of OTAGO
Te Whare Wānanga o Otāgo
NEW ZEALAND

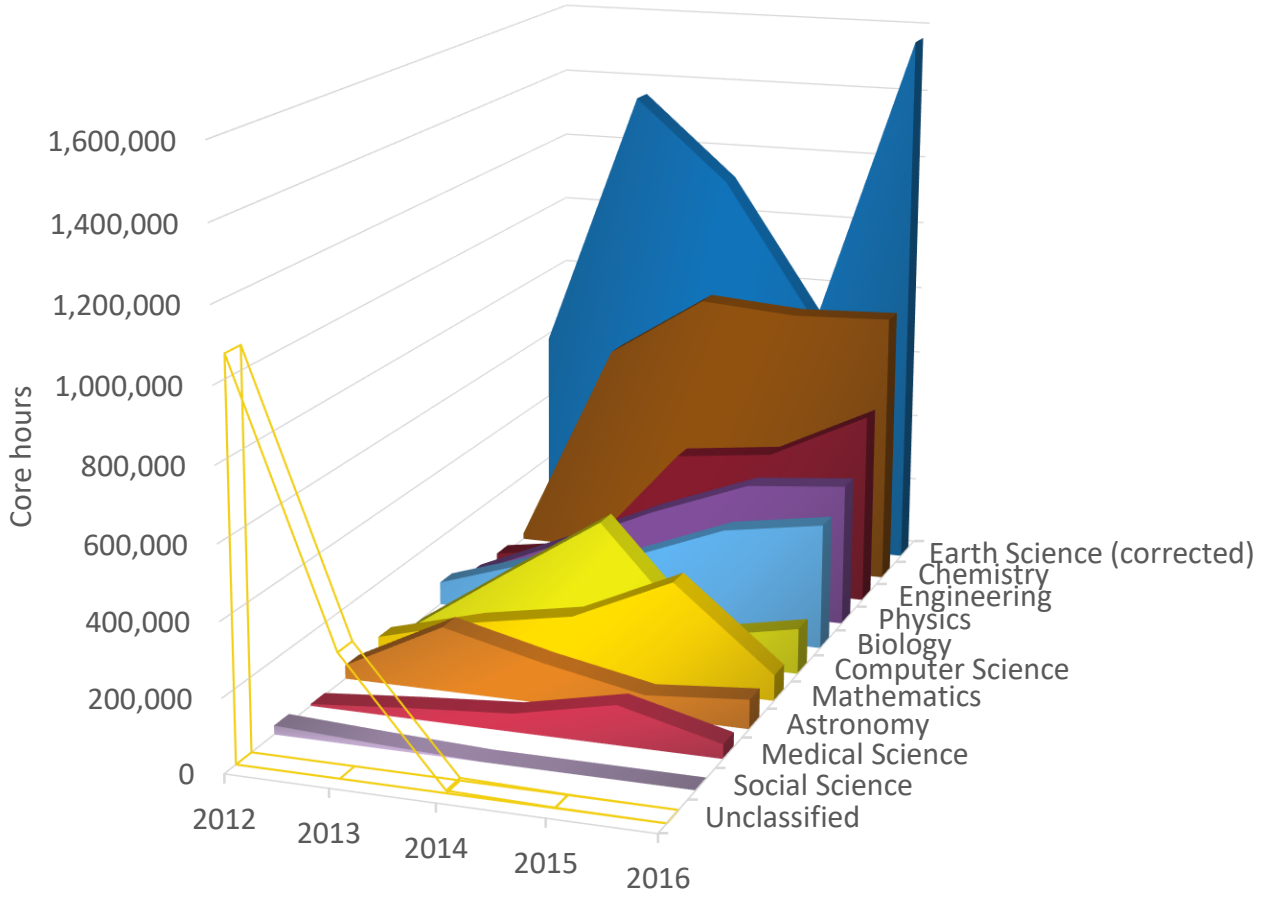
THE UNIVERSITY OF AUCKLAND
Te Whare Wānanga o Tāmaki Makaurau
NEW ZEALAND

NIWA
Taihoro Nukurangi

Computing capability for future prosperity



HPC utilisation by discipline



Growing the computing capability of NZ researchers

NeSI's Scientific Programmers

+ Data Science Specialist

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Data sharing and transfer

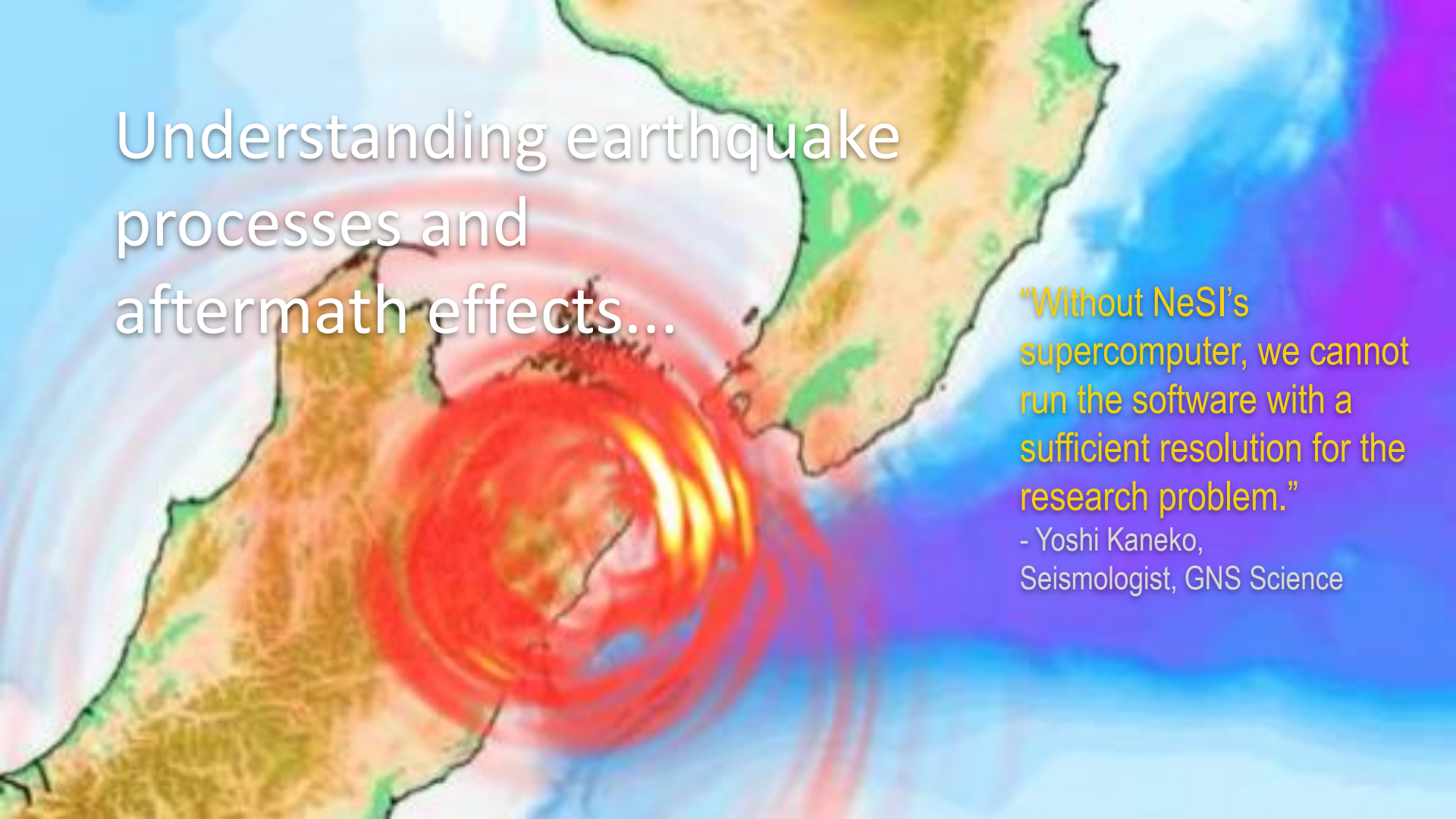
Need to run better/faster on NeSI platforms?
Are you currently developing custom software for your research needs?
Do you think you could be using NeSI more efficiently or the code you are using could be running faster?
Could you benefit from custom visualisation for extra impact in your research outputs?

Consultancy

Consultancy Service

- A service offered to NeSI platform users, generally at no cost to the researcher
- Research group granted access to one or more of NeSI's Scientific Programmers
- Projects offered ~90h over 3 months
- Goal is **raise the capability** of the research group so emphasis is on **transferring skills**

Challenge – identifying projects which would benefit from a Consultancy Project


Understanding earthquake processes and aftermath effects...
"Without NeSI's supercomputer, we cannot run the software with a sufficient resolution for the research problem."
- Yoshi Kaneko,
Seismologist, GNS Science

Priorities for conservation of NZ's ecosystem

"Through this project, we've begun to see the benefits of using the NeSI platform for other projects we would like to get underway in the future."

- David Burlace, Technical Advisor at the Department of Conservation

Water conservation applies to weather models too

"NeSI provided a robust solution that runs faster than expected and is easy to use."

- Celine Cattoen-Gilbert, NIWA

Training

https://www.nesi.org.nz/services/training/overview/training-strategy

Enabling researchers to do better research…

by supporting communities: digital skills and capability building

Plant and Food: Software Carpentry

CRI Coding Conference 2016

NeSI at University of Otago Day

Scion: Software Carpentry

Winter bootcamp: University of Auckland Software Carpentry workshop

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New Zealand eScience Infrastructure

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SAVE THE DATE
eResearch NZ 2019
18 - 20 February // Heritage Hotel Auckland, New Zealand
NeSI
New Zealand eScience Infrastructure
REANNZ