



NeSI Training

Georgina Rae, John Rugis, Sung Bae



New Zealand eScience Infrastructure



NeSI's Mission



Growing the **computing capability of researchers** to ensure
New Zealand's future prosperity

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Growing the **computing capability of researchers** to ensure
New Zealand's future prosperity

Why is training important to NeSI?



Training

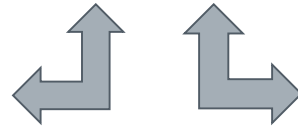
Why is training important to NeSI?



Training



Relationship



Community

What we've been doing

Prior to 2014 – largely *ad hoc*

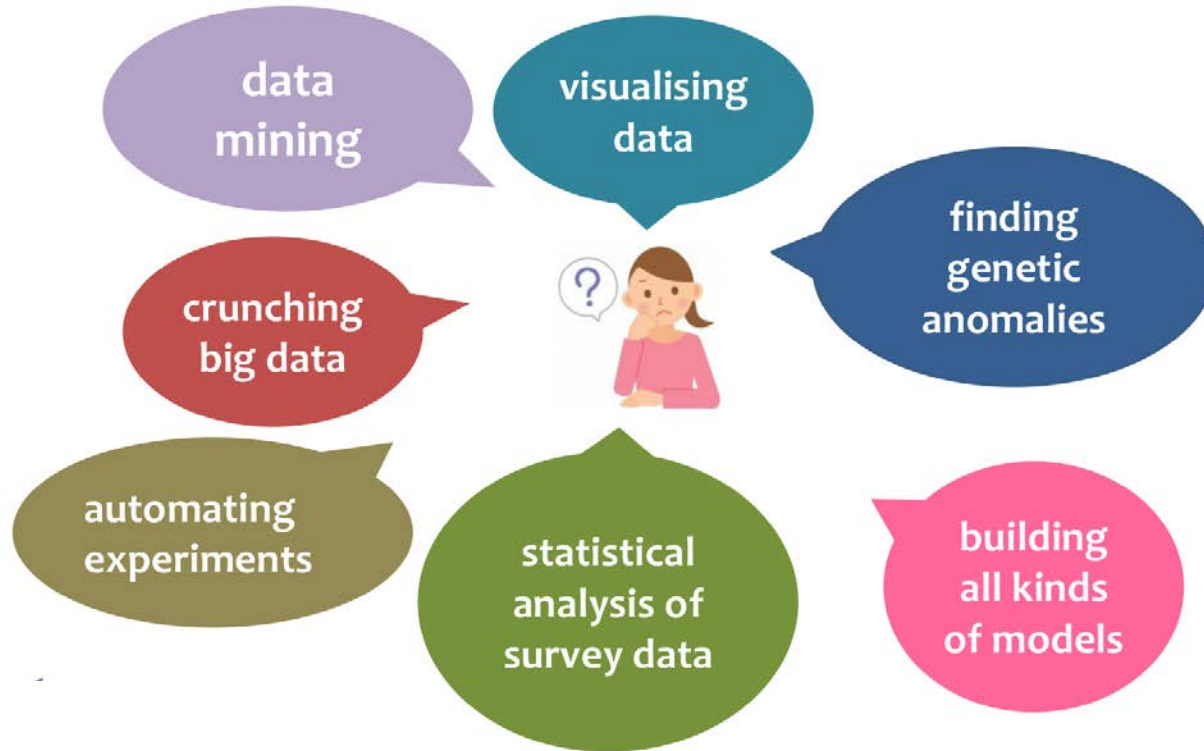
2015:

- NeSI became an “affiliate” of Software Carpentry Foundation
- Certified SWC instructors: Sung Bae, John Rugis
- 7 Workshops: UC, AUT, Otago, Massey (Palmy, Albany), VUW, Lincoln
- 2 HPC courses at UC, NVidia GPU workshop at NIWA



Software Engineering Carpentry?

Researchers increasingly need programming and data analysis skills



But...



Coding and data analysis are **not** routinely **taught***
as part of research training

*Except in disciplines such as mathematics or computer science

Q: Do they have to become software engineers?

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A: No, but they can do more science with digital “tools”!





A worldwide volunteer organisation whose goal is to make scientists more **productive**, and their work more **reliable**, by teaching them basic computing *skills*.

software carpentry

Short, intensive workshops (2-day boot camps) that cover:

- Task Automation using the Unix shell
- Programming (R/Python/MATLAB) : Play with data (query, compute, process), plot/visualize
- Version Control + Collaboration : Good practice
- Database : Manage data and discover new knowledge through queries

Open contribution model (maintainers)



Q: Aren't NeSI supposed to do HPC? It sounds a bit too basic!!

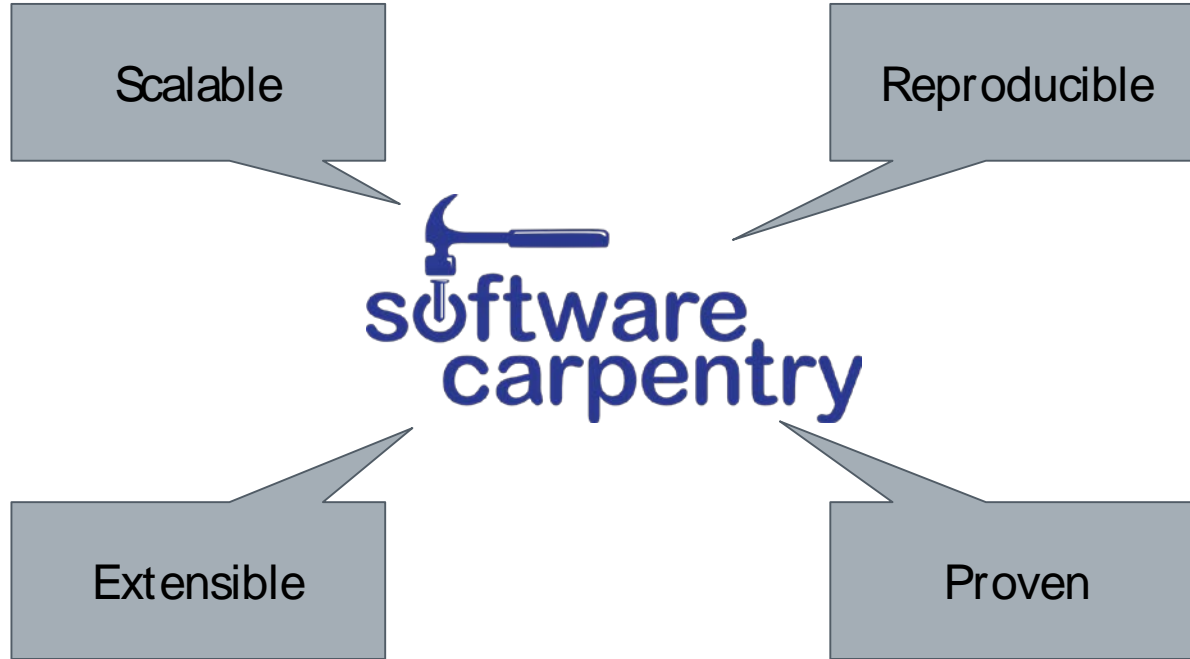


Q: Aren't NeSI supposed to do HPC? It sounds a bit too basic!!

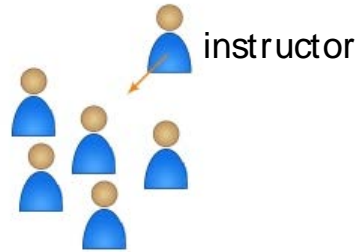
A: Agreed, but we do have a plan!



SWC model as a training platform



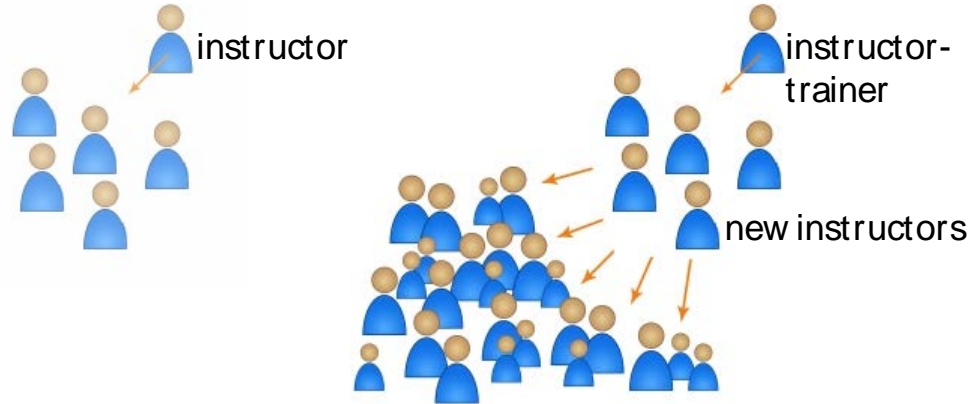
Training Strategy - Phase 1 (2014 ~)



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

SWC “Training the Trainer”



20 new SWC instructors



Aleksandra Pawlik

Certificate of Achievement



This certificate has been awarded for successfully completing the Software Carpentry instructor training program. The recipient has demonstrated understanding of core pedagogical concepts and evidence-based teaching practices, and is qualified to teach Software Carpentry's core curriculum.

Recipient: Sung Bae

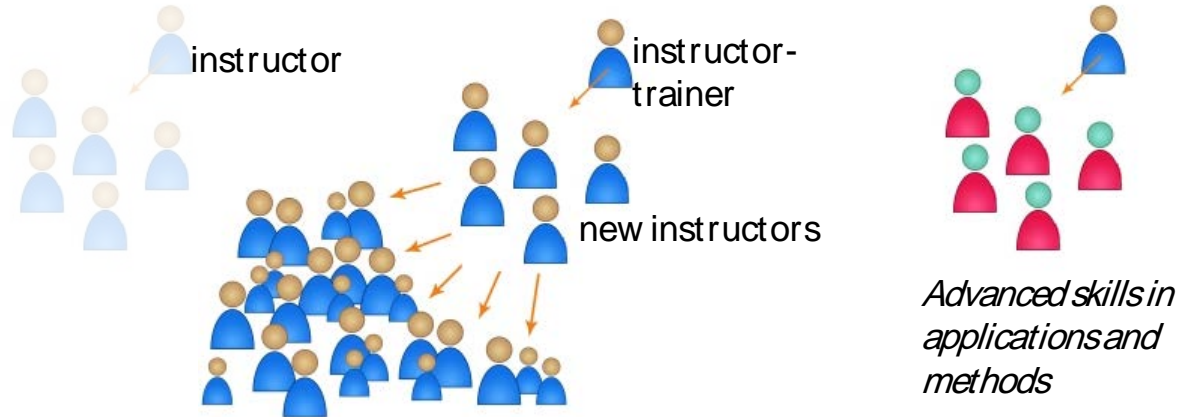
Date of Award: February 27, 2015

Certified by: Greg Wilson

The Software Carpentry logo, which consists of a blue key icon above the text "software carpentry" in a lowercase, sans-serif font.

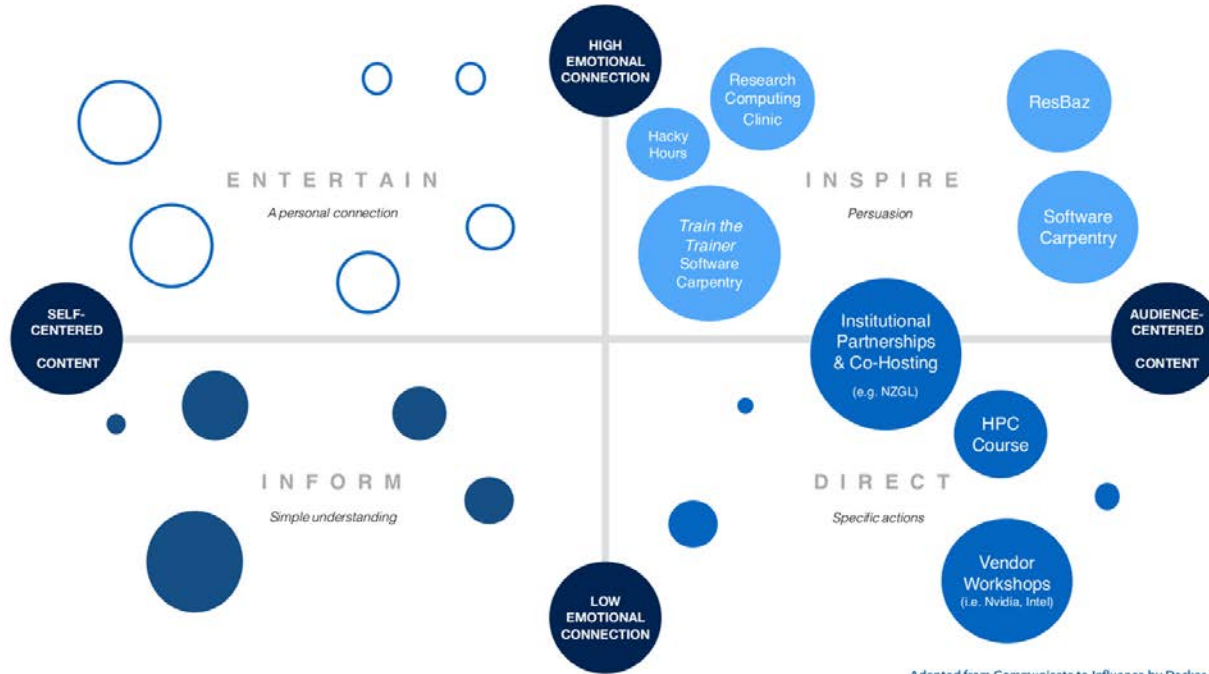
software carpentry

Training Strategy - Phase 3 (2017 ~)



Advanced topics- Research applications and methods
Existing training continue as BAU

Training Offerings



...

Growing the **computing capability of researchers** to ensure
New Zealand's future prosperity



NeSI
New Zealand eScience
Infrastructure



2015 NeSI Training Contributors

Ben Roberts
Francois Bissey
John Rugis
Jordi Blasco
Peter Maxwell
Sung Bae
Wolfgang Hayek

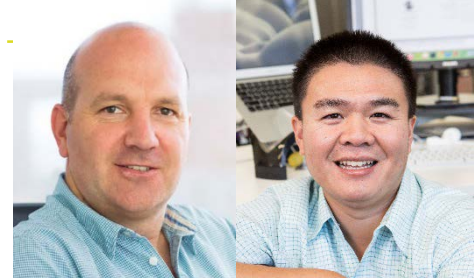
Andre Geldenhuis
(VUW)
Bart Verleye (CeR)
Cameron McLean
(UoA)
Constantine
Zakkaroff (UC)
Fatemeh Ashari
Ghomi (UC)
James Boocock
(Otago)
Kim Rutherford
(Otago)
Mik Black (Otago)

Murray Cadzow
(Otago)
Nick Young (CeR)
Paul Gardner (UC)
Paul Walmsley (UC
HPC)
Richard Brown
(Massey)
Sebastian Schmeier
(Massey)
Sina Masoud-Ansari
(CeR)
Tom Kelly (Otago)



NeSI at eResearch NZ 2016

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





Questions











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