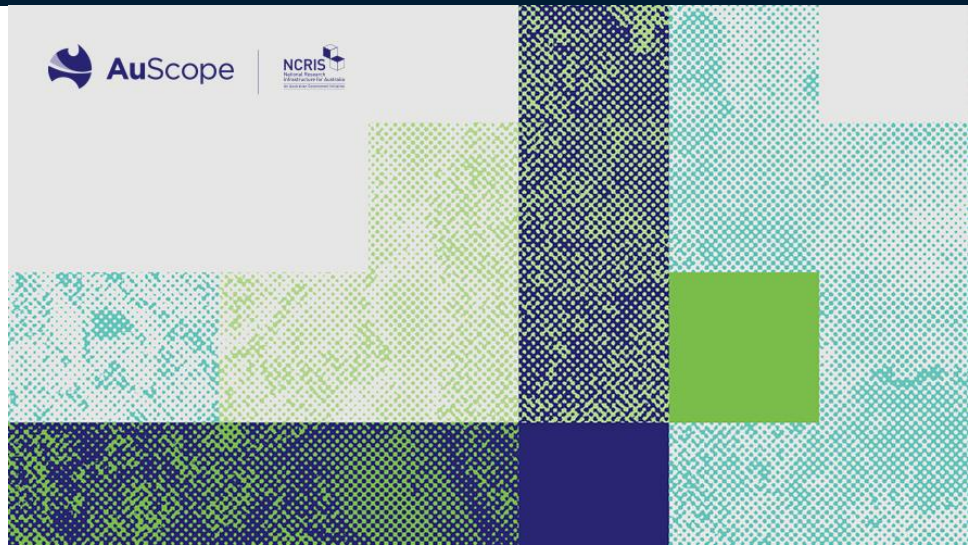
Australia's National Science Agency

Engaging the scientific users in the technical design process: where do you start and how do you keep their attention?

Dr Pavel Golodoniuc, Dr Vincent Fazio, YunLong Li, Dr Jens Klump, Dr Lesley Wyborn



Brisbane, Australia
18 October 2022

AuScope Virtual Research Environment

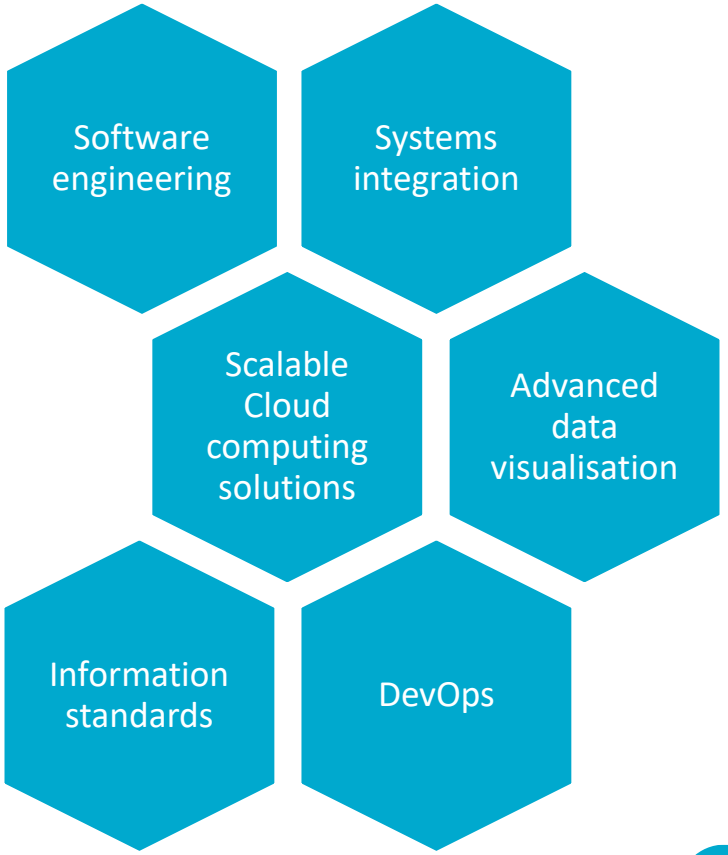
- The AuScope Virtual Research Environment (AVRE) provides a unifying technological platform for AuScope Programs' data and analytical needs.

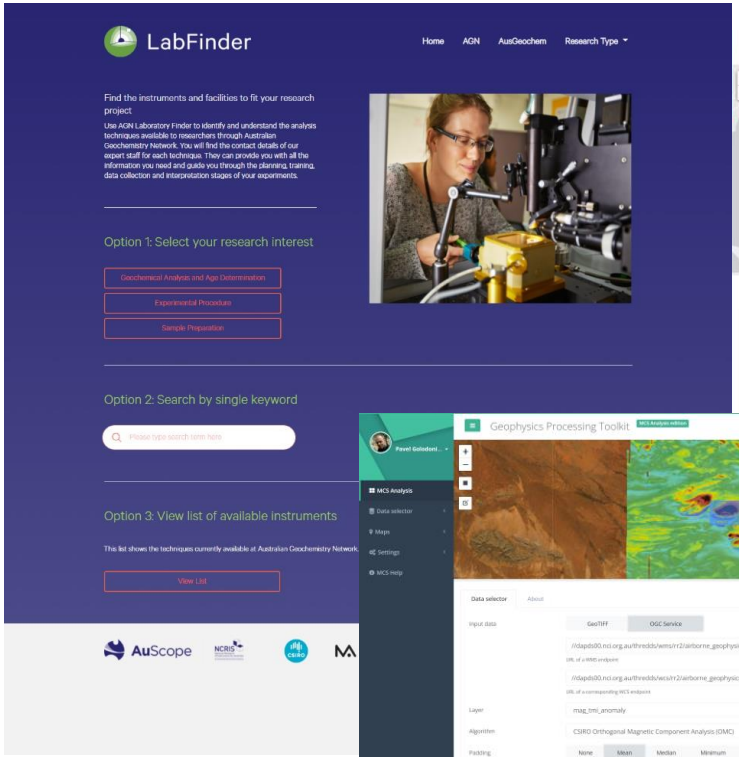
- AVRE's role is to ensure that other AuScope Program components can find and deliver data and analytics following the FAIR (Findable, Accessible, Interoperable, Reusable) principles.

- Increase uptake of data-driven research through outreach and embedding engineers/programmers within specific AuScope Programs that aid in data delivery and data analytical enrichment activities.

AVRE Build Program

The AVRE Build Program is used as a vehicle to promote low-barrier collaboration opportunities with Australian universities, research institutions and the industry on real-world scientific problems that would benefit from application of new technology, computing and storage infrastructures, and data management.

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Research Type
Find the instruments and facilities to fit your research project
Use AGN Laboratory Finder to identify and understand the analysis techniques available to researchers through Australian Geochemistry Network. You will find the contact details of our expert staff for each technique. They can provide you with all the information you need and guide you through the planning, training, data collection and interpretation stages of your experiments.
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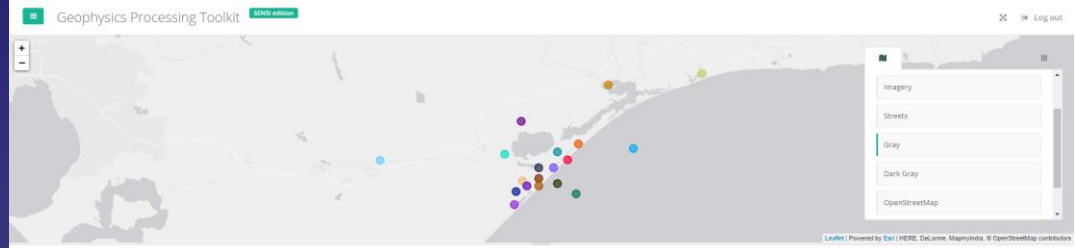
Geophysics Processing Toolkit
SENSI edition
Log out
Imagery
Streets
Gray
Dark Gray
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Stations
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Medium shear velocity
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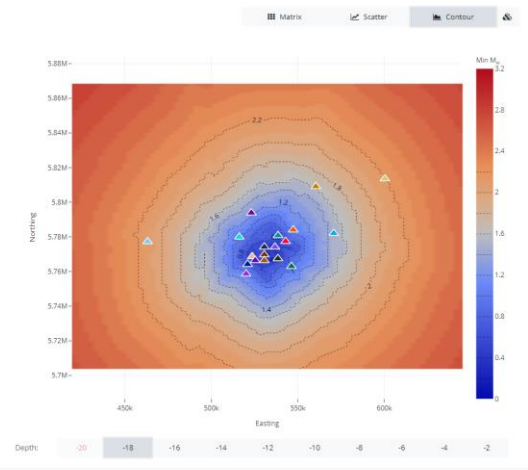
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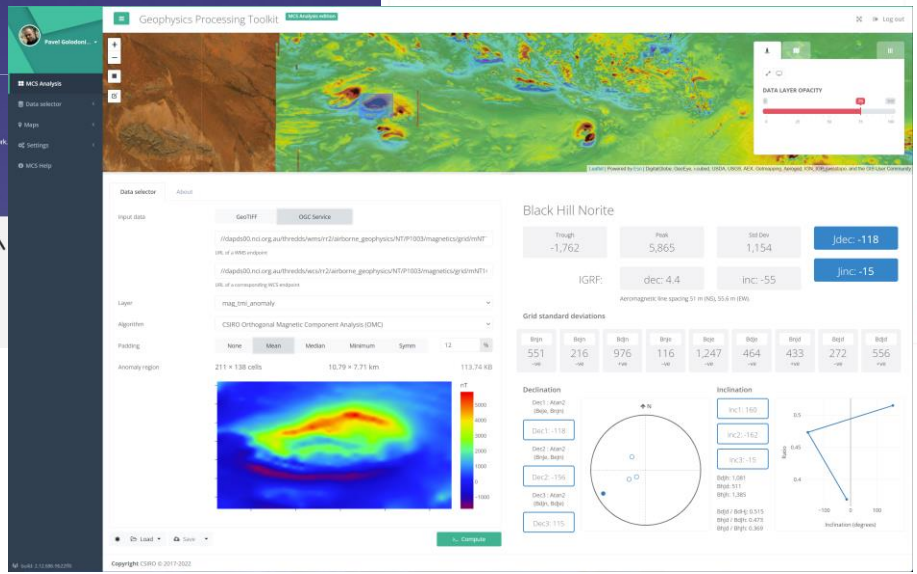
Geophysics Processing Toolkit
MCS Analysis edition
MCS Analysis
Data selector
Maps
Settings
MCS Help
DATA LAYER OPACITY
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Trough
-1,762
Peak
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Std Dev
1,154
IGRF:
dec: 4.4
inc: -55
Jdec: -118
Jinc: -15
Grid standard deviations
Declination
Inclination
Compute
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Challenges

- Diverse multidisciplinary environment
- Language barrier between scientists and technologists:
  - What they think they need
  - What is actually needed
  - What is possible
- Where to start?
- How to keep the momentum?

Software engineering heritage

- Rapid Application Development methodology
- Agile Project Management
- Clear product lifecycle – from inception to business as usual
- All are commonplace in software engineering realm

Our approach

Problem definition

Early vision of the solution

User-centred design

Iterations with direct user involvement

Relationship with users

Product management

Discipline

User ownership

Celebration of success

Where to next

- AVRE Build Program continues – reach out to us!
- Continuous improvement and learning
- AVRE Build Program format improvements

Australia's National Science Agency

Thank you!

CSIRO Mineral Resources
Australian National University (ANU)
National Computational Infrastructure (NCI)

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