

A background image showing four people (three men and one woman) sitting around a table in a meeting, looking at documents and tablets. The image is overlaid with a blue and purple gradient.

**Energy**  
.intersect.org.au

# May our force be with you

Power up your eResearch capability with Intersect Australia's eResearch expertise, consultation, software engineering & training

## Your Research. Our Energy.

We are the people behind Energy. [intersect.org.au](http://intersect.org.au). We improve researcher productivity with research computing solutions. Our eResearch Analysts support research at your organisation, providing expertise in data storage and management, HPC and cloud computing, IT planning and grants. Our software engineers develop tools, mobile and web applications to help researchers share and collaborate. Our trainers teach research-tailored technology courses.

## Research is our DNA

Intersect Australia is a not-for-profit organisation by NSW and ACT institutions. Our team supports the world-class research done at our member universities and other organisations by complementing locally delivered IT services. Your organisation's membership makes it easy for you to access all of our services. Members benefit from collaborative grant funding and economies of scale to deliver shared storage, compute and research platforms infrastructure.

## Advanced IT solutions for Researchers

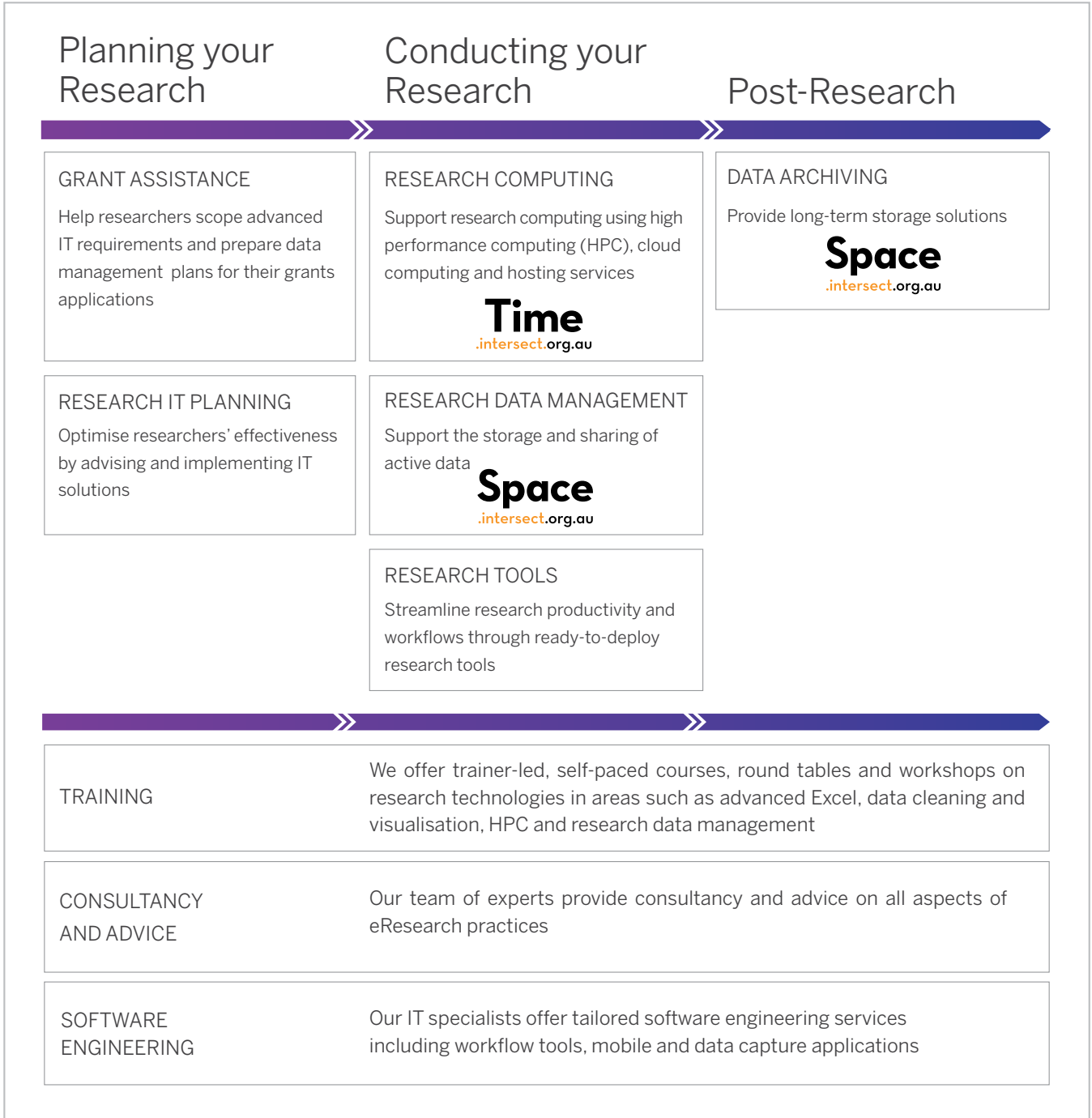
Our track record is in working with researchers to deliver eResearch solutions that work. Our focus is meeting researchers' needs by sharing and solving eResearch problems. We have successfully delivered over 100 research-focused software engineering projects across all disciplines and platforms. We've trained over 2,700 researchers in 270 courses about advanced research computing topics. We help our members secure linked grant funding through collaboration.

# High-value services to support your research



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Our services are targeted at enhancing the capability (skills) and capacity (resources) of organisations, disciplines and research groups. Being part of the Intersect community allows our members and their researchers to benefit from our research technology gained across disciplines and organisations throughout each phase of the Research lifecycle. When it comes to sharing and solving eResearch challenges, we want to be your null hypothesis.



Intersect helps researchers increase their impact through innovative technologies and expert advice. We work closely with our members and the wider research community to:

- Increase research **productivity** by decreasing time from hypothesis to tested results.
- Support research **diversity** by enabling collaborators to share data and experience across disciplines and across organisations.
- Increase research **longevity** by storing and sharing the long tail of data beyond the research project lifecycle.



Productivity



Diversity



Longevity

## Consultancy and Advice

Intersect eResearch Analysts optimise research outcomes through the application of advanced IT solutions. We help researchers better understand and select the most appropriate IT solutions to increase research productivity. We provide advice on availability, access and use of high performance computing (HPC) and cloud computing facilities. We help develop research data management plans to accommodate specific digital storage and collaboration requirements. We work closely with our members to augment local IT services and make capability recommendations. We recommend existing tools to enhance workflow and improve research productivity. We analyse researcher needs to help develop new tools and software where needed. We share best practices across universities, institutes, disciplines and research groups.

## Grants Assistance

We enhance research team grant applications by developing data management plans, developing estimates for grant application IT components, making in-kind contributions of Intersect services and products like Space and Time, and by building partnerships for multi-institutional collaborations. Intersect offers a highly successful track record in building cross-organisational research teams to secure collaboratively linked funding. Grant team building successes have been achieved in the Australian Research Council Linkage Infrastructure and Facilities (ARC LIEF) program, the National eResearch Collaboration Tools and Resources (NeCTAR) Commonwealth scheme, the NeCTAR Virtual Laboratories and Research Tools bid and the NSW Science Leveraging Fund (NSW SLF), to name a few.

## Software Engineering and Research Platforms

We develop cost-effective, research-focused software applications. We have a track record of over 100 software engineering projects delivered across all research disciplines. Our team has proven technical capabilities in web and mobile applications. We build new research software applications with innovative technologies and also reuse existing applications wherever possible. We offer researchers software platforms, tools and applications to meet research needs, ranging from custom to off-the-shelf. Intersect engineered platforms are as diverse as DIVER for generic research data management, POSSUM medication administration monitoring, WOMBAT clinical activity monitoring, Alveo human communication dataset curation, Cr8it ('Crate It') file packaging and publishing application and Launchpod virtual machine application automation. Deployment typically leverages Intersect Space and Time products, and some tools can be deployed into other eResearch contexts. We can also work with you to create a solution tailored to your specific requirements or recommend suitable commercial and open source tools.

## Training

We offer an array of eResearch training courses held in local training labs, from beginner through to advanced levels. We develop new courses in response to your needs. Our courses provide practical and research-relevant hands-on exercises. Current training offerings include: "Excel Fu for Researchers", "Research Data Management Techniques", "Data Visualisation with Google Fusion Tables", "Cleaning and Exploring your data with OpenRefine", and High-Performance Computing Courses from "Command Line for Unix" to "HPC Parallel Programming". Advanced courses in Python, versioning with Git, databases and SQL, Software Carpentry and others are available to improve compute-intensive research productivity.

Course places are frequently 100% subsidised for researchers and HDR students from Intersect member institutions. Intersect also structures fee-for-service training for non-member organisations.

"One of the things that I really like about working with Intersect is they actually understand the sector. They got a much better understanding of the needs of universities than, say, commercial providers would have. In that way we can engage with them at a much deeper level in terms of the storage, compute and collaboration needs that researchers have".

Mr Kerry Holling, Chief Information  
and Digital Officer  
Western Sydney University

# Case Studies

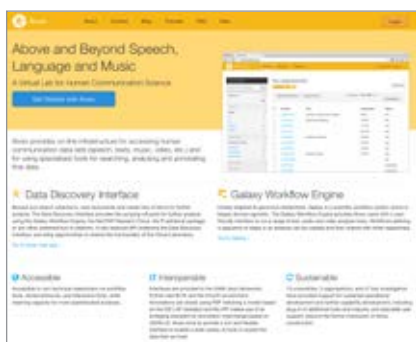


## Australian Schizophrenia Research Bank (ASRB)

### Revolutionising schizophrenia research - Health & Medical

The ASRB web portal was developed for the University of Newcastle by Intersect to provide researchers with a secure environment for collecting and storing research data. This is a central resource for the entry, upload and download of clinical assessments, MRI brain scans and management of genetic blood samples of ASRB participants. The system has fine-grained and flexible security, enabling controlled online access. A Clinical Assessment System laptop software enables officers to assess participants in the field and upload information in the portal later on.

[schizophreniaresearch.org.au/bank](http://schizophreniaresearch.org.au/bank)



## Alveo - Above & beyond speech, language and music

### Human Communication Science (HCS)

Focusing on the manner in which humans communicate with each other, and with computers and machines via codified means, this virtual laboratory allows a diverse range of researchers to access corpora and analytical tools.

Intersect developed a range of online tools enabling HCS researchers to access human communication data sets (speech, texts, music, video, etc) and specialised tools for searching, analysing and annotating data previously spread across various sites with varying degrees of accessibility. This project is led by Western Sydney University with funding from NeCTAR.

[alveo.edu.au](http://alveo.edu.au)



Biobanked specimens  
Photo: A/Prof Daniel Catchpole  
Children's Hospital at Westmead Paediatric  
Tumour Bank

## Supporting the Cancer Biobanking Community in NSW

### Cancer Research - Health & Medical

Biobanks collect and store human tissue samples and biopsies for use in subsequent research projects. Intersect is working with the Cancer Institute NSW's Biobanking Stakeholders Network (BSN) that involves 23 cancer biobanks. The survey of existing IT and imaging platforms in use across the BSN and assessment of user requirement needs has provided recommendations for implementing new biobanking data management and information integration systems across the network.

[cancerbiobanknsw.org](http://cancerbiobanknsw.org)

## Learn more

This information and more is available online.

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[.intersect.org.au](http://intersect.org.au)

## Energy Boot Camp

Scheduled training and seminars run on member university campuses.  
Get in touch with your local eResearch analyst or visit:  
[intersect.org.au/training](http://intersect.org.au/training)

## Get Started

Want to ask questions about our Services or have us contact you?

Reach out by emailing  
✉ [energy@intersect.org.au](mailto:energy@intersect.org.au)

## [Help.intersect.org.au](http://Help.intersect.org.au)

To make your research life easier, we offer a simple new one-stop researcher experience called [Help.intersect.org.au](http://Help.intersect.org.au). By visiting or emailing our helpdesk, you can let us know about a problem, ask for help, order Space storage or Time compute, or find information. You can get started by signing in with your institution credentials through the Australian Access Federation (for participating organisations).

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Intersect is a pivotal part of NSW research infrastructure. We provide robust, innovative and collaborative technology to support the world-class research at members institutions and research organisations. Intersect delivers storage and analysis platforms, customer engineering, expert consultation and training programs to thousands of researchers every year.

