eResearch Services and Capabilities

Advancing the Professionalism of our eResearch Workforce
Overview

FAVeR and APeRW Working Group

eResearch: Value Proposition & Value Chain

eResearch: Services & Capabilities

Capabilities: Processes and Infrastructure
FAVeR

Federation for the Advancement of Victorian eResearch

- Collaboration of the eight Victorian-based universities

- Vision: "To enhance the coordination of eResearch initiative across Victorian universities in order to improve access to and utilisation of eResearch services and infrastructure."

- Three current projects:
  - Access to infrastructure – models that scale
  - Advancing the professionalisation our eResearch workforce
  - How to best engage with digital humanities research in Victoria?

http://www.faver.edu.au/
APeRW Working Group

Name: Advancing the Professionalism of our eResearch Workforce (APeRW)

Goal: Create a white paper that clarifies the roles within the eResearch workforce:

- **Scope** and **categorisation** of eResearch roles.
- **List of roles**, including high-level position descriptions for each role.
- **Career paths**, as links between roles.
APeRW Previous Work

Modelling Roles for eResearch

BoF Session (2018)
Presentation (2019) @ eResearch Australasia:

Services <<< Capabilities <<< Skillsets

Ongoing discussion and sharing of perspectives by FAVeR members

BoF Session @ eResearch Australasia 2020
What is eResearch?

"The application of advanced computing and ICT across the research lifecycle."

Value Proposition of eResearch Workforce

"Research technology specialists can help by exploring, developing, and recommending appropriate solutions for diverse researchers, across the research lifecycle."
What are eResearch Services?

The outputs delivered by eResearch professionals that support, or enable, the eResearch activities of researchers and other institutional staff.

Inputs

Capabilities

• People
• Processes
• Infrastructure

Services

• Outputs
eResearch Services

Advise
- Provide Advice
- Triage Enquiries

Train
- Develop
- Organize Program
- Deliver

Promote
- Research Tech
- Services

Develop
- Advise
- Support
- Develop
- Refer

Deploy
- Research Tech
- Maintain Systems
- Support Bespoke Deployments

Support
- Research Tech
- Applications
- Platforms
Advise
- Provide Advice
- Triage Enquiries

Provide advice on:
- appropriate technology solutions (internal and external)
- appropriate approaches
- application of RDM principles
- appropriate solutions for RDM

to support:
- data life-cycle
- computation
- grant applications
- ethics applications

Triage and referral of enquiries to other service units.
Develop, organise and deliver training for researchers:
- across various levels of expertise: awareness, introductory, intermediate, and advanced.

on:
- technical aspects of tools, software and platforms. e.g. python, R, HPC.
- techniques for data capture and analysis. e.g. data science
- RDM systems (internal and external)
- embedding technologies in the research life cycle
- onboarding for specialised laboratory equipment
- bespoke domain-specific platforms and technologies

Skills Transfer through resource provision into active research projects.

Referral to external training materials and opportunities.

eResearch Services

Promote available technologies and services to researchers through:
• community-driven engagement
• departmental training and events
• consultation as a service (with relationship management)
• consolidated catalogue of available services (internal and external)

Promote policies that impact research technologies. e.g. Research Data Management (RDM)
eResearch Services

Develop bespoke project workflows and pipelines for:
- data Science
- domain specific data analysis
- etc.

Provide advice about development within the institutional context on:
- feasibility and best practice
- policy and technologies
- software quality requirements
- RDM principles

Support the development of scripts and software:
- within research projects
- in collaboration with researchers

Develop research technology:
- specialist and bespoke solutions
- solutions to integrate research systems and services.

Referral to third party software development services.

Develop
- Advise
- Support
- Develop
- Refer
eResearch Services

Deploy research infrastructure, technologies and systems within the institutional context.

Provide ongoing maintenance to research and data storage systems to:
• ensure currency of security patches.
• migrate to newer versions.
• include ad-hoc enhancements.

Support bespoke deployment for research technology provided through various platforms.
eResearch Services

Support key research infrastructure, technologies, applications and platforms:
  • e.g. RDM and data storage
  • across the research life cycle
  • across institutional units (Library, Research Office, IT Services, etc.)

Provide access and manage allocations for technical research infrastructure.
eResearch Services

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eResearch Capabilities

What is a capability?

• An expression of what a business does or can do.
• This can be the **People, Processes, and Infrastructure** required to transform inputs to outputs within the activities upon which service delivery depends.

Potential Capabilities: Training

• Training **Planning**: requirements elicitation and solution identification.
• Training **Organization**: program design and session planning.
• Training **Delivery**: deliver training to researchers.
eResearch Capabilities: Next Steps

What are the Processes and Infrastructure that support the delivery of these services?

We're inviting input from the community...
Google Form:  https://eresear.ch/caps-survey/

APeRW Project Page...

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