

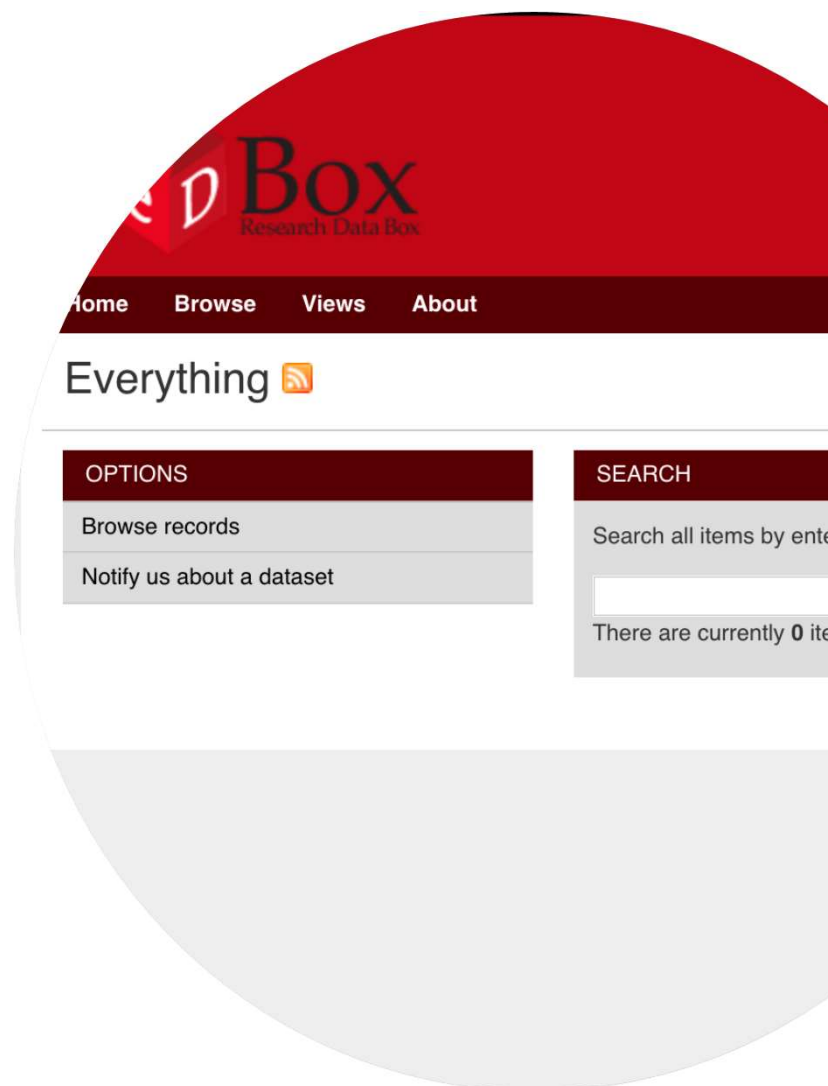
# Provisioning and sustaining research workspaces and repositories

Progress on ReDBox 2.0

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**Mike Lynch**  
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## ReDBox 1.10

- Research data catalogue / metadata store
- 8 Australian institutions
- Maintained by QCIF (Queensland Cyber Infrastructure Foundation)
- OAI-PMH feed publishing metadata records to aggregators like RDA
- More recent releases include a data management planning tool



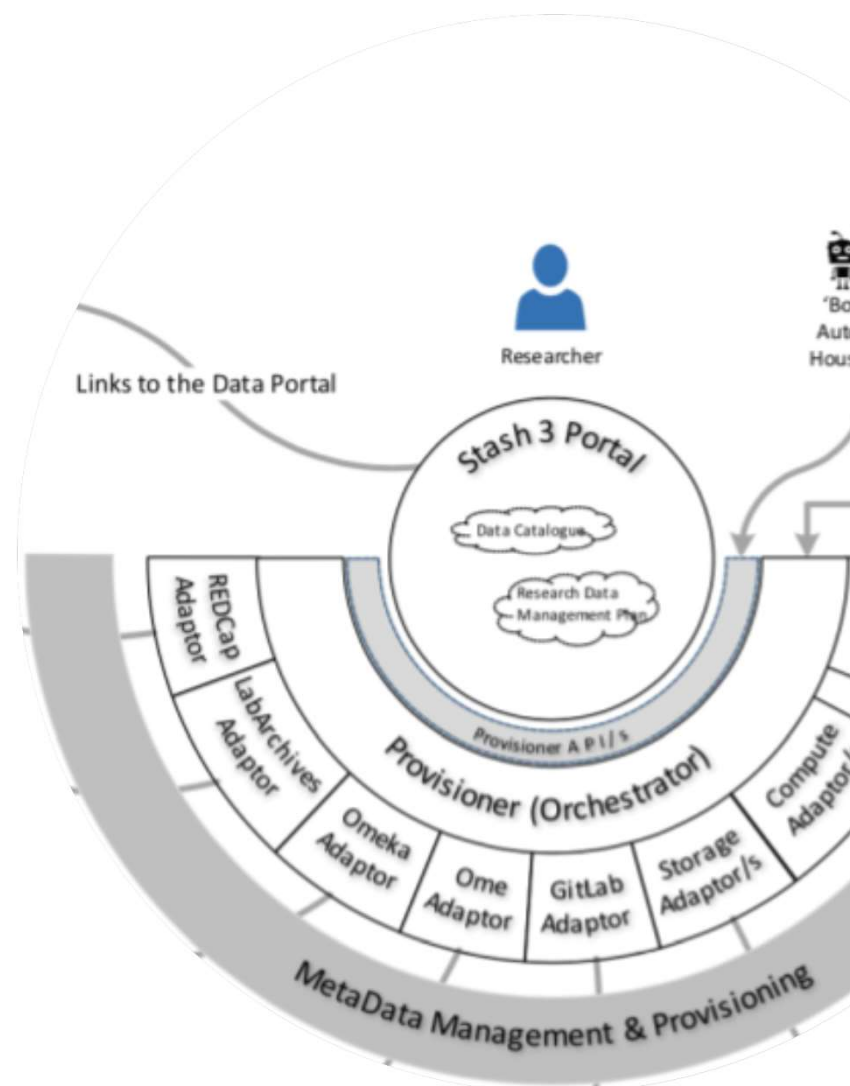
## Problems with (our) 1.10

- Outdated technology stack: Java / Jython / Apache, old JS frontend
- Researchers can submit metadata records for review but not data files – there's still a manual data publication process
- Curation – don't publish a record until everything it refers to has been published. Brittle, hard-to-debug, records get stuck in curation.



# Provisioner

- UTS project for integrated research data management
- Learn from earlier attempts to provide data + metadata capture
- Integrate with specialised research applications: OMERO, GitLab
- More general applications: fileshares, ReDCAP surveys
- General data review and publication



## ReDBox 2.0 / Provisioner

- UTS – big risks for this sort of software development
- Collaborate with QCIF
- ReDBox 2.0 is a ground-up reimplementation of the platform
- Research data planning
- Describe and publish data sets
- Provisioning workspaces

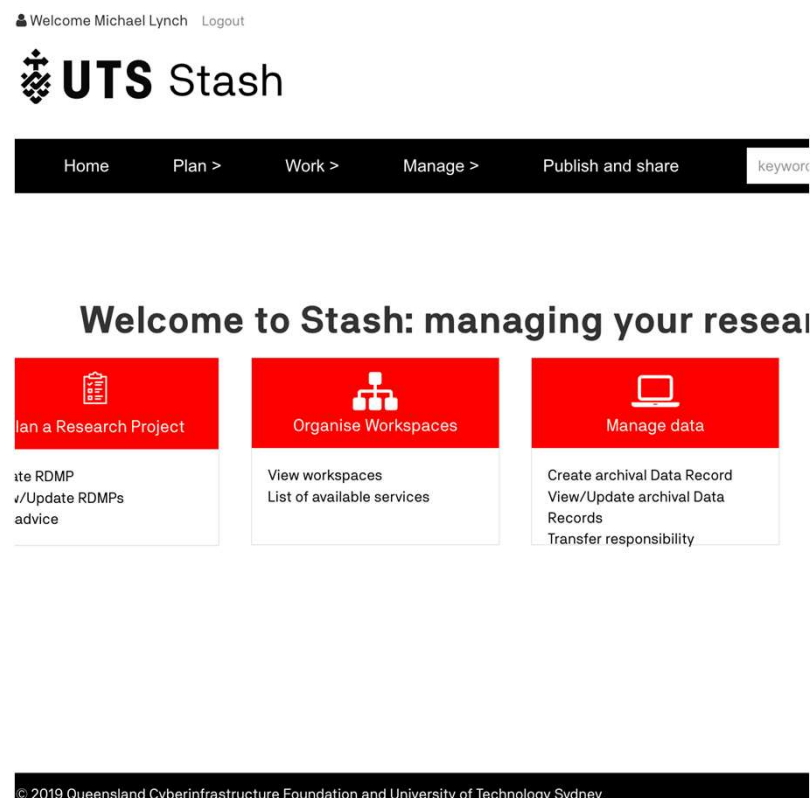
The screenshot shows the UTS Stash web application interface. At the top, a user is logged in as Michael Lynch with a 'Logout' link. The UTS Stash logo is prominently displayed. Below the logo is a navigation bar with links: Home, Plan >, Work >, Manage >, Publish and share, and a search bar labeled 'keyword'. The main content area is titled 'Welcome to Stash: managing your research'. It features three red-topped cards with white icons and text:

- Plan a Research Project**: Includes links for 'Create RDM', 'Update RDMs', and 'Get advice'.
- Organise Workspaces**: Includes links for 'View workspaces' and 'List of available services'.
- Manage data**: Includes links for 'Create archival Data Record', 'View/Update archival Data Records', and 'Transfer responsibility'.

At the bottom, a footer bar contains the copyright notice: '© 2019 Queensland Cyberinfrastructure Foundation and University of Technology Sydney'.

# Development

- QCIF – reimplementing the ReDBox platform
- UTS – workspaces and data migration, business analysis, form and process development
- Agile project methodology
- Collaboration via Slack and weekly sprint meetings
- Late 2017 – early 2019



## The techie slide

- node.js
- MongoDB for record storage
- Sails.js – an MVC web app framework based on express.js
- Frontend: Angular
- Much better performance than v1.n
- Compiling it can melt your laptop



## ReDBox 2.0

- Modern UX
- Pre-filling forms with details from project records is much better
- Workspaces can be created and linked to RDMPs
- Data records linked to RDMPs which can have attached data
- Data publications based on data records

Welcome Michael Lynch Logout



Home

Plan >

Work >

Manage >

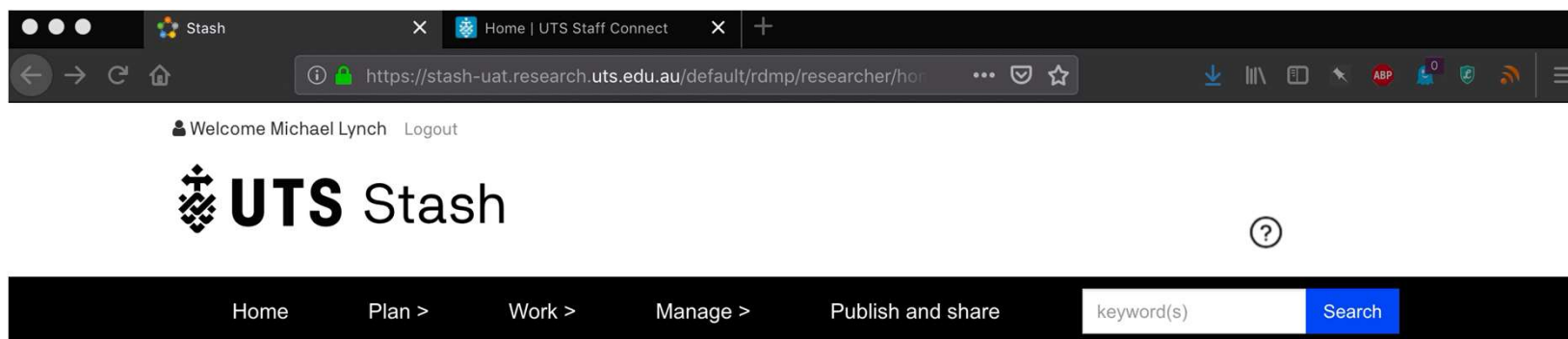
Publish and share

keyword





### Welcome to Stash: managing your research

 Plan a Research Project	 Organise Workspaces	 Manage data
Create RDMP ✓/Update RDMPs advice	View workspaces List of available services	Create archival Data Record View/Update archival Data Records Transfer responsibility





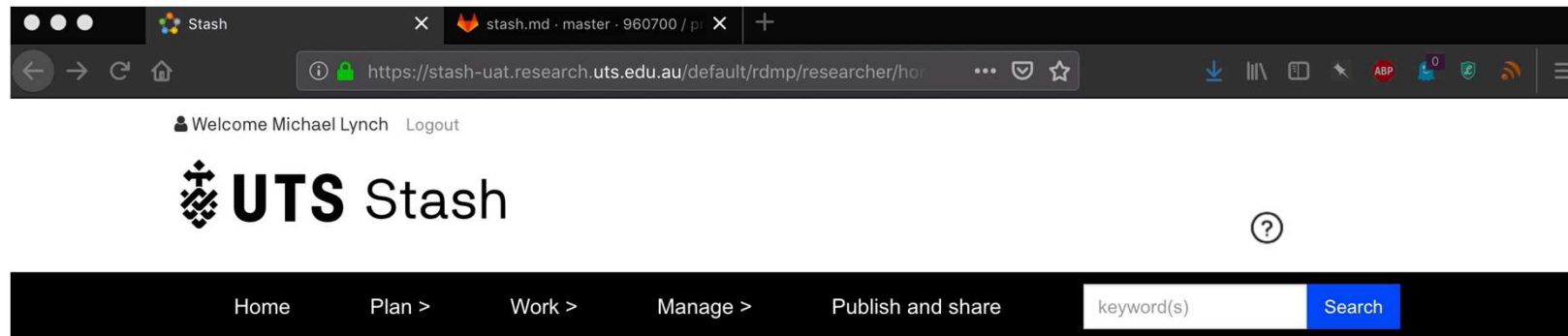
## Welcome to Stash: managing your research data

 <b>Plan a Research Project</b>	 <b>Organise Workspaces</b>	 <b>Manage data</b>	 <b>Publish and share</b>
Create RDMP View/Update RDMPs Get advice	View workspaces List of available services	Create archival Data Record View/Update archival Data Records Transfer responsibility	Create Data Publication View/Update Data Publications





The screenshot shows a web browser window with the URL `https://stash-uat.research.uts.edu.au/default/rdmp/record/...`. The page header includes a welcome message for Michael Lynch and a navigation bar with links: Home, Plan >, Work >, Manage >, Publish and share, and a search bar. The main content area is titled "Project overview" and contains a form with the following fields:

- Project name (\*)**: Feasibility studies of cavitation effects on jet cutting devices
- Project ID (\*)**: 100002797
- Project Description (\*)**: Conventional jet cutting devices rely on high velocity jets and experience intensive nozzle erosion. The feasibility of reducing the nozzle wear, by using cavitation, without sacrificing cutting speed will be studied. The feasibility studies will be initiated using a UTS-O'Brien Link grant and an application for a SPIRT grant will then be made enabling to fully investigate the problem and develop an improved design for a jet cutting machine with minimum wear in the jet nozzle but maximum erosion of the target. The project will lead to a dramatic reduction in the frequency of nozzle replacement, maintenance and energy used, giving an advantage edge to Australian manufacturing. Finally, factors governing surface erosion in a particulate-laden cavitating jet flow will be studied.

A sidebar on the left lists navigation options: Project (selected), People, Data collection, Data retention and disposal, Access and rights, Ethics and sensitivities, and Workspaces.



## Welcome to Stash: managing your research data

 <b>Plan a Research Project</b>	 <b>Organise Workspaces</b>	 <b>Manage data</b>	 <b>Publish and share</b>
Create RDMP View/Update RDMPs Get advice	View workspaces List of available services	Create archival Data Record View/Update archival Data Records Transfer responsibility	Create Data Publication View/Update Data Publications

## What's next?

- We went live last week: planning a bugfix release in the next month
- Data publication repository with Peppermint search/discovery app
- Oxford Common File Layout
- More research apps:
  - LabArchives ELNs
  - File storage



Search

thistle

Search Results: 1

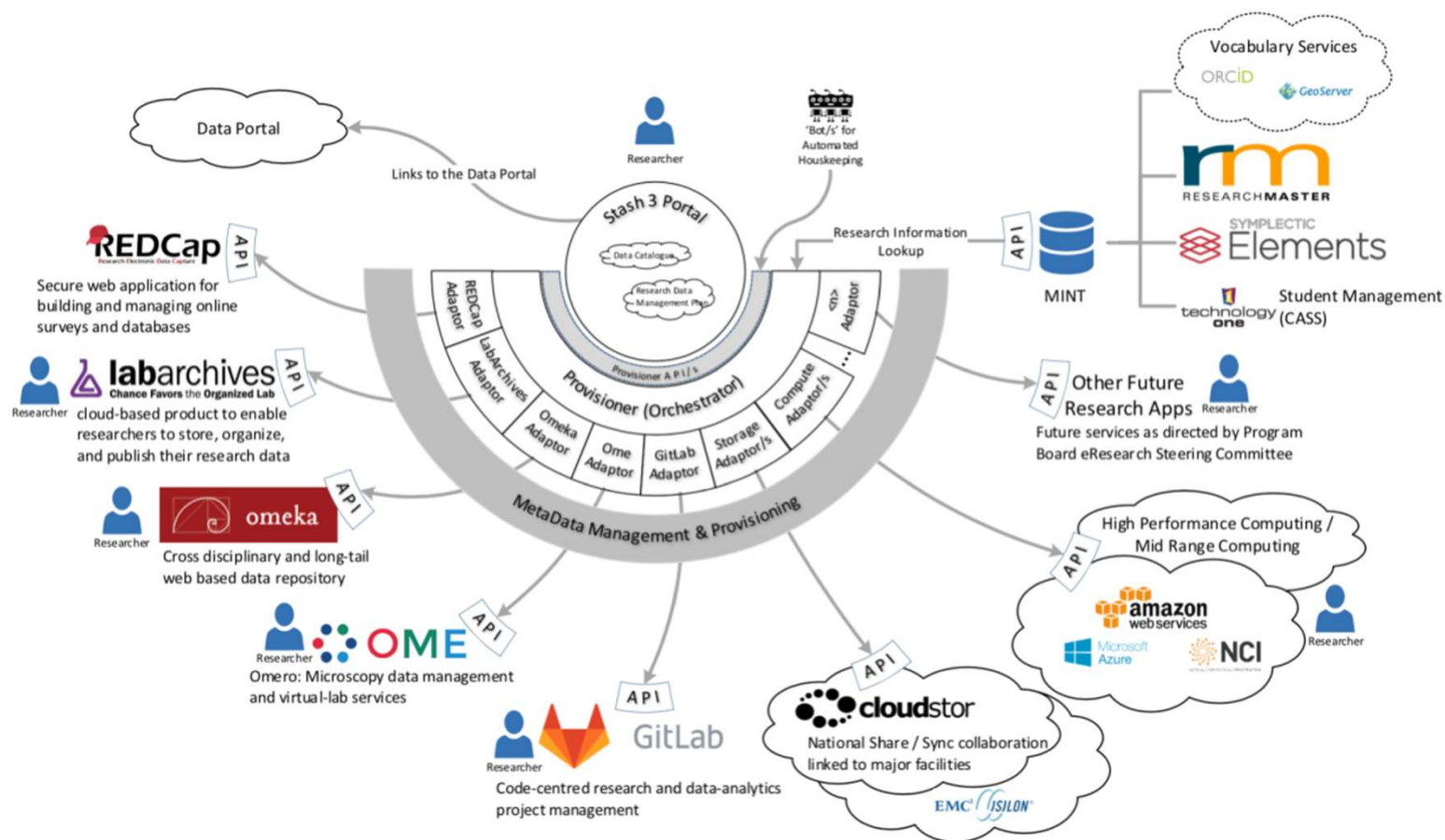
### Australian Nucleotide (DNA/RNA) and Protein sequences from *Centaurea iberica*

This data collection contains all currently published nucleotide (DNA/RNA) and protein sequences for the star thistle. Other information about this group:

The nucleotide (DNA/RNA) and protein sequences have been sourced through the European Nucleotide Archive (ENA) and the European Protein Data Bank (PDB), which are part of the European Research Community.

The identification of species in *Centaurea iberica* as Australian dwelling organisms has been recorded in the Australian Faunal Directory (AFD) through the Atlas of Living Australia.

# What's after that?



# Links

- <http://www.redboxresearchdata.com.au/>
- <https://github.com/redbox-mint/redbox-portal>
- <https://eresearch.uts.edu.au/>
- <https://www.qcif.edu.au/>
- <https://ardc.edu.au/>

Thank  
you

