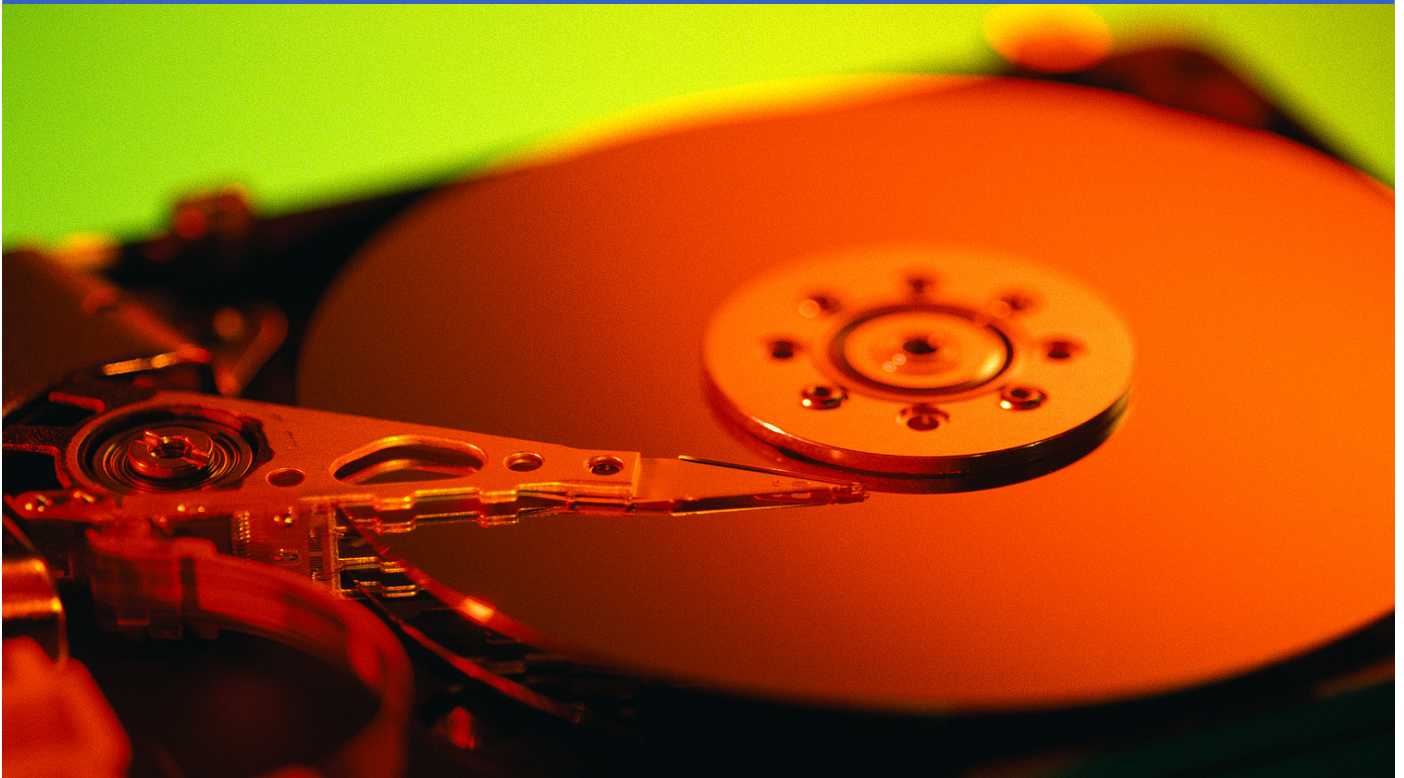




More researchers sharing and re-using  
data more often



## Monash Data Capture Projects

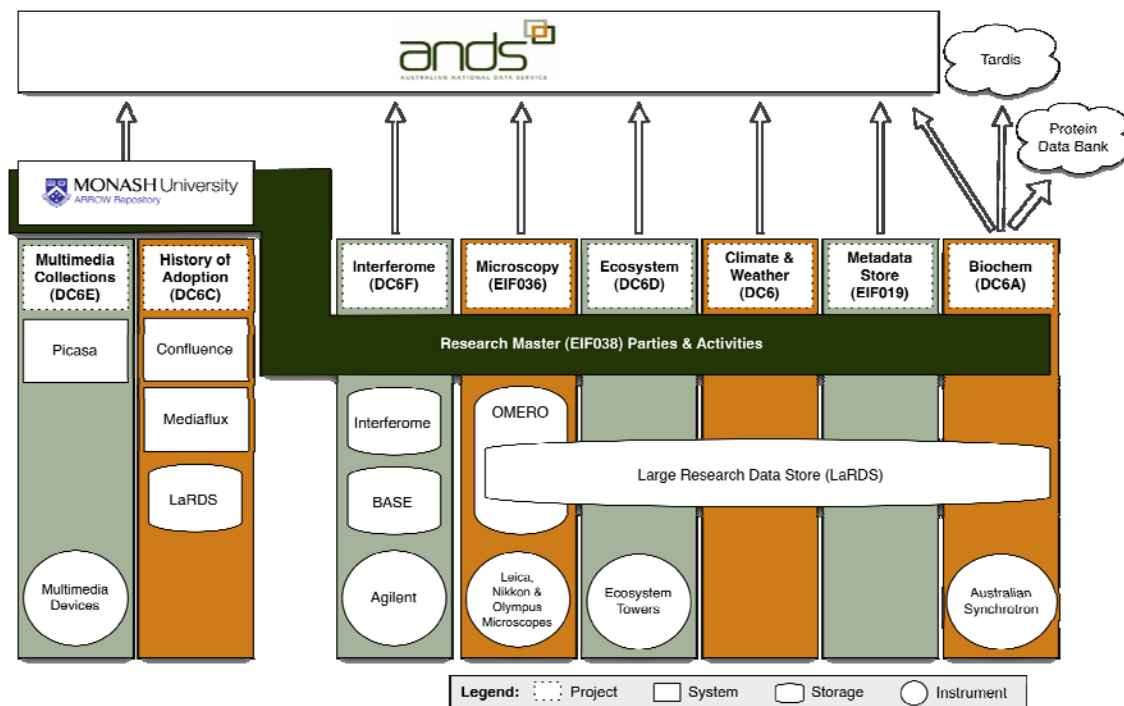
The Monash e-Research Centre (MeRC) was awarded funding from the Australian National Data Service (ANDS) in 2010 to undertake eight data capture projects.

MeRC harnesses the skills and resources of Monash University's Office of the CIO, Office of the DVC Research, the Library, and computer scientists in the Faculty of Information Technology to provide advanced information and communication tools and solutions.

ANDS is supported by the Australian Government through the National Collaborative Research Infrastructure Strategy Program and the Education Investment Fund (EIF) Super Science Initiative.

The objectives of the data capture projects are to:

- Improve research data management practices.
- Capture data and metadata from research instruments and devices.
- Enable data/metadata management and sharing.
- Facilitate the re-use and discovery of data.
- Provide the capability to easily publish data collections to the Australian Research Data Commons (ARDC), sometimes referred to as Research Data Australia.  
<http://services.ands.org.au/home/orca/rda/>



### EIF019: Development of Metadata Store Infrastructure with a Large Research Data Store (LaRDS)

*Squirrel* is a versatile metadata store application that integrates with a large institutional research data store (i.e. LaRDS in the case of Monash University). This application manages **multi-disciplinary research data** and metadata about the data collections, and includes information to support; searching/discovery, assessment of relevance, access to and re-use of the data shared internally and/or externally to the institution.

### EIF036: Comprehensive Data Management for Microscopy

This solution allows the Faculty of Medicine, Nursing and Health Sciences to generate and capture experimental information and raw data from **optical microscopy** instruments in a centralised location, rather than the current practise of capturing this on researchers' lab-notes and personal disks. This approach will establish a concept for the mandatory annotation of digital imaging data to maximise the use, re-use and distribution of experimental information within the scientific community.

### DC6F: Data Publication to Interferome

This project streamlines the deposition of research microarray data within the **immunology and genomics** fields that will contribute towards the knowledge base for the Interferome community. The solution addresses current shortcomings in collaborations and in the sharing of this valuable data. Availability in the Australian Research Data Commons (ARDC) of the data, along with the corresponding collection records, will improve data discovery and facilitate hypothesis generation and novel biological discoveries that would not otherwise be possible.

### DC6A: Biomedical Data Platform (Molecular Biology)

*MyTardis* seamlessly facilitates the capture and annotation of **protein crystallography** data from the Australian Synchrotron MX beamlines, the deposition of the data to the researcher's institutional data store, and the metadata publication across multiple research data repositories, including TARDIS (Monash-run), Protein Data Bank (worldwide) and the ARDC (nationwide). It has been integrated with Monash University's High Performance Computing grid to process the raw data and store the output. Visit [www.tardis.edu.au](http://www.tardis.edu.au) to view the public solution.

### DC6C: History of Adoption

This solution, built for the Faculty of Arts, provides a workflow that enables members of the public to submit their **life stories about adoption** in text and sound files, subsequently able to be reviewed and curated before being published on the History of Adoption website and on the ARDC. The previous manual workflow, involving many systems, has been simplified significantly through the integration work of the project.

<http://arts.monash.edu.au/historyofadoption/>

### DC6D: Capture and Publication of Australian Ecosystem Data from a Network of Measurement Sites

This project seeks to directly address the lack of coordination of the data collecting and archiving of **ecosystem NetCDF** files produced from towers at various locations across Australia. The solution will promote quality control across the active groups in Australia and access to the integrated research data by both Australian and international researchers. The solution can be viewed at:

<http://ozflux.its.monash.edu/ecosystem/>

### DC6E: Tools for Curating and Publishing Research Data in the form of Media Collections

This project developed generic software tools that support the organisation of pre-existing **digital media** data collections into files and formats suitable for publication via institutional repositories, and from those repositories into other discovery services, including the ARDC.

### DC6: Climate and Weather

An online solution has been developed to store and share **climate simulations and reference data sets**. The data, in particular NetCDF and GRIB files, are managed in collections and allow the researchers to describe their experiments by defining descriptive metadata.

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