# Sensitive Imaging Infrastructure using XNAT

## This project will consider how institutionally supported policy and data infrastructure can help ensure management and reusability of sensitive imaging data through controlled access using XNAT.

Institutions across Australia have been building platforms to manage imaging data, which is often sensitive. In the clinical space, research practice is often married to clinical practice, using the same instruments and often the same patients. Depending on where an instrument is housed, data may come anonymized to various degrees, ranging from having almost all metadata removed for public data sets, to completely identifiable (linked or otherwise) data use for clinical reporting.

**Start date**

3 June 2019

**Expected completion date**

21 October 2019

**Investment by ARDC**

$50,000

**Co-investment partners**

Monash Biomedical Imaging

**Lead node**

THE UNIVERSITY OF SYDNEY

### 1. Security audit

Conduct an audit of deployment of XNAT on AWS

### 2. Audit of current workflows and sensitive data risks

Document workflows of researchers and facilities for handling data on XNAT, capturing risks and capability gaps.

### 3. Use cases discussion

A baseline classification and agreement on minimum identification profiles.

### 4. Creation of new policy

Reduce systematic risk through creation of standardized workflows and patient consent templates.

### 5. Enhancement of existing platforms

Implement tools to automate the desired workflows and force minimum rulesets for DICOM metadata along with updated reference architecture.

### 6. Presentations

Develop and give a presentation at the ARDC Data Summit. We will also contact other institutions with XNAT, and NIF for presentations more directly.

## Core features

### Policy and Procedures Documentation

Workflows and policy for sharing Imaging data between organisations, and for Reuse will be captured.

### Patient Consent Template(s)

Consent templates will be developed to help ensure researchers are asking for the most appropriate consent to use XNAT in the most FAIR way.

### Anonymization Toolset for XNAT

Tools will be released for use with XNAT, based on Free and Open Source Software (FOSS); providing an integrity benefit for a large number of research publications.

### Reference architecture

Development of a reference architecture to allow other institutions to be able to build their XNAT environments with appropriate controls to allow it to handle sensitive data.

# Who is this project for?

- Research organisations
- Peak bodies
- Infrastructure providers
- Commercial eInfrastructure providers
- Government (state and commonwealth)

# What does this project enable?

This project will better enable sensitive data sharing standards across imaging infrastructure deployments and streamline the conversion of Human Ethics Research Committee (HERC) outcomes to technical implementations for Digital Imaging and Communications in Medicine (DICOM) data.

# Handy resources

- Final report
- FAIR assessment
- Presentation
- Workshop addressing questions on Ingestion, Storage and Compute for Image Data Services
- XNAT Project
- DICOM standard
- Full title of project for reference: “Institutionally supported policy and data infrastructure to ensure management and reusability of sensitive imaging data through controlled access using XNAT”

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