EMBL's European Bioinformatics Institute (EMBL-EBI)

# Data Steward Training Project

## Building a national imaging data stewardship skills base

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## Project overview

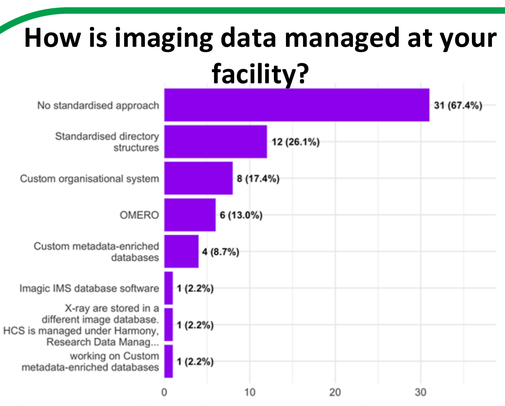
Working with biological images can pose significant challenges requiring research technical professionals (RTPs) with appropriate technical expertise. This project aims to address these by working to build image data stewardship skills, role recognition and career pathways within the UK community. We will provide direct training support for RTPs integrating their data generation, curation and annotation work into the permanent scientific record. While doing so **we aim to develop a comprehensive curriculum in image data management and stewardship, and deliver it via courses, workshops and train-the-trainer events**.

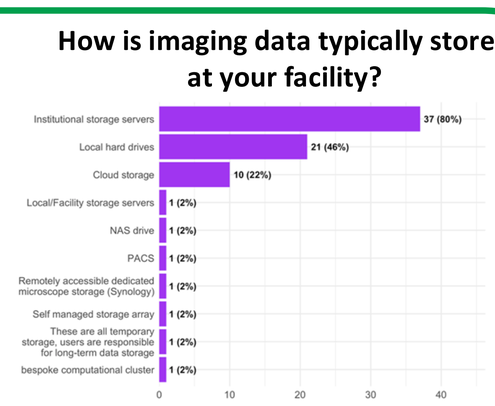
As an initial step, we conducted a survey to properly identify the needs and challenges of the bioimaging community in the UK and thus be able to cover the critical skill gaps.

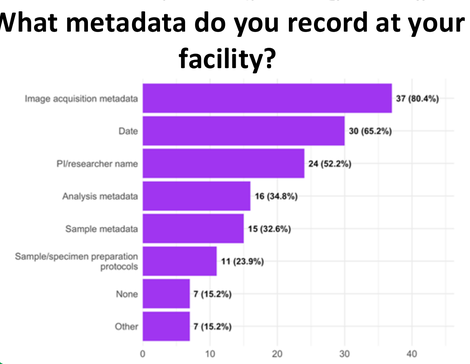
The survey received 46 responses from various imaging facilities across the UK.

## Summary of the main findings of the survey

### Commonalities





- 70% use proprietary formats followed by TIF (63%)
- Sharing is mainly by external hard drives (54%) and the cloud (41%)
- Users are provided with support on image acquisition (93%), processing (85%) and analysis (91%)

### Shared challenges

- Lack of a standardised approach and dedicated support for managing imaging data
- Lack of metadata and data flow management, affecting findability of data, data loss, data duplication
- Handling large volumes of data: data storage and data transfer
- Data ownership policy (user, university or facility)
- Different requirements between repositories and funders when depositing data and the time it takes to do it
- Limited staff and lack of recognition

## Proposed next steps

**Prepare training on the following topics:**

1. **Imaging Data Management & Metadata in Imaging**
   Improve the consistency and quality of imaging data management and support the adoption of metadata standards and FAIR principles
2. **Big Imaging Data Storage, Transfer and Sharing**
   Learn about standardised file formats and conversion strategies, storage and sharing options, and transfer tools like Aspera or Globus
3. **Public Repository Submission and Data Re-use**
   Convey the importance of FAIR sharing. Learn about submission process and guidelines, and opportunities for data re-use.
4. **Train-the-Trainer Programme**
   Train facilities staff so they can communicate the benefits and know-how of data management and data sharing

**Helpdesk email:**

datahelp_bioimaginguk@gmail.com

**Full survey report and other training resources available:**

Partners: BioImage Archive, Image Data Resource, Royal Microscopy Society

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