

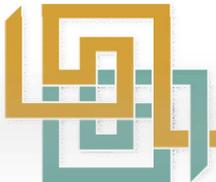


# Data Management Planning

Holly Wright



- What is data management planning?
- Why does it matter?
- What to include in a Data Management Plan (DMP)
- Intro to the DCC online Data Management Plan (DMP) system
- Group exercise
  - *Drafting a Data Management Plan*

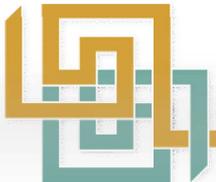


# What is data management planning?

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Data management plans are written at the start of a project to define:

- The project
- What data will be created or collected
- How the data will be documented and described
- Where it will be stored
- Who is responsible for data security and backups
- Which data will be shared and/or preserved
- How and with whom the data will be shared
- May have preliminary, interim and final planning phases



# Why does it matter?

- Advantages for research teams
  - Data is well organised, documented and in the correct formats
  - There's no need to re-format, re-organise or try to remember details of the data
  - It's easier to explain to new members of the team what work has been done
- Advantages for organisations
  - Uniform approach to data management by different teams
  - Clarity about which data was produced by whom
  - Researchers are responsible for managing their data well from the start

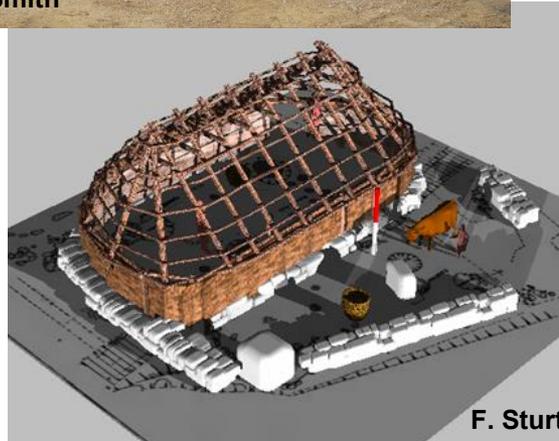
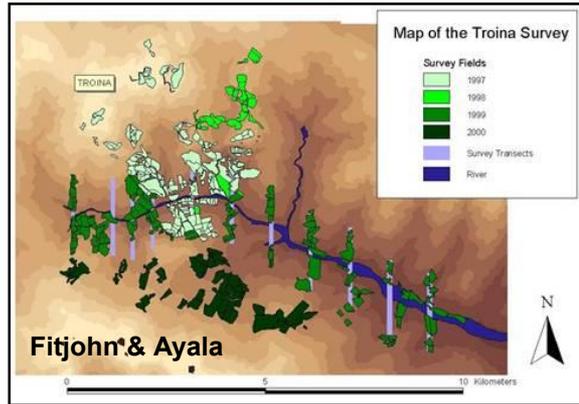
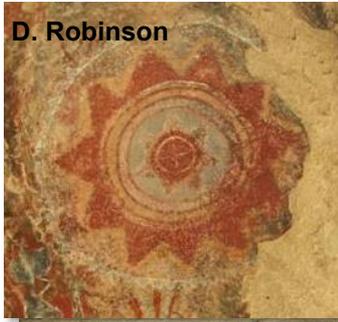


# What to include in a DMP

- Description of the project
- How the data was created or collected
  - Tools and methods
  - Standards and formats
  - Ethics and Intellectual Property Rights or restrictions
- Data documentation
- Storage
  - Short term management and backups
  - Longer term archiving and preservation
- Access
  - Plan for data sharing or dissemination



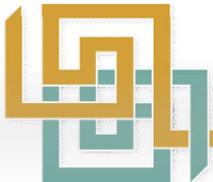
# What data will you create?



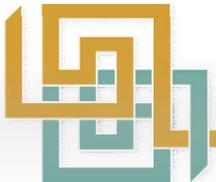
# Possible types of data

Can be anything created or manipulated on a computer:

- Text files
- Images – from digital scans of physical objects to photos
- 3D models
- Audio
- Video
- Spreadsheets & databases – numerical and textual data
- Survey data – from simple EDM surveys to Lidar scans and geophysical surveys
- Websites – even social media can be research data
- Etc...



- What data will be created and how:
  - Are there any standards to follow?
  - Tools and software used for capturing and processing data
  - File formats – choose carefully some are better than others for long term preservation and use
  - Procedures for consistency and data quality
  - Ontologies, thesauri or controlled vocabularies used in creating metadata
- Any existing data collected or re-used
- Describe the nature, scale and scope of the data



## Guides to Good Practice

- Digital Data (general)
- GIS
- CAD
- Geophysics
- Aerial Photography
- Remote Sensing
- Fieldwork
- Virtual Reality



### Archaeology Data Service / Digital Antiquity Guides to Good Practice

Log in

- Home
- Full Table of Contents

#### Digital Archiving

- About these Guidelines
- How to use these Guides
- What is Digital Archiving?
- Archival Strategies

#### The Project Lifecycle

- Planning for the Creation of Digital Data
- Project Documentation
- Project Metadata
- Data Selection: Preservation Intervention Points
- The Project Archive: Storage and Dissemination
- Copyright and Intellectual Property Rights

#### Basic Components

- Documents and Texts

This new and revised series of Guides to Good Practice have been produced as the result of a two-year collaborative project between the UK Archaeology Data Service and Digital Antiquity in the US. The project has encompassed important revisions of the existing six ADS Guides as well as the development of entirely new documents covering areas such as marine survey, laser scanning, close-range photogrammetry, digital audio and digital video. The project has involved previous Guides authors revising existing content alongside new authors, from both Europe and the US, also contributing to the development of the guides into new themes and areas.

The project has been undertaken in collaboration with the Digital Antiquity initiative, a US-based project with the aim of enhancing the preservation of and access to digital records of archaeological investigations. A major aim of the Guides is to provide the basis for archaeological project workflows that will create digital datasets that can be archived and shared effectively by Digital Antiquity's iDAR archive and repository in the US and by the Archaeology Data Service in the UK. The development of the Guides involves close collaboration with teams in the US at both the University of Arkansas and Arizona State University.

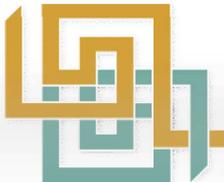
Other ADS projects have also fed into the revision and development of the Guides. ADS involvement in the European VENUS project has formed the basis of a guide focussed on marine survey. In addition, the incorporation of findings from the ADS Big Data project, together with the revision of the existing guide on aerial photography and remote sensing data, has seen a significant contribution to the guides from English Heritage funded projects.

Previous versions of the ADS/AHDS Guides to Good Practice have been archived and are still available on the old Guides to Good Practice page.

View the full new Guides to Good Practice Table of Contents



<http://guides.archaeologydataservice.ac.uk/>



# Describing and documenting the data

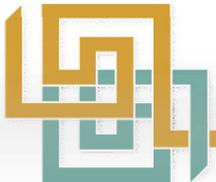
- Data description (metadata) is essential for the future
  - A form of communication between the principle investigator and researchers re-using the data
- What metadata are needed?
  - Any standards for data archiving, data discovery or sharing to follow? Any controlled vocabularies?
  - What tools will be used for capturing metadata (Lab notebooks, Field recording sheet, Auto-saved files on instruments, Database, mobile application, etc.)
  - Formats
  - Procedures for consistency and retrievability



# Storing data during the project

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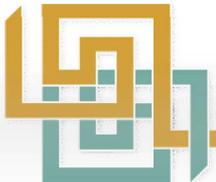
- Where will you store the data in the short term?
  - Local PC, network., etc.
- Describe how it is organised:
  - Project and data identifiers
  - Folder structures
  - File naming conventions
  - File version control



# Data security and backup

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- Identify who is responsible for data security and protection in your data management plan
- Describe your back up procedures
- How will you monitor compliance with the data management plan?



- Plan ahead in the early stages of the project
- Identify possible archives and get in contact
- Do they have any requirements? Formats, metadata...
- Archives need permission from the owners of the IPR to preserve and distribute the data; most do not ask for a transfer of rights



# Preserving for the long term

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- Which data will be preserved?
  - Does the data contain any confidential personal information or high security data?
  - Are there any restrictions on access? For example
    - Privacy or ethical issues
    - Embargos for political, commercial or research reasons?
  - If there are restrictions on access, what is required to make the data available to others? Any access policies?



# Access and sharing your data

- How will your data be made available for re-use?
  - Will the archive or repository disseminate your data?
  - Self dissemination through a web-site?
- How will users cite your data?
- Are there any restrictions on access?
  - License for permitted uses: non-commercial, derivatives, etc.
  - Embargo until specified date
  - Contact to request permission



- The [Digital Curation Centre](#) has a wide variety of resources online to help:
  - Checklists
  - Examples of Data Management plans from successfully funded proposals
  - An online data management planning form ([DMP](#))



# Acknowledgements

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Contributors: Ulf Jakobsson, Swedish Data Archive; Hella Hollander KNAW-DANS

## Image credits

Slide 6 Anti-clockwise from the top left image:

David Robinson: Chumash pictograph, South Central California, USA.

Matthew Fitzjohn and Gianna Ayala: Map of Torina survey., Italy.

Neol Tan: Digital photography at Angkor Wat. Cambodia.

Cultured Rainforest Project: R. Ferraby carrying out geophysical survey in Kelabit Highlands, Sarawak Photography: G. Barker.

Fraser Sturt: 3-D reconstruction.

Cultured Rainforest Project: Excavation at Ruma' Ma' on Dakah, Kelabit Highlands, Sarawak. Photograph: B. Nyiri

Lindsay Lloyd-Smith: Iron Age burial at Trumpington Meadows, Cambridge, England. Excavation by Cambridge Archaeology Unit.

Lindsay Lloyd-Smith: Henge-form at Old Wolverton quarry, Milton Keynes, England. Excavation by Cambridge Archaeology Unit.

