# Introduction to Data Management Planning

Dr Katie Green,
ADS Collections Development Manager

A Data Management Plan, is an **iterative** document describing how you plan to manage the data gathered through the delivery of a **specific archaeological project,** and what will happen to that data once the project is complete.

# Why should archaeologists develop a Data Management Plan?
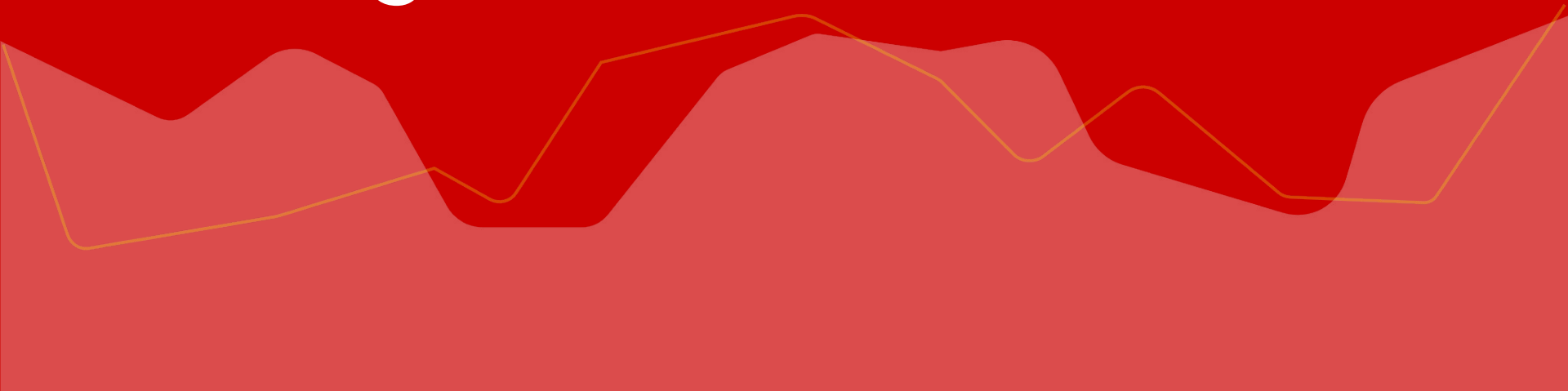
Why should archaeologists develop a Data Management Plan?

- To avoid the **duplication** or re-working of data and **reduce** the **costs** and **time** spent on data management,

- To provide **continuity** and **consistency** across project staff and facilitate **data sharing,** leading to more **collaboration** and **advances** in archaeological research

- To allow for the **validation** of results and data re-use, making your archaeological research more **visible** and have greater **impact,**

- To better facilitate the **long-term preservation** of your data,

- To help make archaeological data **FAIR** (Findable, Accessible, Interoperable, Re-usable).

Before you begin your Data Management Plan
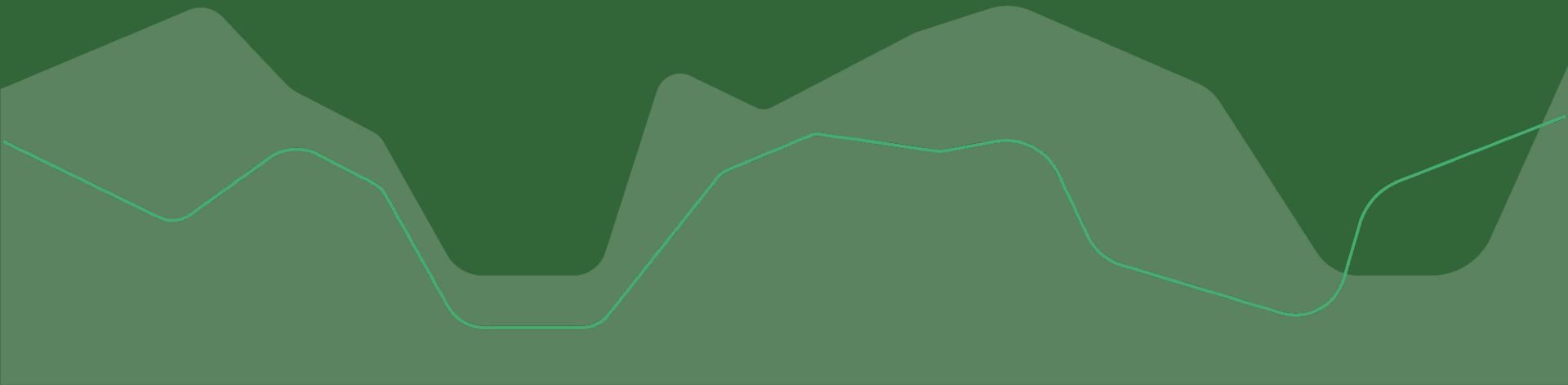
Before you begin your Data Management Plan you should:

- Understand your project **requirements**,

- **Consult, collaborate** and seek **advice** from appropriate stakeholders,

- Understand your **existing support** and **infrastructure provision,**

- Be able to clearly **define** the **roles** and **responsibilities** within your project,

- Be prepared to **implement your plan.**

Know your data!
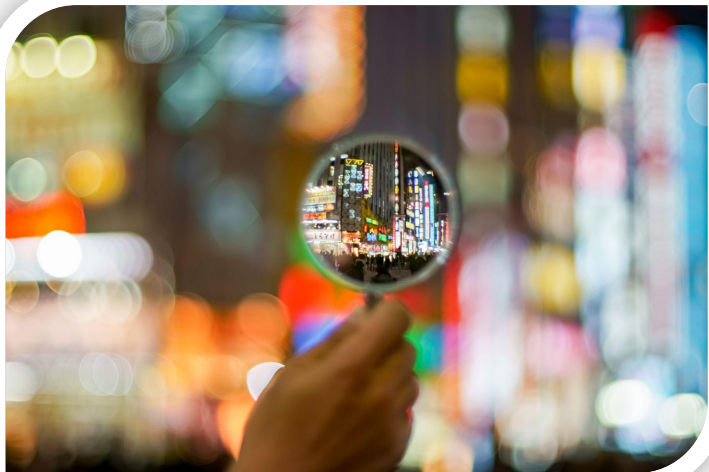
There are many Data Management Plan **templates** available and many organisations will have a set structure that you may be **required to follow** for your project.

Always read and follow any DMP guidelines your project is required to meet (i.e. funder or employer guidelines).


Work Digital / Think Archive - Data Management Plan Overview

The sections below are the basic components of the Data Management Plan. Each section comprises a series of sections which need to be completed. In the pages below the DMP format is fully explained, and includes the Questions to Consider, Guidance and Examples where appropriate.

Section 1: Project Administration
- Key project details, unique identifiers and contacts

Section 2: Data Collection
- What data will you collect or create?
- How will the data be collected or created?

Section 3: Documentation and Metadata
- What documentation and metadata will accompany the data?

Section 4: Ethics and Legal Compliance
- How will you manage any ethical, copyright and Intellectual Property Rights (IPR) issues?

Section 5: Storage and Backup
- How will the data be stored, accessed and backed up during the research?

Section 6: Selection and Preservation
- Which should be retained, shared, and/or preserved?
- What is the long-term preservation plan for the dataset?
- Have you contacted the data repository?
- Have the costs of archiving been fully considered?

Section 7: Data Sharing and Accessibility
- How will you share the data and make it accessible?
- Are any restrictions on data sharing required?

Section 8: Responsibilities
- Who will be responsible for data management?

This document forms part of the Work Digital / Think Archive guidance for digital archives prepared by DigVentures, on behalf of Archaeological Archives Forum and in partnership with the Chartered Institute for Archaeologists. The project was funded by Historic England (Project No. 7796).

Dig Digital - Data Management Plan   1

Creating a Plan
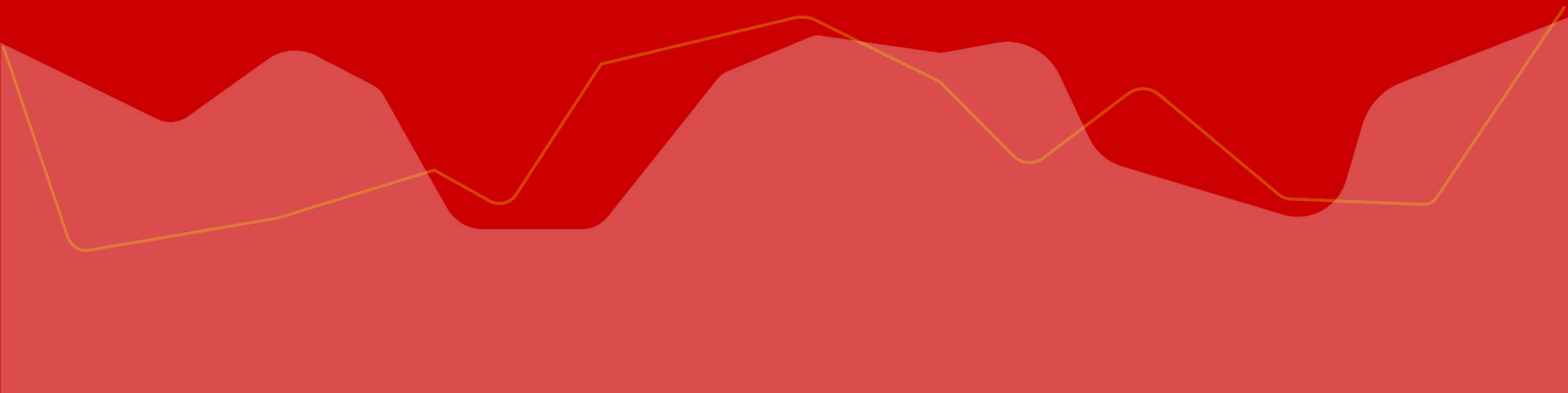
7 key area's a DMP should include:

ads Archaeology Data Service
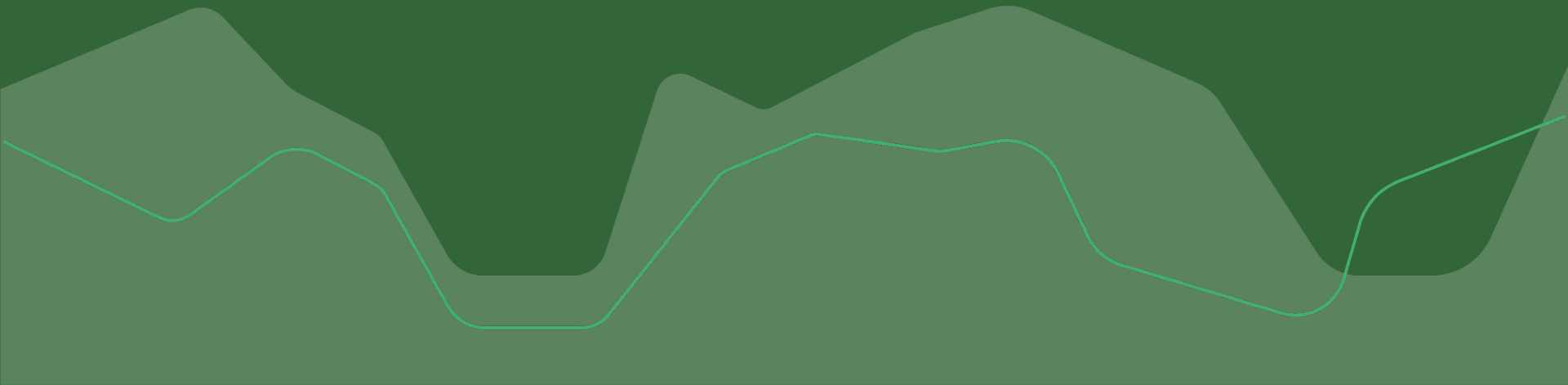
Context

For an archaeological project, the contextual information for a Data Management Plan should include:

- Key details such as **project** or **site names** and related **unique identifiers;**

- **Funding bodies** where relevant;

- The date the DMP was **created** and last **updated;**

- The **version** number for the DMP document;

- Reference to any related **data management policies, fieldwork manuals** or other relevant documentation.

Star Carr and Lake Flixton University of York Research Project.
Image © University of York

Roles and Responsibilities

For an archaeological project, this area of your Data Management Plan should include:

- Information on who is **responsible** for **implementing** the DMP and ensuring it is **reviewed** and **revised**

- Information on who will be responsible for **each** data management activity

- How responsibilities will be **split across partners** in collaborative projects

- How data ownership and responsibility for data management be part of any **consortium agreement or contract** between partners

ads Archaeology Data Service

Data Description

For an archaeological project, the data description section of your DMP should include:

- **What** data you will **collect** or **create** including the data **type**, **format** and **volume/size** of your data

- A justification of your chosen **formats** and the **software** used

- Information on what **existing data** is being collated and how this data will be used.

© Digital Preservation Business Case Toolkit

Standards and Methods

For an archaeological project, this should detail the standards and methods used in the project, such as:

- **How** you will **collect** and **create** your data
- What **instrumentation** will be used and why
- What **discipline specific** data **Standards** or **methodologies** will be used and why
- How you will **structure** your data
- How you will manage **version control** of your data
- What **quality assurance** processes will be used and why
- What **documentation** and **metadata** will accompany the data and **how** will this be **captured** and **created**
- What **metadata standards** will be used and **why**

Ethics and IPR

For an archaeological project, this section of your DMP should include:

- The name(s) of the **copyright holder(s)** for your data

- Information on required **data sharing agreements** (or equivalent)

- Details of any **ethical concerns** and **ethical review** processes undertaken for your data/project

- How **personal or sensitive data** will be handled, stored and transferred securely

- How you will ensure your data is compliant with a**ppropriate legislation** (i.e. GDPR 2018, UK Human Remains Acts)

- Information on any **data sharing restrictions required**, and what action you will take to overcome or minimise restrictions

Sharing Access and Security

For an archaeological project, this should include how your data will be stored, accessed and backed up during your research, such as:

- Details of **appropriate storage provision** for your dataset

- Information on **security** and **backup** procedures

- How data will be **recovered** in the event of an incident

- If creating or collecting data in the field, how will you ensure its **safe transfer** into your main secured systems

- How you will **control access** to keep the **data secure**

- How will you ensure **collaborators** can **access** your data securely

Image © www.digitalbevaring.dk

Preservation and Access

This part of your DMP should include how your archaeological data will be preserved and made available in the long-term, such as:

- What **selection strategy** will be applied to your data and what will happen to **de-selected data**

- How will the preserved data **relate** to any planned publication and other **dissemination** materials

- **Where** will the **data be deposited**, for **how long** will it be preserved, and **why** your selected repository was chosen

- **When** you will make the data available, and under what **re-use licence**

- What are the **foreseeable research uses** for your data

"The single most useful thing you can do to ensure the long-term preservation of your data is to plan for it to be re-used. Imagining it being re-used by someone else who has never met you and who never will meet you, will cause you to approach the creation and design of your data in a new light.

Moreover, studies show that re-use of data is the single surest way of maintaining the integrity of data and tracking errors and problems with it. In short, always plan for re-use"

Prof. Julian Richards, Director Archaeology Data Service

A good DMP will map out how the project team are managing data and provide a **handy checklist** to help keep on top of changes which might impact the integrity of your data or the resources required throughout your project.

Maintaining an **up-to-date** version of the DMP throughout a project is good practice and undertaking a meaningful review of the DMP takes a small amount of time but will help save time and frustration later and maximise the value of your project data.

CIfA Dig Digital Toolkit (https://www.archaeologists.net/digdigital)

RECAP
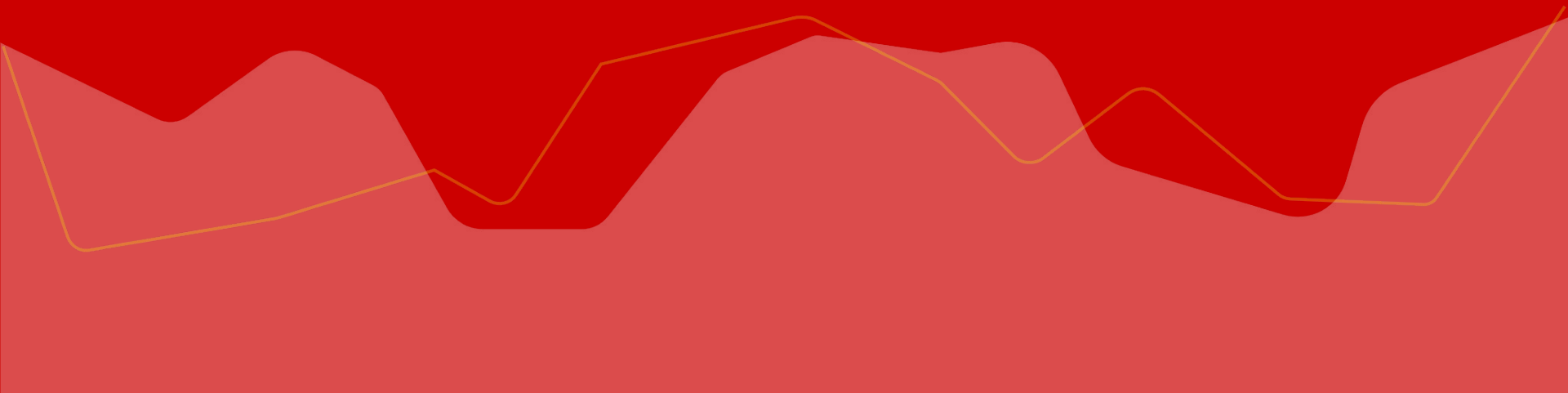
# Data Management Plans should be:

- Project specific,

- Iterative, living documents,

- Be created collaboratively and in consultation with all team members,

- A tool to help you and your colleagues manage your data and your project.

ads Archaeology Data Service

An archaeological Data Management Plan should include the following:

1. **Context** of the DMP

2. **Roles, responsibilities** and when the DMP will be **reviewed**

3. A **description** of the data to be collected

4. The **Standards** and **methods** used for data collection and data management

5. Consideration of **ethics, Intellectual Property Rights** and **data restrictions**

6. Plan for **data sharing, access** and **security** during the project

7. Plan for long-term **preservation** and **access** after the project

Useful Tools and Resources
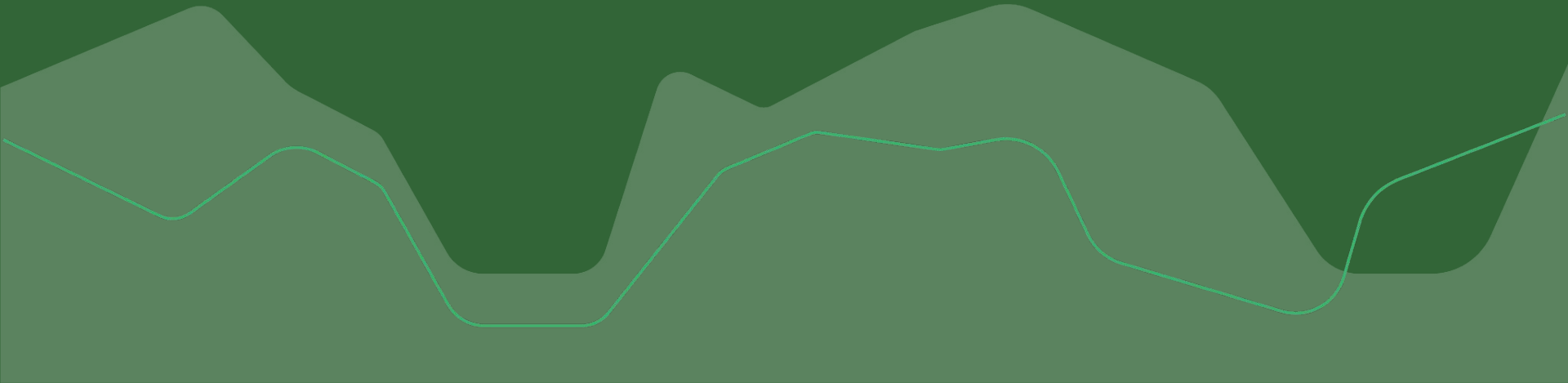
CIfA Dig Digital DMP Toolkit for Archaeologists
https://www.archaeologists.net/digdigital

Digital Curation Center DMP Online Tool
https://dmponline.dcc.ac.uk/

Digital Curation Center DMP Check List
https://www.dcc.ac.uk/sites/default/files/documents/
data-forum/documents/docs/DCC_Checklist_DMP_v
3.pdf

ERC DMP Guidelines
https://erc.europa.eu/sites/default/files/document/fil
e/ERC_info_document-Open_Research_Data_and_
Data_Management_Plans.pdf