

# CESSDA Data Management Expert Guide

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Forschungsdatenmanagement Training Tool

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*Forschungsdatenmanagement Reloaded*

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# Der Data Management Expert Guide

- ◆ Generelle Einführung in das Forschungsdatenmanagement (Geistes- & Sozialwissenschaften) *(auf Englisch)*
  - ◆ Wissenstransfer (gute wissenschaftliche Praxis)
  - ◆ „Europäische Vielfalt“
- ◆ „lebendes“ Werkzeug
  - ◆ entwickelt 2016-2017
  - ◆ in 2018 um ein Kapitel erweitert
  - ◆ stetige Überarbeitung, Ergänzung, Weiterentwicklung etc.

[www.cessda.eu/DMEG](http://www.cessda.eu/DMEG)



# Genereller Aufbau

- ◊ Strukturiert entlang des Lebenszyklus von Forschungsdaten
- ◊ Sieben Kapitel zur Einführung in die unterschiedlichen Bereiche des FDM
  - ◊ analoger Aufbau
  - ◊ wiederkehrende (strukturierende) Elemente
  - ◊ weiterführende Ressourcen
- ◊ Nutzung
  - ◊ Selbststudium (ca. 15-20 Stunden)
  - ◊ Grundlagen für Lehre und Beratung



# Wiederkehrende (strukturierende) Elemente



## Experten-Tipps:

- Denkanstöße
- praktische Anleitungen



## Europäische Vielfalt:

- Datenschutz und Urheberrechte
- Förderauflagen
- etc.



## Datentypen:

- qualitative und quantitative Daten
- Fallbeispiele



## Datenmanagementplan:

- DMP-Vorlage
- Tipps zum Anpassen der Vorlage

# Die Kapitel des Data Management Expert Guides

- ❖ Sieben Kapitel zu FDM-Themen
  1. Planen
  2. Organisieren und Dokumentieren
  3. Datengenerierung
  4. Datenspeicherung
  5. Datenschutz und Urheberrechte
  6. Archivieren und Teilen
  7. Daten finden
- ❖ Ziel ist es, Datenproduzierende in die Lage zu versetzen, ein geeignetes FDM systematisch zu betreiben

## Data Management Expert Guide

This guide is designed by European experts to help social science researchers make their research data findable, accessible, interoperable and reusable.





# Kapitel 1: Planen



## 1. Plan

This introductory chapter features a brief overview of data management planning.

Before we get you started on making your data management plan, we will introduce you through the basic concepts that you need to know about research data, and FAIR data are some of the key concepts.

### Ziel

- Bewusstsein für die Notwendigkeit eines systematischen FDM schaffen
- generelle Einführung in das FDM (DMP)

### Inhalt

#### Main take-aways

After completing this chapter you should be able to:

- Familiar with concepts such as (s)
- Aware of what data management is and why it is important;
- Familiar with the content elements of a DMP;
- Able to answer the DMP questions and to integrate them to your own DMP.

Forschungsdaten (in den Geistes- & Sozialwissenschaften)

Forschungsdaten und Europäische Vielfalt

Konzept FAIRer Forschungsdaten

#### Data Management Expert Guide

##### 1. Plan

- Benefits of data management
- Research data
- Data in the social sciences
- FAIR data
- European diversity
- Adapt your DMP: Part 1
- Sources and further reading

##### 2. Organise & Document

##### 3. Process

##### 4. Store

##### 5. Protect

##### 6. Archive & Publish

##### 7. Discover

# Kapitel 2: Organisieren und Dokumentieren



## 2. Organise & Document

In this chapter, we provide you with tips and advice on how to organise your data and metadata. We begin with discussing file structure, file naming and organisation. We then look at how the way you organise your data facilitates understanding the information contained within it.

In addition, we will focus on how to set up a data management plan. Development of rich metadata is required to facilitate promoting data sharing.

### Ziel

Strategien und Konventionen zur Datenorganisation (Benennung und Versionierung) vermitteln

- Notwendigkeit der Datendokumentation und Nutzung von Metadaten(-standards) verdeutlichen

### Data Management Expert Guide

- 1. Plan
- 2. Organise & Document
  - Designing a data file structure
  - Organisation of variables
  - File naming and folder structure
  - Documentation and metadata
  - Adapt your DMP: part 2
  - Sources and further reading
- 3. Process
- 4. Store
- 5. Protect
- 6. Archive & Publish
- 7. Discover

### Main take-aways

After completing your travels through this chapter, you should:

### Inhalt

- Aufbau von Datensätzen
- Ordnerstrukturen, Benennung und Versionierung von Dateien
- Dokumentation und Metadaten
- Be aware of the elements which are required to organise your data for intended reuse
- Have an overview of best practices for structured and unambiguous folder naming
- Understand how comprehensive documentation of your data are correctly understood
- Be aware of common metadata standards
- Be able to answer the DMP questions for your own DMP.

# Kapitel 3: Datengenerierung



## 3. Process

In this chapter, we focus on the data operations and data sharing. Throughout the different phases of data management, it is crucial to ensure the quality of the information contained in the data and the process.

However, we will start with the topics of data entry and data quality. Finally, you will learn about the importance of data quality.

## Ziel

Strategien zur Dateneingabe und zu Qualitätskontrolle (Datenintegrität) vermitteln

- Bedeutung unterschiedlicher Datenformate verdeutlichen

### Data Management Expert Guide

- 1. Plan
- 2. Organise & Document
- 3. Process
  - Data entry and integrity
  - Quantitative coding
  - Qualitative coding
  - Weights of survey data
  - File formats and data conversion
  - Data authenticity
  - Wrap up: Data quality
  - Adapt your DMP: part 3
  - Sources and further reading
- 4. Store
- 5. Protect
- 6. Archive & Publish
- 7. Discover

## Main take-aways

After completing your travels through this chapter, you should be able to:

- Be familiar with strategies to minimise errors in coding;
- Understand why the choice of file format is important;
- Be able to manage the integrity and authenticity of your data;
- Understand the importance of a systematic approach to data management;
- Be able to answer the [DMP questions](#) when developing your own DMP.

## Inhalt

- Dateneingabe und Datenqualität
- Kodierung quantitativer und qualitativer Daten
- Gewichtung quantitativer Daten
- Daten- und Dateiformate



# Kapitel 4: Datenspeicherung



## 4. Store

The data that you collect, organise, prepare, and the documentation describing it are the lifeblood of your research. It is therefore essential to protect it from accidental loss and against unauthorised manipulation.

Particularly when collecting (sensitive) personal data, only be accessed by those authorized to do so. This chapter to help you address these threats.

### Ziel

- Aufmerksamkeit für unterschiedliche Speichermöglichkeiten und Medien schaffen
- Entwicklung einer Sicherungs- und Back-Up-Strategie unterstützen

### Inhalt

- Speichern von Dateien und Speichermedien
- Back-up Strategien
- geschütztes Speichern von (sensiblen) Informationen

### Main take-aways

After completing the chapter, you should be able to:

- Aware of different storage solutions and their pros and cons
- Able to plan a storage strategy adequate to your needs
- Able to plan a backup and disaster recovery strategy to protect your data through human error or hardware failure
- Able to decide when and how to protect your data using passwords and encryption.
- Able to answer the DMP questions which relate to data storage in your own DMP.

#### Data Management Expert Guide

- 1. Plan
- 2. Organise & Document
- 3. Process
- 4. Store
  - Storage
  - Backup
  - Security
  - Adapt your DMP: part 4
  - Sources and further reading
- 5. Protect
- 6. Archive & Publish
- 7. Discover

# Kapitel 5: Datenschutz und Urheberrechte



## 5. Protect

This part of the tour guide focuses on key legal and ethical data.

We begin by clarifying the different legal requirements, the impact of the General Data Protection Regulation (GDPR). Subsequently, we will show you how sharing data is a combination of obtaining informed consent, data protection and the supporting role of ethical review in managing your data in this chapter.

### Ziel

Vermittlung rechtlicher Grundlagen im Umgang mit Forschungsdaten

### Inhalt

- Forschungsethik und Schutz sensibler Informationen
- Nutzung personenbezogener Daten
- Konzept der informierten Einwilligung
- Datenanonymisierung
- Urheber- und Verwertungsrechte

#### Data Management Expert Guide

- 1. Plan >
- 2. Organise & Document >
- 3. Process >
- 4. Store >
- 5. Protect ▼
  - Ethics and data protection
  - Ethical review process
  - Processing personal data
    - Diversity in data protection
  - Informed consent
  - Anonymisation
  - Copyright
    - Diversity in copyright
  - Adapt your DMP: part 5
  - Sources and further reading
- 6. Archive & Publish >
- 7. Discover >

### Main take-aways

After completing this chapter you should:

- Be aware of your legal and ethical obligations and the different legal requirements of EU Member States;
- Understand how protecting your data properly allows you to create shareable personal data;
- Understand the impact of the General Data Protection Regulation (GDPR 2016a);
- Understand how a combination of informed consent and data protection allows you to create shareable personal data;
- Be able to define what elements should be integrated into your DMP;
- Be able to apply anonymisation techniques to your data;
- Be able to answer the DMP questions which are relevant to your own DMP.

# Kapitel 6: Archivieren und Teilen



## 6. Archive & Publish

High-quality data have the potential to be reused in many ways. Properly archiving and publishing your data is at the core of making your data FAIR and will enable others to get the most out of your data.

In this chapter, we venture into the landscape of research data management to guide you in making an informed decision on where to archive your data so that others can properly access, understand, use and cite it.

### Ziel

- Bedeutung der Datenbereitstellung (*data sharing*) erörtern
- Verständnis für die Auswahl eines geeigneten Archivs / Repositoriums schaffen

### Inhalt

- Understand the difference between data archiving and data publishing
- Be aware of the benefits of data publishing
- Be able to differentiate between different data publishing options (data archiving, a data repository);
- Be able to select a data repository which fits your research
- Be aware of ways to promote your research data publication
- Be able to answer the [DMP questions](#) which are listed in your own DMP.

### Main take-aways

After completing your roundtrip through this chapter you should:

#### Data Management Expert Guide

- 1. Plan
- 2. Organise & Document
- 3. Process
- 4. Store
- 5. Protect
- 6. Archive & Publish
  - Towards archiving & publication
  - Selecting data for publication
  - Data publishing routes
  - Publishing with CESSDA archives
  - Citing your data
  - Licensing your data
  - Access categories
  - Promoting your data
  - Adapt your DMP: part 6
  - Sources and further reading
- 7. Discover

# Kapitel 7: Daten finden



## 7. Discover

If you want to reuse or review research data shared by others, this chapter will show you the steps you can take in your process of finding a picture of the data you need to evaluate data quality.

To make it easier for you to discover high-quality data, this chapter will show you social science data sources in Europe and around the world. Keep these points in mind when you access selected data.

### Ziel

Entwicklung einer Suchstrategie (Auswahl- und Qualitätskriterien) unterstützen

- unterschiedliche Zugangs- und Nachnutzungsregulierungen vorstellen

[« Previous](#)

### Inhalt

#### Main take-aways

After completing your travels through this chapter, you will be able to:

- Be able to set up - and adjust - a search strategy for your research purposes;
- Understand that social science data repositories are a valuable source of social science data;
- Be aware of data sources which CESSDA experts recommend;
- Be aware of steps in evaluating the quality and reliability of data;
- Understand different types and modes of access to data;
- Be able to answer the [DMP questions](#) which are relevant to your own DMP.

Auffinden geeigneter Forschungsdaten (*data discovery*)

Datenarchive und Datenkataloge

Bedingungen des Datenzugangs und der Datennutzung (Lizenzen)

Datenzitation in der Nachnutzung

#### Data Management Expert Guide

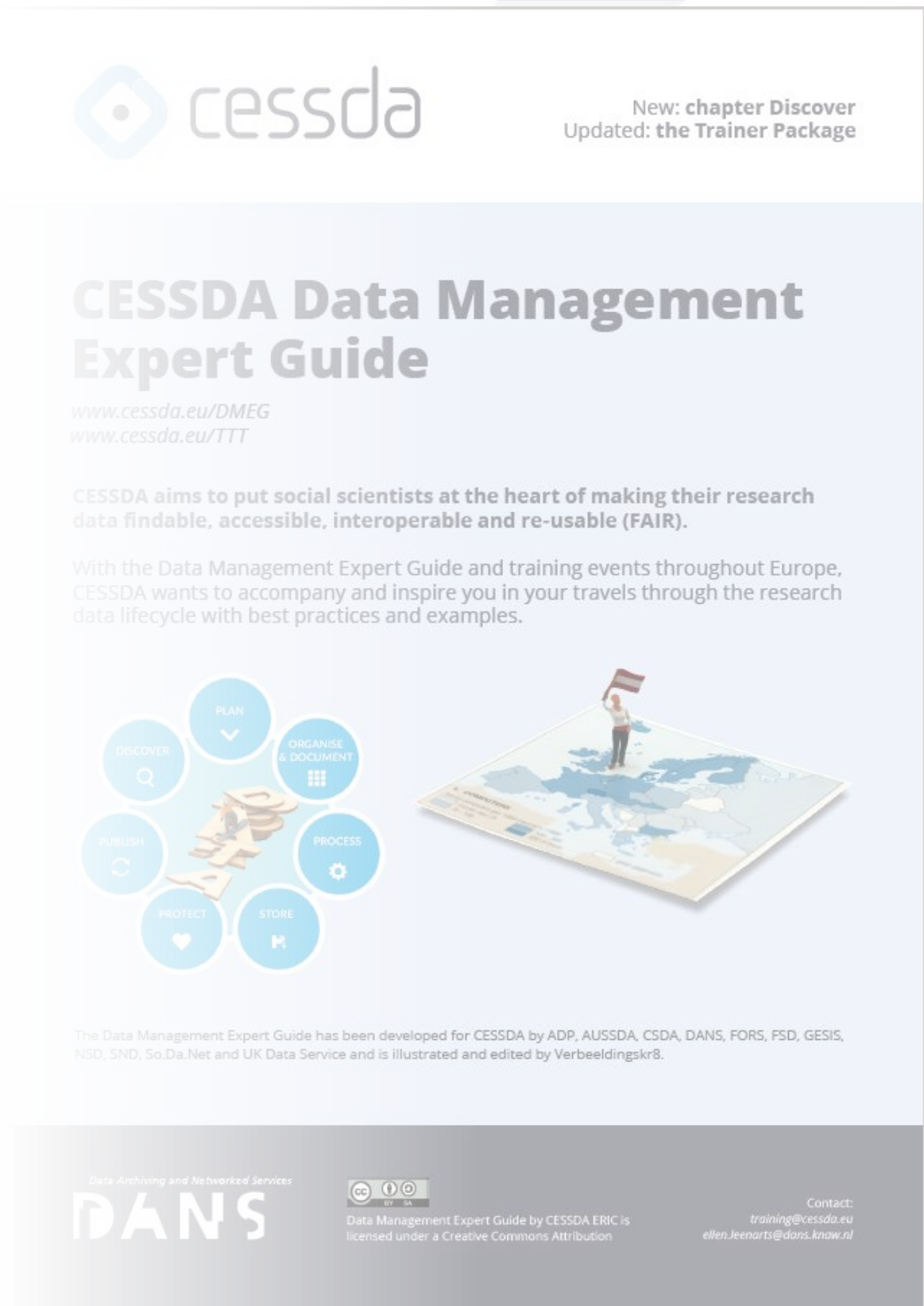
- 1. Plan >
- 2. Organise & Document >
- 3. Process >
- 4. Store >
- 5. Protect >
- 6. Archive & Publish >
- 7. Discover ▼
  - The process of data discovery
  - Data repositories as data resources
    - International surveys
    - Data resources for ageing
    - Other curated data sources
  - Access, use and cite data
  - Adapt your DMP: part 7
  - Sources and further reading



# Das Train-the-Trainers Packet

- ◊ Grundlage für Lehrveranstaltungen zum FDM
- ◊ Inhalt *(auf Englisch)*
  - ◊ Workshopbeschreibungen und Ablaufpläne
  - ◊ Präsentationen zu den einzelnen Kapiteln
  - ◊ Übungen zu verschiedenen Themenbereichen
  - ◊ weiterführende Dokumente (Tipps, Didaktik, DMP, Ressourcen etc.)
  - ◊ Druckversion des Expert Guides (pdfs) *[in Bearbeitung]*

[www.cessda.eu/TTT](http://www.cessda.eu/TTT)





# Fazit

- ◊ CESSDA Data Management Expert Guide
  - ◊ generelle Einführung in das FDM
  - ◊ Unterstützung bei der Generierung nachnutzbarer, FAIRer (geistes- und) sozialwissenschaftlicher Forschungsdaten
  - ◊ Expertentipps und Europäische Vielfalt
  - ◊ Erstellung eines (individuellen) DMPs
- ◊ Erstellt von FDM-Experten für Datenproduzierende, Datensuchende und Lehrende
- ◊ Probieren Sie es aus
  - ◊ nutzen Sie es in der Lehre und Beratung
  - ◊ schicken Sie uns Feedback  
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Fragen?

