

Core Requirements for
Data Management Plans

TEMPLATE FROM THE SCIENCE EUROPE PRACTICAL GUIDE TO

THE INTERNATIONAL ALIGNMENT OF
RESEARCH DATA MANAGEMENT

# Introduction

Research funding organisations and research organisations increasingly require researchers to develop data management plans. These plans support the researcher in considering all relevant aspects of data management from the very beginning of a research project. A DMP should stimulate researchers to think about optimal handling, organising, documenting, and storing of their data.

Currently, there is a lot of variation in research data management policies. Many research funding organisations, research organisations, and research communities have developed their own rules and templates. This can be confusing for researchers and is especially problematic as many researchers acquire their funding from different sources; they are increasingly confronted with different grant requirements and institutional policies. There is an urgent need to align data management policies in order to provide more clarity for researchers. DMPs should not be a bureaucratic burden for them, but a useful means of support when planning and conducting a research project.

The following list presents six topics that should be covered in DMPs, each specified with several guiding questions. These topics and questions for setting up a DMP form the core requirements that every research funding organisation should request in order for the researcher to develop a useful DMP. The order of the core requirements can be changed according to specific needs and organisational focal points. However, all six core requirements need to be addressed in a DMP.

# Core Requirements for Data Management Plans

When developing solid data management plans, researchers are required to deal with the following topics and answer the following questions:

1. Data description and collection or re-use of existing data
	1. How will new data be collected or produced and/or how will existing data be re-used?
	2. What data (for example the kind, formats, and volumes) will be collected or produced?
2. Documentation and data quality
	1. What metadata and documentation (for example the methodology of data collection and way of organising data) will accompany data?
	2. What data quality control measures will be used?
3. Storage and backup during the research process
	1. How will data and metadata be stored and backed up during the research process?
	2. How will data security and protection of sensitive data be taken care of during the research?
4. Legal and ethical requirements, codes of conduct
	1. If personal data are processed, how will compliance with legislation on personal data and on data security be ensured?
	2. How will other legal issues, such as intellectual property rights and ownership, be managed? What legislation is applicable?
	3. How will possible ethical issues be taken into account, and codes of conduct followed?
5. Data sharing and long-term preservation
	1. How and when will data be shared? Are there possible restrictions to data sharing or embargo reasons?
	2. How will data for preservation be selected, and where will data be preserved long-term (for example a data repository or archive)?
	3. What methods or software tools will be needed to access and use the data?
	4. How will the application of a unique and persistent identifier (such as a Digital Object Identifier (DOI)) to each data set be ensured?
6. Data management responsibilities and resources
	1. Who (for example role, position, and institution) will be responsible for data management (i.e. the data steward)?
	2. What resources (for example financial and time) will be dedicated to data management and ensuring that data will be FAIR (Findable, Accessible, Interoperable, Re-usable)?