

## FAST GUIDE #1 **RESEARCH DATA: THE BASICS**

## **EPFL LIBRARY**

RESEARCH DATA MANAGEMENT

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<sub>a</sub>9

Processed data

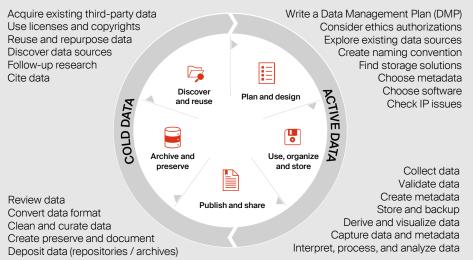
Code is also data!

v3 - 2023

## DEFINITIONS<sup>[1]</sup>

- ✓ "Research data [...] is collected, observed, or created, for purposes of analysis to produce original research results"
- "Recorded factual material commonly accepted in the scientific community as necessary to validate research findings... "
- "Materials generated or collected during the course of conducting research..."

## **RESEARCH DATA LIFECYCLE**



DO NOT CONFUSE Data point 11.02 m/s Raw data . . . Dataset Database

Check the

Fast Guide #6: CODE AS DATA <sup>[2]</sup>

Polish data; Validate and verify data; Create user documentation; Publish and share; Select appropriate access to data; Promote data; Peer-review publications

	Data type	Description	Examples
0	Observational	Data captured in-situ, can not be recaptured, recreated or replaced	Sensor readings; Sensory (human) observations; Survey results; Interview notes/transcripts
Ŋ	Experimental	Data collected under controlled conditions, in situ or lab-based. Should be reproducible, but can be expensive	Gene sequences; Chromatograms; Spectroscopy; Microscopy
	Simulation	The process of taking a large amount of data and using it to mimic real-world scenarios or conditions.	Climate models; Economic models; Biogeochemical models
	Derived / Compiled	Reproducible, but can be very expensive	Derived variables; Compiled database; 3D models
	Reference / Canonical	Static or organic collection [peer-reviewed] datasets, probably published	Gene sequence databanks; Chemical structures; Census data; Spatial data portals
<b>;;;</b>	Metadata	Structured information associated with data for purposes of discovery, description, use, management, and preservation	README files <sup>[4]</sup> ; Publication keywords; File and folder names

Credits and sources [1] <u>libguides.macalester.edu/data1</u> [2] <u>go.epfl.ch/rdm-fastguide06</u>

[3] <u>data-archive.ac.uk</u> [4] go.epfl.ch/rdm-readme

Bibliothèque

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