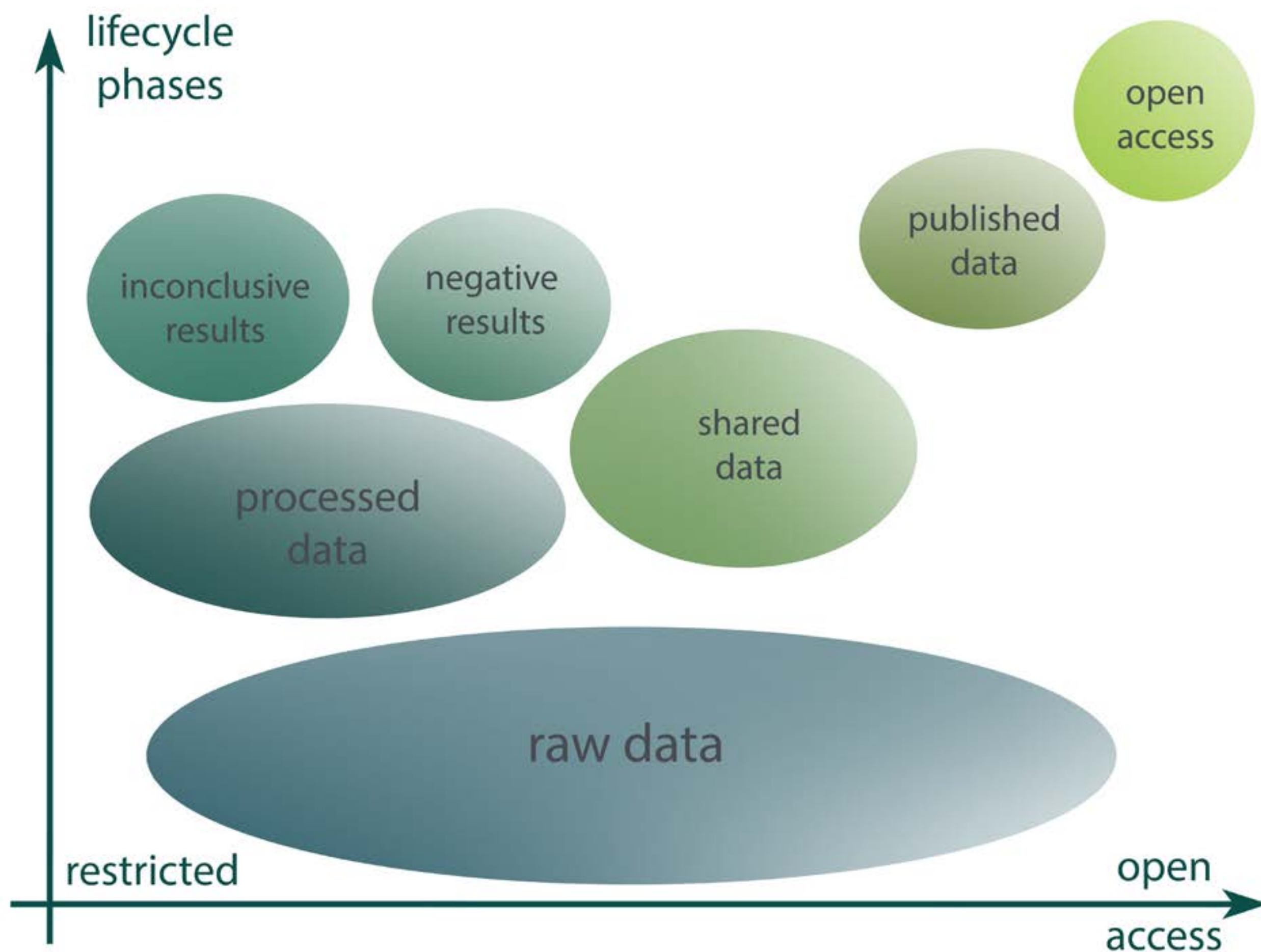# Permanent storage and efficient re-use of digital research- and educational data

S. Kopácsi, R. Ganguly, B. Sanchez Solis, S. Blumesberger

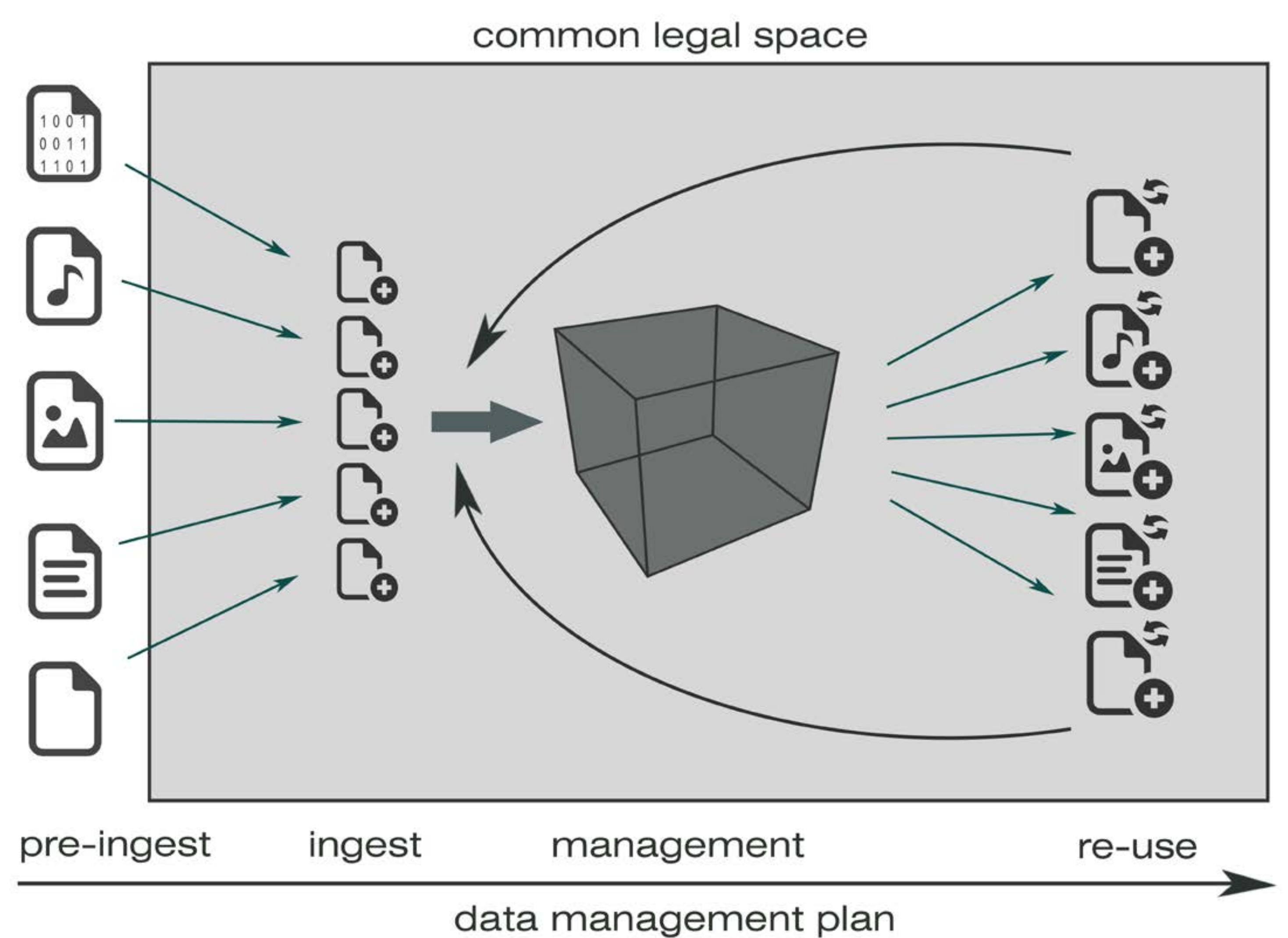University of Vienna

Data from Research Processes

lifecycle phases

open access

published data

inconclusive results

negative results

shared data

processed data

raw data

restricted — open access

Levels and Layers of Data

Raw Data: Primary data derived from the research processes.

Processed Data: Data derived from analytical processes. These processes could provide results, including negative or inconclusive results.

Negative Results: Results that don't satisfy the specified goals of a certain research.

Inconclusive Results: It cannot be determined if the results are positive or negative in the aspect of a certain research.

Shared Data: Data that will be shared with others.

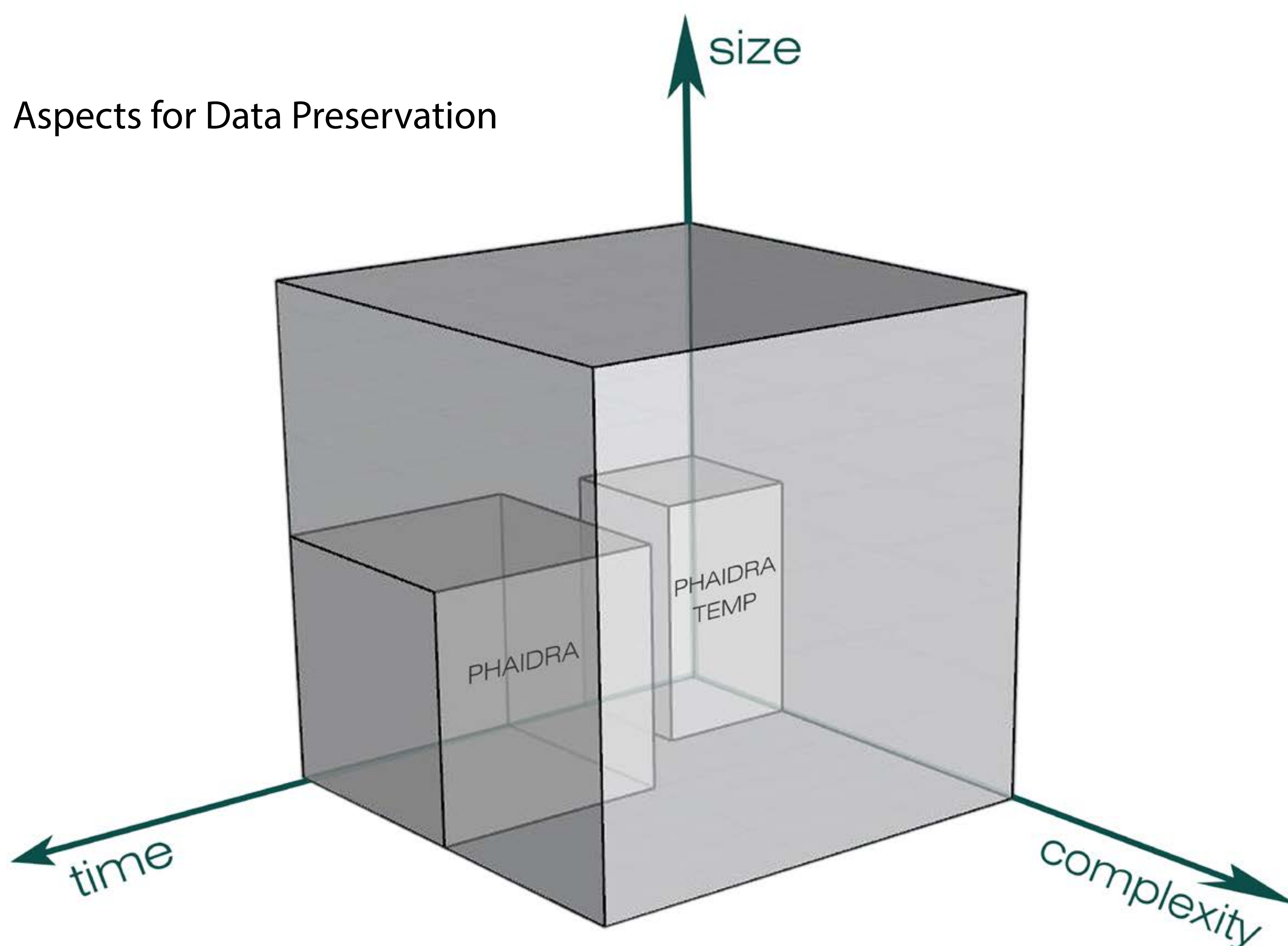Published Data: Data which are published in publications sometimes with restricted access.

Phases of the Data Preservation Process

Pre-Ingest: In this step, the responsibilty lies on the Content Creator. In this phase will be determined which data is to be archived, their quality, and under what user license will be granted their re-use.

Ingest: In this step, the Repository Manager takes over the responsibility. To be able to archive the data, a data conversion process needs to take place first. The conversion process should not affect the quality of the data.

Management: Ensures security and access to the data, in the quality required for their re-usability.

Re-Use: Delivery to external applications specialized on reusing the data provided. The data can be used in e-Learning systems, Presentations, or any other additional research processes. Here the responsibility goes to the Content Provider of the external applications.

Workflow Model for the Preservation Processes

common legal space

pre-ingest · ingest · management · re-use

data management plan

Aspects for Data Preservation

size

PHAIDRA TEMP

PHAIDRA

time · complexity

XDI - eXtensible Data Interchange

- originally called XRI (Extensible Resource Identifiers) Data Interchange

- is service for generalized distributed data sharing and mediation using XRIs, a URI-compatible abstract identifier scheme

- is a semantic data interchange format and protocol under development by the OASIS XDI Technical Committee

- based on an addressable semantic graph model serialized in JSON (JavaScript Object Notation)

XDI Graph for storing IDs of an Phaidra Object

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