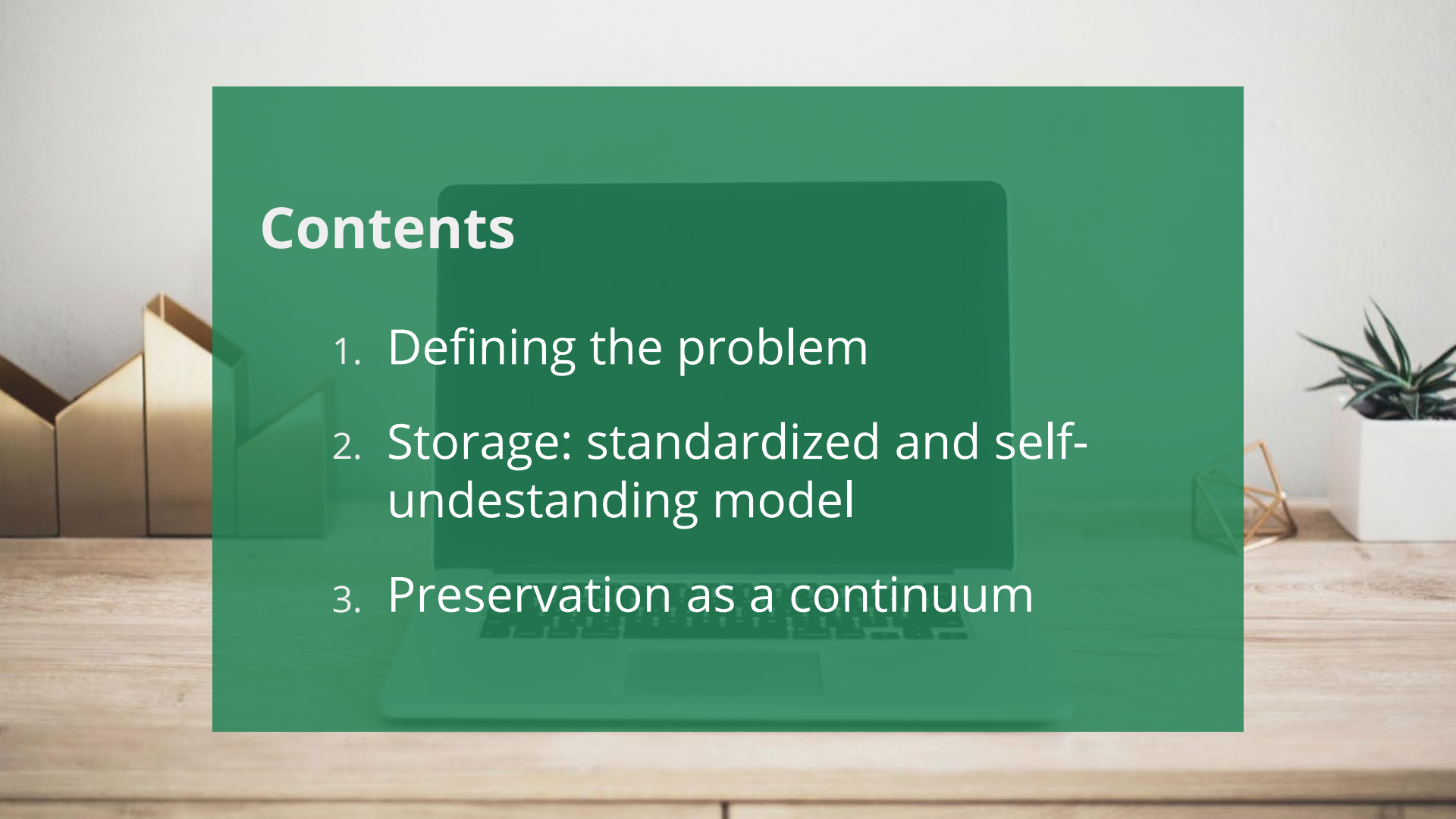
DESIGNING STORAGE ARCHITECTURES FOR DIGITAL COLLECTIONS
03/14/2022

TOWARDS A SELF-UNDERSTANDING STORAGE AND PRESERVATION MODEL



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1. Defining the problem
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01

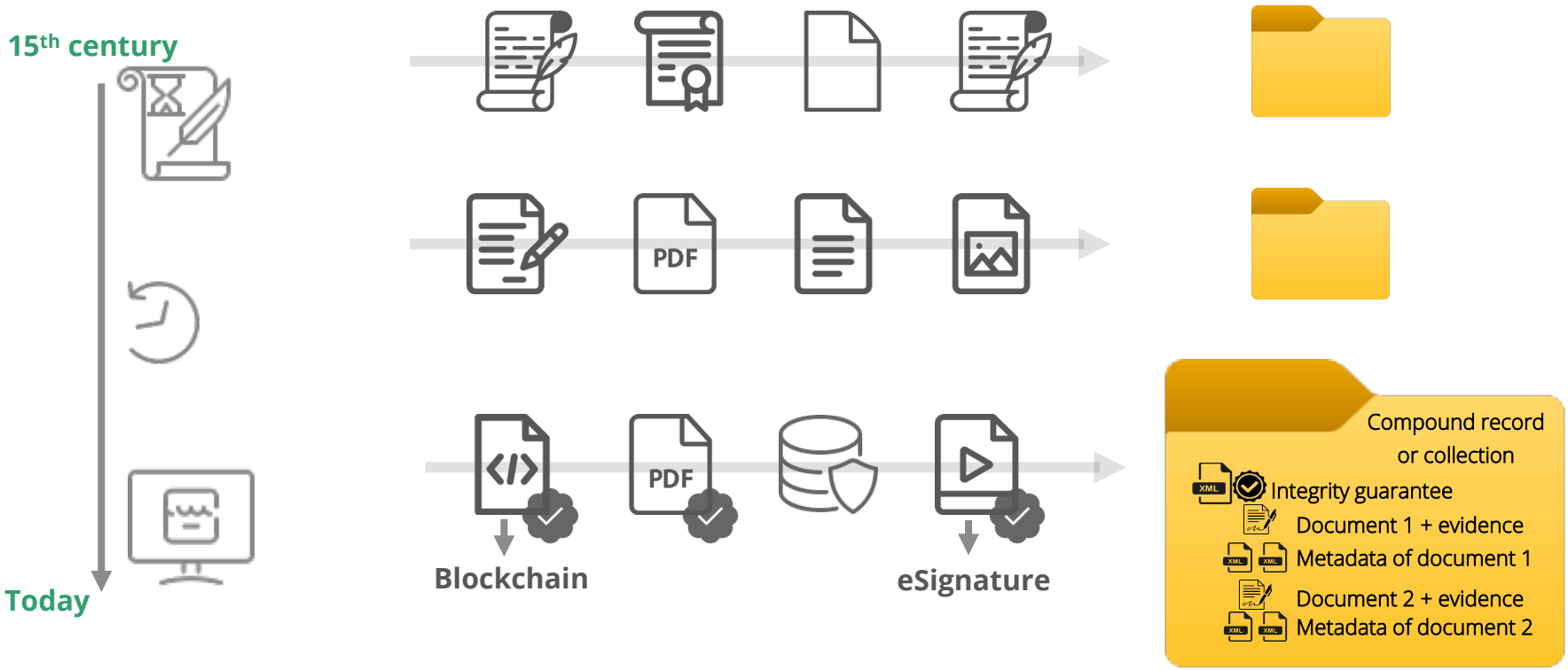
Defining the problem

A different archival tradition: the importance of preserving collective and institutional

Digital collections, documents and compound objects...

The obligation of cultural institutions and memory keepers such as archives, libraries and museums to preserve our heritage carries with the idea of perpetuity

Guaranteed system based on documents & evidence



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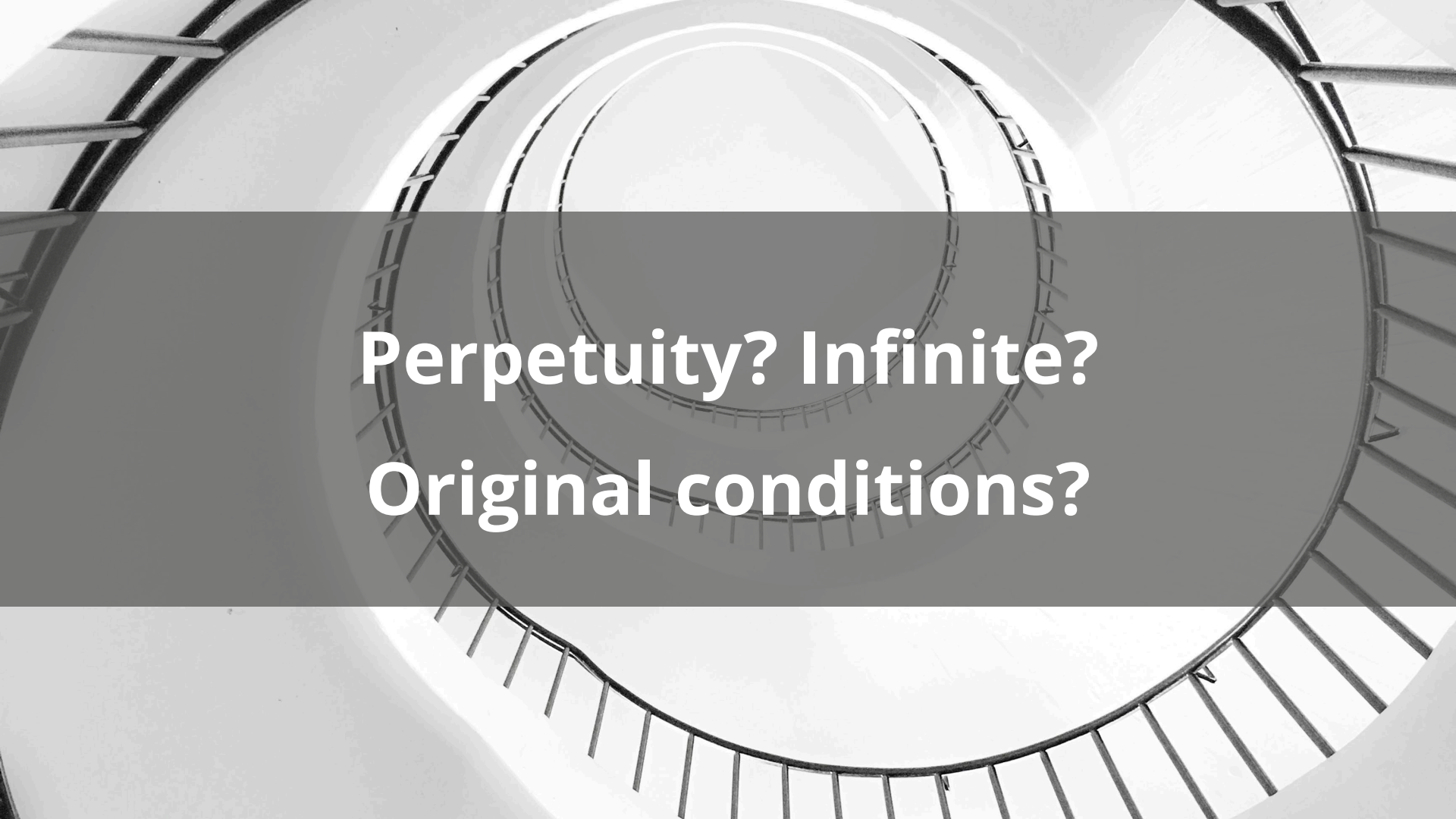
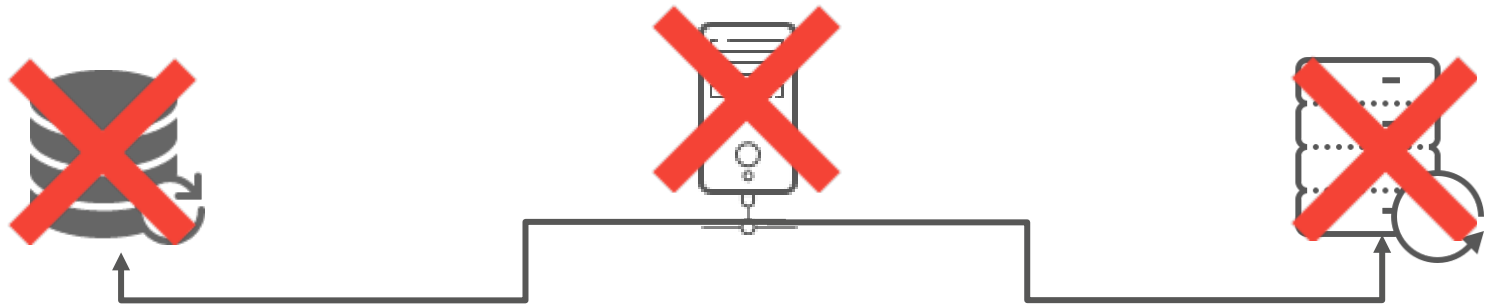

Perpetuity? Infinite?
Original conditions?

02

Storage: standardized and self-undestanding model

OAIS ISO 14721 as the base of our model – WHY?



DATABASE

Preserves metadata of records (and other file system items) and links between these items and digital objects

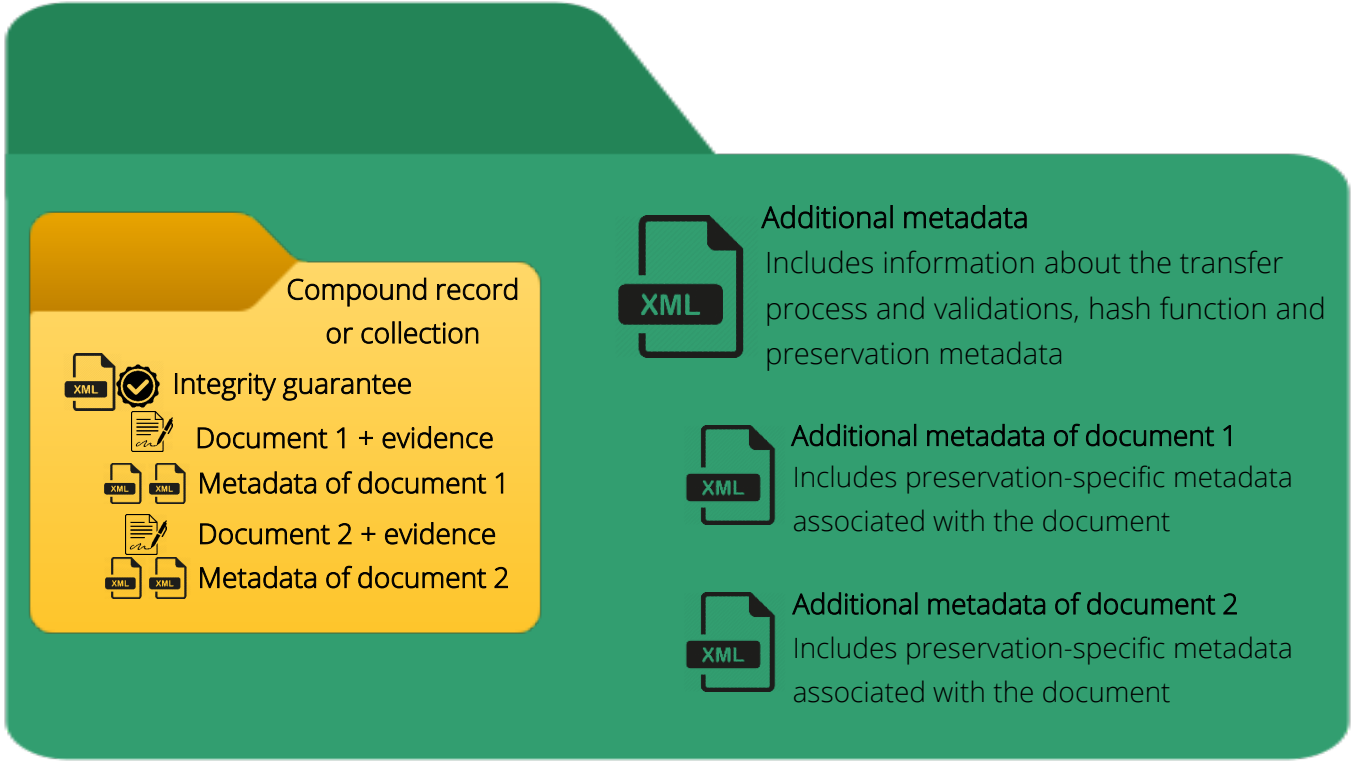
APPLICATIONS

Applications are the only system capable of correctly interpreting its own database and the different relationships that exist internally between data and the relationships with digital objects

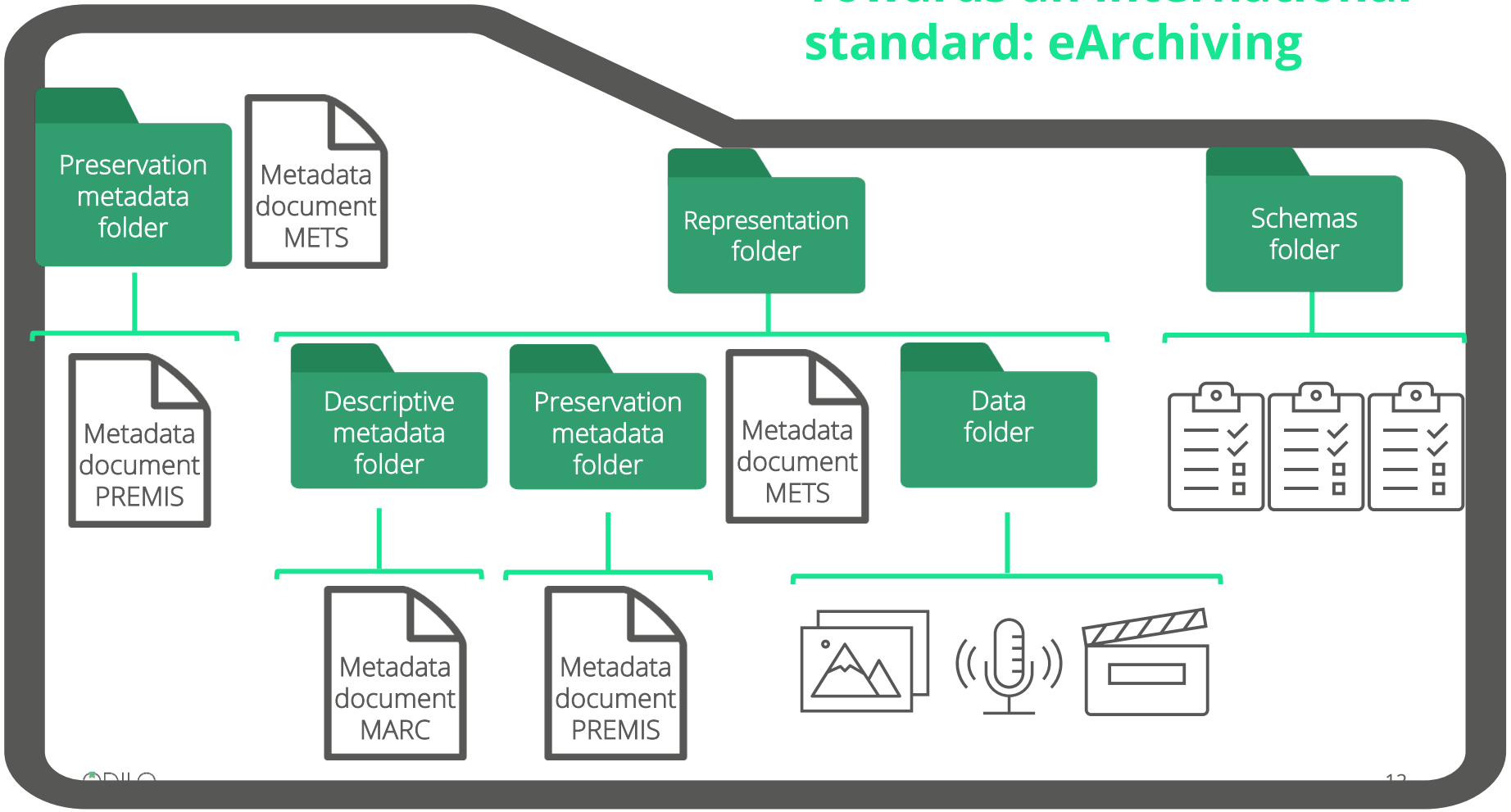
REPOSITORY OF DIGITAL OBJECTS

Electronic documents are part of the system, so they are stored in a repository of digital objects

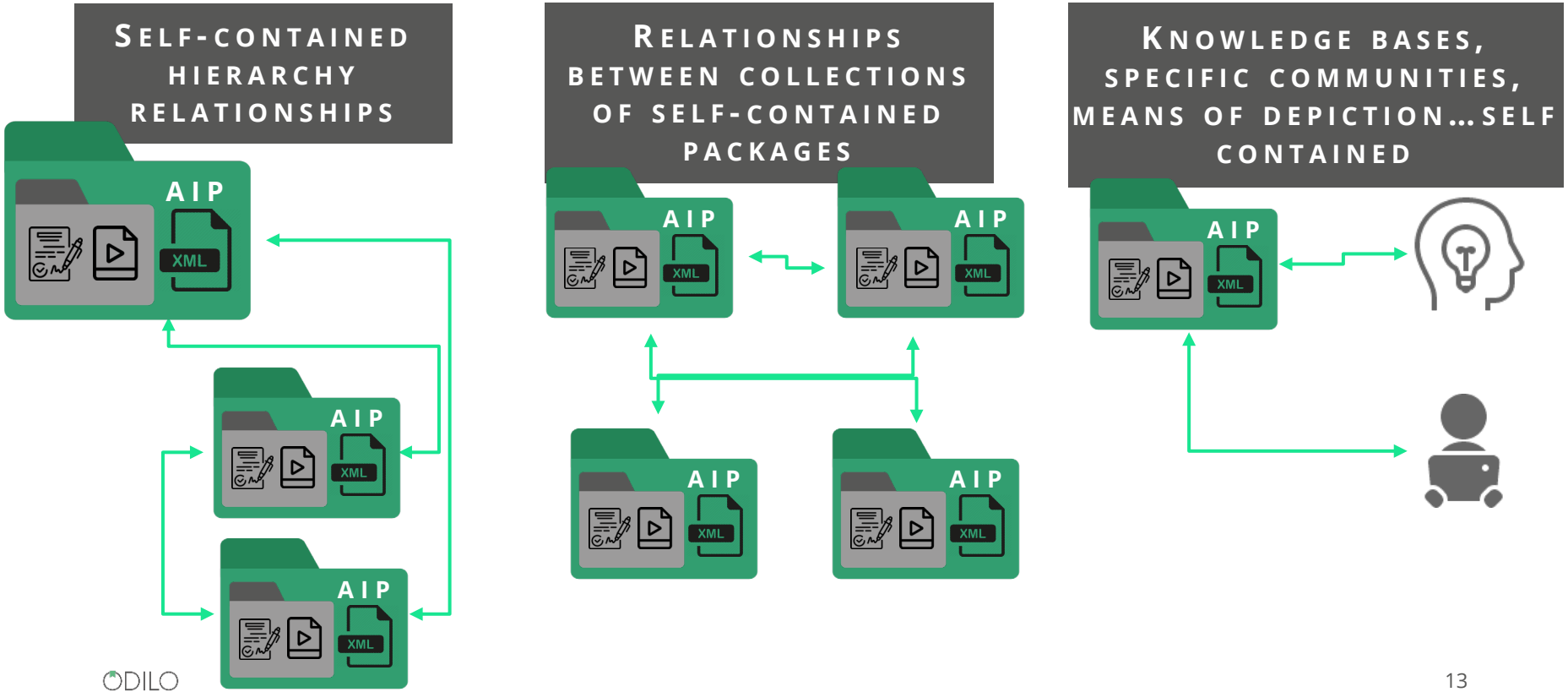
The need to build independent technology, self-understanding packages (AIPs)

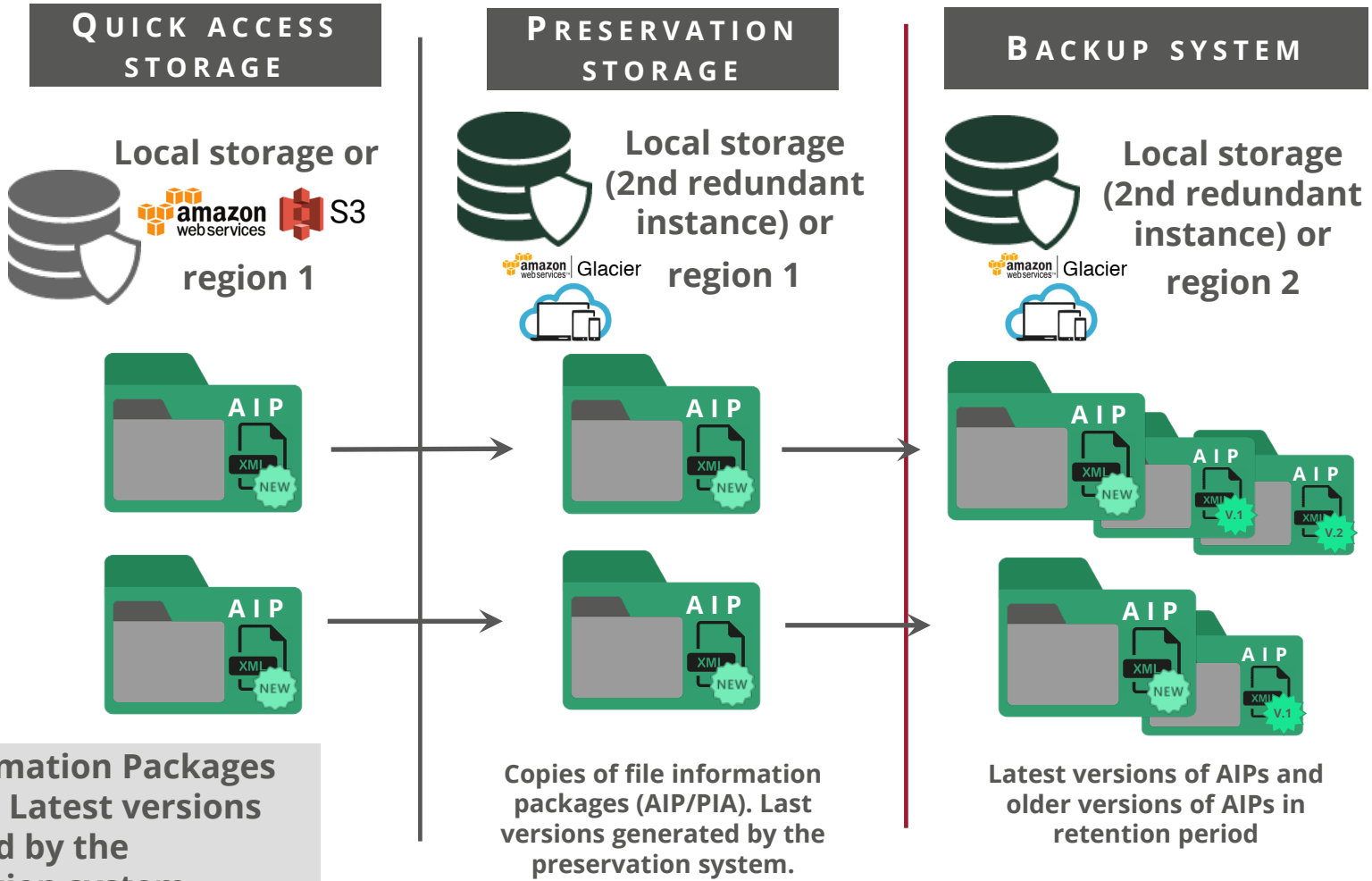


Towards an international standard: eArchiving



A standardized and self-understanding model




QUICK ACCESS STORAGE
Local storage or
amazon web services
S3
region 1
PRESERVATION STORAGE
Local storage (2nd redundant instance) or
amazon web services
Glacier
region 1
BACKUP SYSTEM
Local storage (2nd redundant instance) or
amazon web services
Glacier
region 2
AIP
XML
NEW
V.1
V.2
File Information Packages (AIP/PIA). Latest versions generated by the preservation system
Copies of file information packages (AIP/PIA). Last versions generated by the preservation system.
Latest versions of AIPs and older versions of AIPs in retention period

03

Preservation as a continuum

Key Point 1. Automatic processes are not enough: Life Preservation as a Continuous (Technological) + Intellectual Process

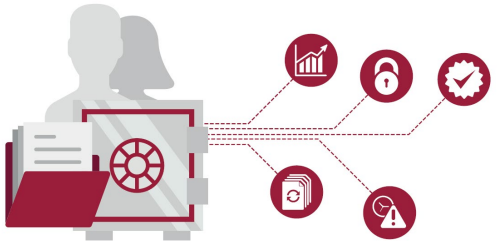
CONSULTANCY SERVICES AND DEFINITION OF THE PRESERVATION PLAN AT THE BEGINNING OF THE PROJECT

ARCHIVING AND PRESERVATION MANAGEMENT PLATFORM

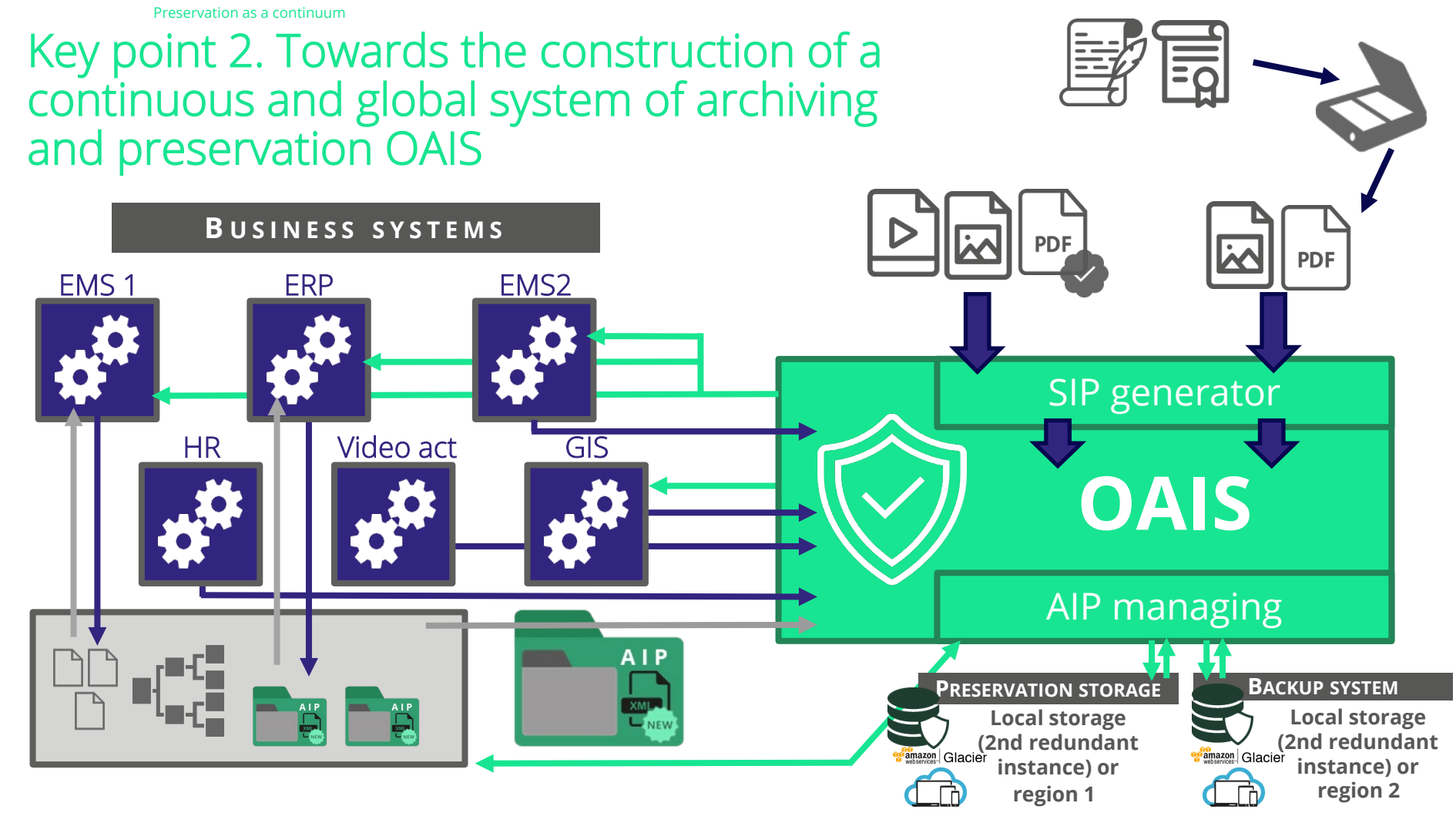
Certificated environment

GEO-REDUNDATED STORAGE SELF-UNDERSTANDING OAIS

CONTINUOUS PRESERVATION SERVICE – RISK CONTROL



Key point 2. Towards the construction of a continuous and global system of archiving and preservation OAIS



Key point 3. Complex processes managed with friendly solutions: OAIS should not be complex for end users

Key point 4. Accreditation with OAIS. Archiving and preservation services as a whole

The requirement of standards that accredit services must be a key element to ensure the continuity of documentation and digital collections

ISO 17068
Trusted repositories for digital records (third party

ISO 27018
Protection of personally identifiable information in public cloud environments

ISO 27701
Security techniques. Privacy information management. GDPR compliance

ISO 27001
Information security and privacy protection

ISO 27017
Information technology. Security techniques.

ISO 14721
Preservation OAIS

ISO 22301
Business continuity management systems

LIBRARY
LIBRARY
OF CONGRESS
ODILO
MEMORIA
DIGITAL