REPOSITORY CERTIFICATION

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Outline

- Certification schemes in general

- Repository certification and EOSC

- Certification schemes within the European Framework for Audit and Certification of Digital Repositories
  - Core Trust Seal
  - Nestor Seal
  - ISO 16363

- Local case study

Certification schemes

❑ Integrated frameworks for auditing and certifying (digital repositories)

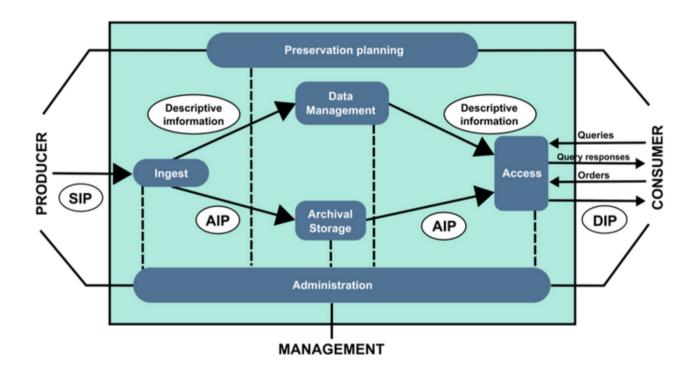❑ The status of a "trusted digital repository"
  - Mission to provide trustworthy long-term access to curated digital resources
  - Monitoring, planning and maintenance
  - Awareness of (and mechanisms to deal with) threats and risks within systems
  - Regular checks and/or certification

Reference Model for an Open Archival Information System (OAIS)

- ❑ Conceptual model for a digital archive dedicated to **preserving** and **maintaining** access to digital information in the long term

- ❑ Produced under the leadership of the Consultative Committee for Space Data Systems (CCSDS); major input from archives and libraries

- ❑ Approved as ISO Standard 14721 in 2002: https://www.iso.org/standard/57284.html

Reference Model for an Open Archival Information System (OAIS)

- OAIS environment: interaction of four entities: producers, designated community, management and the archive

- OAIS Information model

- OAIS Functional model: five functional units: Ingest function. Archival Storage Function, Data Management Function, Administration function, Access Function
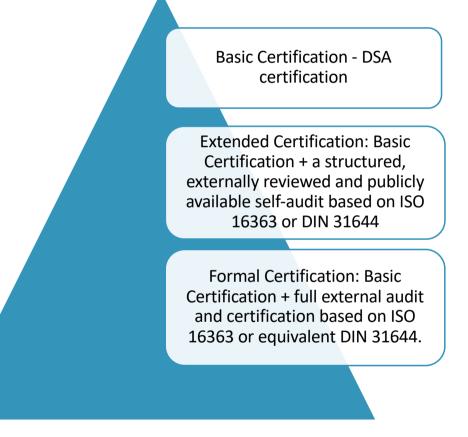

OAIS Reference Model, source: Wikimedia Commons, CC BY-SA 4.0 International

More history

❑ In 2010, the European Framework for Audit and Certification of Digital Repositories was established - a memorandum of understanding (MoU) between three groups working on **standards for Trusted Digital Repositories** (Consultative Committee for Space Data Systems) – CCSDS / ISO Repository Audit and Certification Working Group (RAC), Data Seal of Approval - DSA) Board and DIN Working Group "Trusted Archives - Certification"

❑ In 2015, Repository Audit and Certification DSA–WDS Partnership WG has produced a two-part recommendation: a Catalogue of Common Procedures for certification + a Catalogue of Common Requirements.

Basic Certification - DSA certification

Extended Certification: Basic Certification + a structured, externally reviewed and publicly available self-audit based on ISO 16363 or DIN 31644

Formal Certification: Basic Certification + full external audit and certification based on ISO 16363 or equivalent DIN 31644.

http://www.trusteddigitalrepository.eu/Trusted%20Digital%20Repository.html

Repository certification and EOSC

❏ The **concept of trustworthy repositories**: certification indicates that an authority has confirmed the trustworthiness of a repository

❏ Parallels with the FAIR principles:

R2. The repository maintains all applicable licenses covering data access and use and monitors compliance.
R3. The repository has a continuity plan to ensure ongoing access to and preservation of its holdings.
R4. The repository ensures, to the extent possible, that data are created, curated, accessed, and used in compliance with disciplinary and ethical norms.
R7. The repository guarantees the integrity and authenticity of the data.
R8. The repository accepts data and metadata based on defined criteria to ensure relevance and understandability for data users.
R10. The repository assumes responsibility for long-term preservation and manages this function in a planned and documented way.
R11. The repository has appropriate expertise to address technical data and metadata quality and ensures that sufficient information is available for end users to make quality-related evaluations.
R13. The repository enables users to discover the data and refer to them in a persistent way through proper citation.
R14. The repository enables reuse of the data over time, ensuring that appropriate metadata are available to support the understanding and use of the data.

EOSC projects supporting repository certification

- ❑ FAIRsFAIR: FAIR Certification (of Repositories) - WP4

- ❑ EOSC Nordic - WP4

- ❑ SSHOC: Task 8.2 "Trust & Quality Assurance" - WP8

D8.2 Certification plan for SSHOC repositories
Home / D8.2 Certification plan for SSHOC repositories

Open Call for Data Repositories

Deadline
30 AUGUST 2019

FAIRSFAIR

SSHOC
social sciences & humanities open cloud

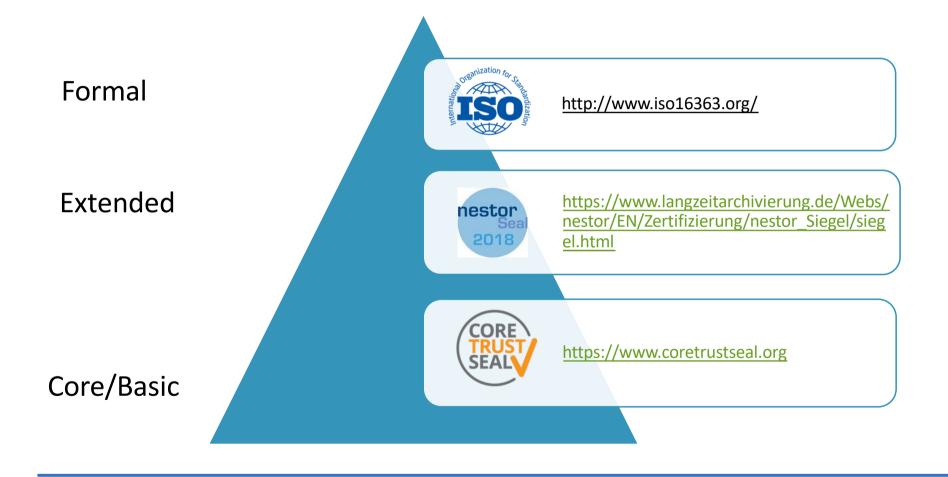**D8.2 Certification plan for SSHOC repositories**

EOSC NORDIC

EOSC-Nordic certification support

Birger Jerlehag, GU/SND

EOSC-Nordic (WP4): FAIR Certification webinar – community support opportunity

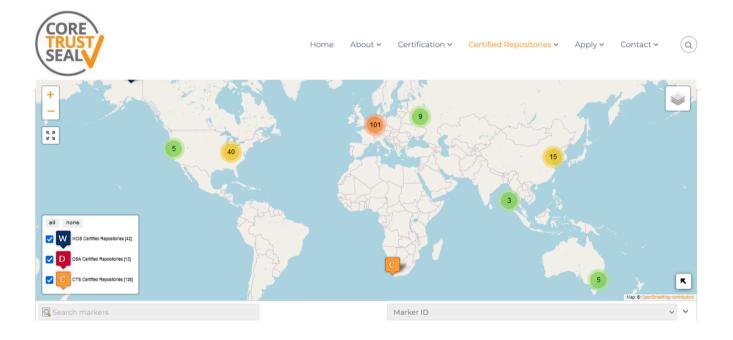EOSC-Nordic project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 857652

neic

European Framework for Audit and Certification of Digital Repositories

Formal

http://www.iso16363.org/

Extended

https://www.langzeitarchivierung.de/Webs/nestor/EN/Zertifizierung/nestor_Siegel/siegel.html

Core/Basic

https://www.coretrustseal.org

Core Trust Seal

☐ Core level certification based on the [Data Seal of Approval (DSA) and World Data System of the International Science Council (WDS) Core Trustworthy Data Repositories Requirements](#) (two catalogues merged under the umbrella of the Research Data Alliance)

☐ CoreTrustSeal - international, community based, non-governmental, and non-profit organization

- 126 repositories certified
- Repositories certified under WDS and DSA to be recertified under CTS

CTS requirements

Core Trust Seal : resources

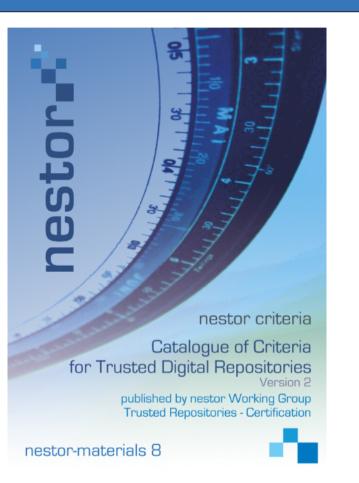❏ Requirements: CoreTrustSeal Trustworthy Data Repositories Requirements: Extended Guidance 2020–2022 (v02.00-2020-2022) https://doi.org/10.5281/zenodo.3632533

❏ Website: https://www.coretrustseal.org/

❏ Application form: https://www.coretrustseal.org/apply/

❏ Requirements Review 2023-2025: https://www.coretrustseal.org/why-certification/meeting-community-needs/trustworthy-data-repository-requirements-review-2023-2025/

NESTOR Seal 2018

- Extended self-assessment process for digital archives developed and offered by nestor on the basis of the DIN 31644 standard "Criteria for trustworthy digital archives"
- Granted to core certification repositories which also perform a structured, externally reviewed and publicly available self-audit based on DIN 31644/nestorSeal
- International collaboration
- Catalogue of criteria: 34 criteria written by the German nestor group and adopted in Germany as DIN 31644

Resources:
- Info
- Explanatory notes on the nestor Seal for Trustworthy Digital Archives (Version 2, in German)
- Model contract (in German)
- Assessment form for obtaining the nestor Seal for Trustworthy Digital Archives
- Explanatory notes on the assessment form
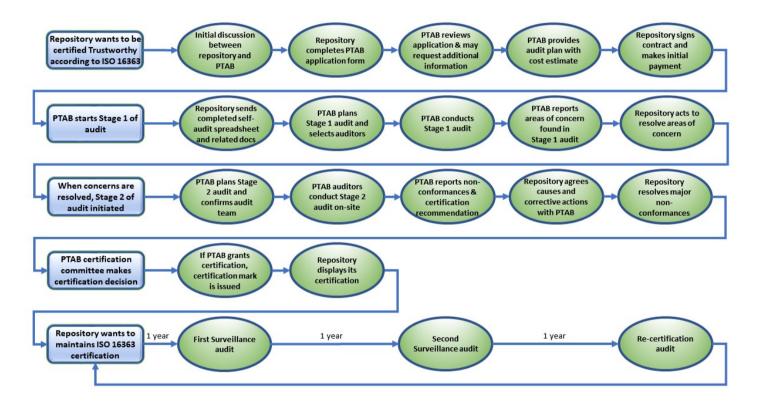

nestor criteria
Catalogue of Criteria
for Trusted Digital Repositories
Version 2
published by nestor Working Group
Trusted Repositories - Certification

nestor-materials 8

https://files.dnb.de/nestor/materialien/nestor_mat_08-eng.pdf

ISO 16363: formal certification

- Based on Open Archival Information System (OAIS) and Trusted Repository Audit and Certification (TRAC)

- More than 100 indicators

- Granted to repositories which in addition to casic certification obtain **full external audit** and certification based on ISO 16363

Repository wants to be certified Trustworthy according to ISO 16363	Initial discussion between repository and PTAB	Repository completes PTAB application form	PTAB reviews application & may request additional information	PTAB provides audit plan with cost estimate	Repository signs contract and makes initial payment
PTAB starts Stage 1 of audit	Repository sends completed self-audit spreadsheet and related docs	PTAB plans Stage 1 audit and selects auditors	PTAB conducts Stage 1 audit	PTAB reports areas of concern found in Stage 1 audit	Repository acts to resolve areas of concern
When concerns are resolved, Stage 2 of audit initiated	PTAB plans Stage 2 audit and confirms audit team	PTAB auditors conduct Stage 2 audit on-site	PTAB reports non-conformances & certification recommendation	Repository agrees causes and corrective actions with PTAB	Repository resolves major non-conformances
PTAB certification committee makes certification decision	If PTAB grants certification, certification mark is issued	Repository displays its certification			
Repository wants to maintains ISO 16363 certification	1 year — First Surveillance audit	1 year — Second Surveillance audit	1 year — Re-certification audit		

PTAB = PTAB - Primary Trustworthy Digital Repository Authorisation Body

Local case study

❑ One repository from Serbia has received support through the SSHOC Task 8.2 Certification support programme: https://www.sshopencloud.eu/sshoc-trusted-repositories

Work done

❑ Multi-institutional repository, established in 2017, mostly, publications, powered by DSpace + additional tools
❑ Improvements:

▪ Relevant information compiled in a wiki: https://repowiki.rcub.bg.ac.rs/index.php/Category:DAIS

▪ Preservation plan was drafted

▪ Persistent identifiers (handles) have been implemented

▪ Metrics (visits and downloads) made public

▪ Recommended citations enabled

❑ The application was submitted in December 2021
❑ Review available in May 2022
❑ Now: preparing to submit an updated application

What has been done?

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- ❑ Preservation plan was drafted

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Challenges

❑ Familiarity with the OAIS framework and terminology

❑ Documentation: even if existent, it is not in English and may not be compliant to the requirements

❑ Responsibilities for preparing the documentation

❑ Some collaborations are insufficiently formalized

Questions?

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