



Becoming a trustworthy digital preservation repository: Certification for data archives and research data centers

Meet the Experts – GESIS online talks

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Data Services for the Social Sciences (DSS)

Our topics



KonsortSWD 
Konsortium für die
Sozial-, Verhaltens-, Bildungs- und
Wirtschaftswissenschaften



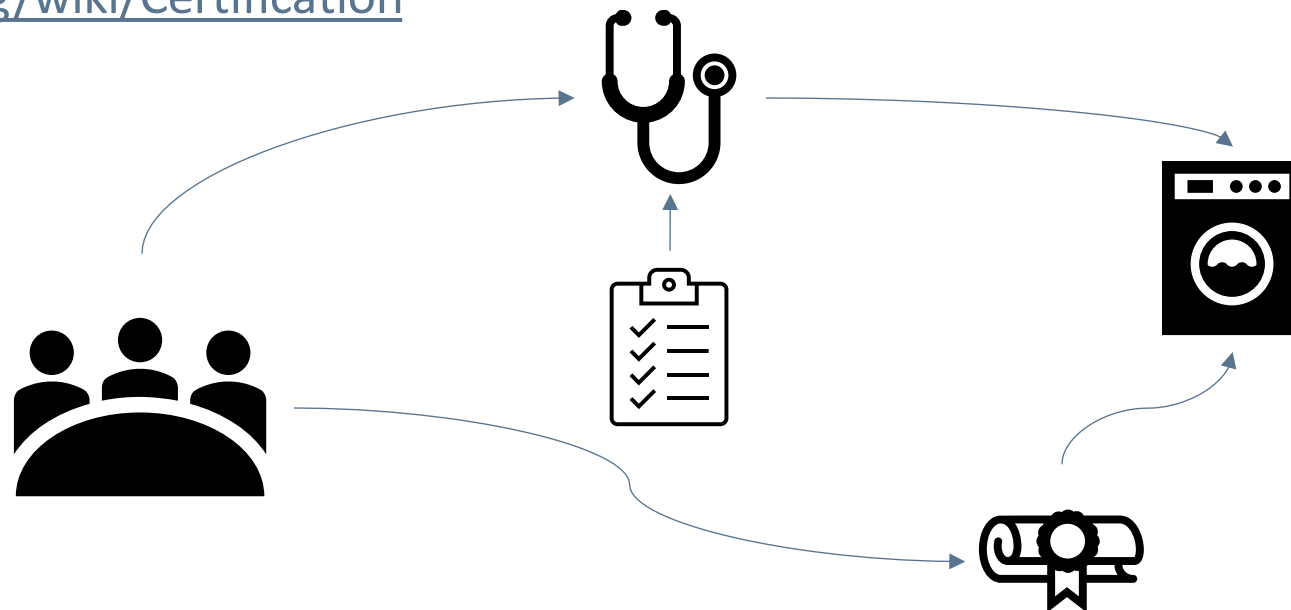
Our teams

- ▼ Archiving
- ▼ Data Acquisitions and Access
- ▼ Metadata Standards and Interoperability

Certification

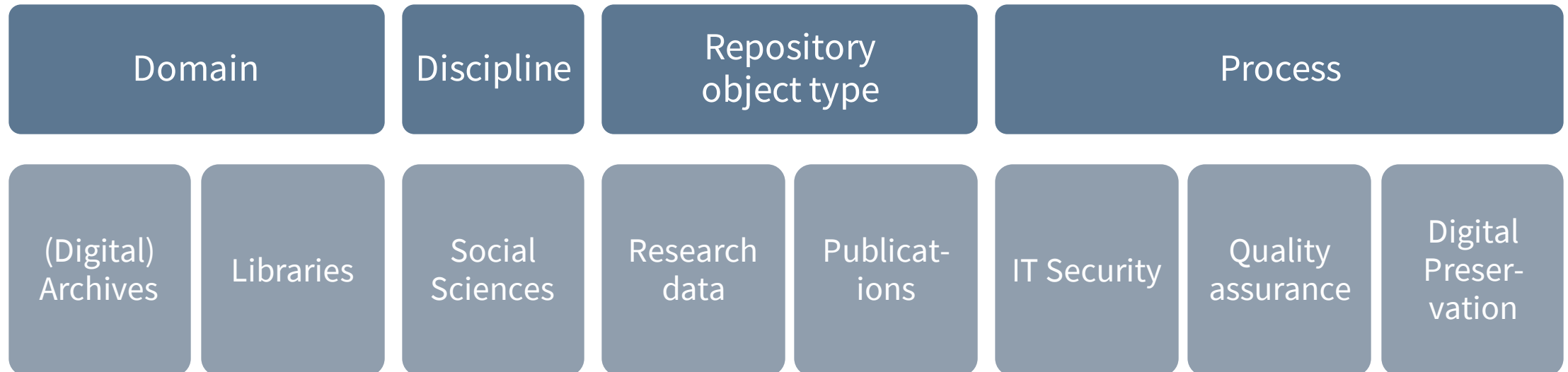
Testing, inspection and the provision of written assurance (a certificate) by an independent body that the product, service or system in question meets specific requirements defined in a technical standard.

Source: <https://en.wikipedia.org/wiki/Certification>



Certification for repositories - Examples

- CoreTrustSeal
- DINI Zertifikat für Open Access Publikationsdienste
- ISO 16363: Audit and certification of trustworthy digital repositories
- ISO 9001: Quality management systems
- RatSWD accreditation



A Trustworthy Digital Repository (TDR)...

- “...is one whose **mission** is to provide reliable, **long-term access** to managed **digital resources** [which are **usable and understandable**] to its **designated community**, now and in the future.” (Research Libraries Group, 2002, p. i).
- ...undertakes measures, such as certification, to demonstrate that it fulfills its mission.

Who benefits from TDR certification?

- Data producers and users
 - quality-assured, transparent repository workflows
 - research results remain usable and reproducible over the long term
 - compliance with funder or publisher requirements
- The data repository
 - review and revision of processes, documentation, policies based on expert feedback
 - improved internal communication
 - can support resource planning and acquisition

Certification standards for TDRs

Standard	Currently certified repositories	No. of criteria	Cost
CoreTrustSeal Requirements ¹	87	16	1000 EUR
DIN31644 (“nestor Seal”) ²	4	34	500 EUR
ISO16363 ³	1	85	~25.000-30.000 EUR

¹ <https://www.coretrustseal.org>

² https://www.langzeitarchivierung.de/Webs/nestor/EN/Zertifizierung/nestor_Siegel/siegel.html

³ <http://www.iso16363.org/>

CoreTrustSeal: Overview

- Documented self-assessment based on 16 requirements in the areas
 - Background information (R0)
 - Organizational infrastructure (R1-6)
 - Digital object management (R7-13)
 - Technology (R14-16)
- Responses and public evidence reviewed by two independent experts from the CoreTrustSeal Assembly of Reviewers
- Certification valid for 3 years

CoreTrustSeal: Who can apply?

- The applicant must
 - have a **mission** that includes direct responsibility for the curation and long-term preservation of a specified collection of digital objects.
 - have sufficient **expertise** and management rights over the data to respond to changes in the technologies and the knowledge base of a well-defined Designated Community of users.
 - ensure provision of the appropriate **infrastructure** (documented policies, people and skills, workflows, and technologies) to preserve data and metadata, such that they remain accessible and reusable over time.
- Long-term data preservation is a requirement for Trustworthy Digital Repository status through CoreTrustSeal certification.

Source: <https://www.coretrustseal.org/why-certification/frequently-asked-questions/>

First steps towards TDR certification

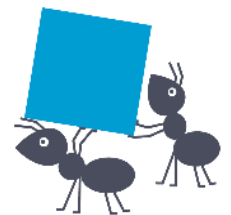
Dos	Don'ts
<ul style="list-style-type: none"> ✓ Get management on board as early as possible → Obtain a mandate for what you are doing 	<ul style="list-style-type: none"> ✗ Start without support from management and/or without a mandate and dedicated resources
<ul style="list-style-type: none"> ✓ Determine objective: Why do you seek certification? ✓ Determine the service/workflow(s) to be certified → Select suitable standard based on these considerations 	<ul style="list-style-type: none"> ✗ Start the process without a good understanding of the certification standard and its scope in relation to the service you want to certify
<ul style="list-style-type: none"> ✓ Carry out initial self-assessment to identify potential challenges, missing documentation and policies ✓ Combine with FAIR assessment for metadata quality 	<ul style="list-style-type: none"> ✗ Start the process without sufficiently documented workflows and policies
<ul style="list-style-type: none"> ✓ Find peer organizations similar to you also considering certification and join forces 	

KonsortSWD Approach

- A growing number of Research Data Centers (RDC)s are acquiring external data for archiving and sharing
- Data producers require quality standards for digital preservation
 - Especially from international research consortia producing high impact data
- Many international data centers and repositories have already certified their services
 - For example, CLARIN data centers and CESSDA data archives

KonsortSWD Approach

- KonsortSWD aims to support RDCs seeking accreditation by the German Data Forum (RatSWD) and/or the CoreTrustSeal
- Objectives:
 - Demonstrating the quality of the data archiving infrastructure
 - Improving internal processes within RDCs to meet international standards
- Procedure:
 - Helping to understand core concepts of digital long-term preservation
 - Sharing experiences between RDCs seeking certification with CTS
 - Producing examples and guidelines of documents required for CTS



KonsortSWD Approach

First steps:

- creating a community of RDCs interested in CTS
- workshop on expectations and ideas of the RDCs toward our support and to collect the most important questions
- workshops/working groups addressing (critical) requirements of CTS
 - to begin with the concept of digital long-term preservation in November.

Expected Outcome:

- CTS certification for participating RDCs
- Hands-on guidelines to support RDCs' certification
- Creating awareness for certification within German RDI



Alternatives to full TDR certification

- **Map** high-level workflows / repository functions to suitable standards
 - E.g. Roles and systems involved in Ingest, Access, etc.
- Carry out **self-assessments** with requirement catalogs of certification standards or using maturity / capability models
 - [DPC RAM \(Rapid Assessment Model\)](#)
 - [NDSA Levels of Digital Preservation](#)
- Seek **peer advice** based on your self-assessment
- **Publish** (summarized) results of self-assessment
- Use these measures in combination with a [FAIR assessment](#)

Expert contact & GESIS consulting



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Upcoming Talks on Data Services, Data Archiving, and Research Data Management

Data Services	28.09.2023	Data Services: An Overview <i>Oliver Watteler</i>
Community Data Collection	12.10.2023	Community Data Collection <i>Alexander Jedinger</i>
Metadata & PIDs	26.10.2023	Metadata and PIDs <i>Wolfgang Zenk-Möltgen, Jan Schwalbach & Kokila Jamwal</i>
DP-R EX	09.11.2023	An Introduction to Domain-Specific Data Infrastructures: DP-R EX <i>Alexander Jedinger, Marlene Hilgenstock & Pascal Kolkwitz-Anstötz</i>
RDM & RDM Training	23.11.2023	Research Data Management & RDM-Training <i>Anja Perry & Sebastian Netscher</i>
Risk & Sensitive Data	07.12.2023	Secure Data Center: Secure Access to Sensitive Data <i>Deborah Wiltshire & Jara Kampmann</i>

Thank you for participating!

References

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- Digital Preservation Coalition (DPC). (2021). *DPC Rapid Assessment Model (version 2 - March 2021)*. <http://doi.org/10.7207/dpcram21-02>
- International Standardization Organization. (2012). *ISO 16363:2012. Space data and information transfer systems — Audit and certification of trustworthy digital repositories*. <https://www.iso.org/standard/56510.html>
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- Research Libraries Group. (2002). *Trusted Digital Repositories: Attributes and Responsibilities*. <https://www.usgs.gov/media/files/trusted-digital-repositories-attributes-and-responsibilities>.

Further resources

- Pegelow, L., Jansen, M., & Neuendorf, C. (2021). Erwerb des Zertifikats CoreTrustSeal (CTS) durch ein Forschungsdatenzentrum im Bildungsbereich – Motivation, Umsetzung und Lessons learned. Bausteine Forschungsdatenmanagement, (1), 10–21.
<https://doi.org/10.17192/bfdm.2021.1.8310>
- Recker, J., Helbig, K., & Neumann, J. (2020). Zertifizierung von Forschungsdatenrepositorien: Wege, Praxiserfahrungen und Perspektiven: 10. Workshop der DINI/nestor-AG Forschungsdaten. Bausteine Forschungsdatenmanagement, (2), 97–105. <https://doi.org/10.17192/bfdm.2020.2.8280>
- Alle Präsentationen des 10. DINI/nestor-Workshops: „Zertifizierung von Forschungsdatenrepositorien - Wege, Praxiserfahrungen und Perspektiven“ verfügbar unter https://www.forschungsdaten.org/index.php/Wiki-Seite_des_10_Workshops_der_DINI_nestor_AG