

Review of CoreTrustSeal Applicability to non-Preservation (Trustworthy) Data Services

UK Data Service

This brief working paper provides an initial overview of the CoreTrustSeal¹ Requirements with regard to their broader applicability to data and metadata services beyond Trustworthy Digital Repositories (TDR).

This text uses the recently released Draft CoreTrustSeal Board proposals for the 2023-2025 Requirements². The working assumption is that this draft will be close to the final version, but this overview will be revised and updated once the final structure, text and guidance are published.

The table below includes comments related to the applicability of the CoreTrustSeal to the wider issue of trustworthy data and metadata services that do not offer a long term preservation component i.e. 'storage-only' services or some lower level of curation. The alignment options for each Requirement are: 'yes', 'no' or 'partial'.

Some concluding remarks provide a first outline of the functional components of trustworthy data services based on our initial analysis. With the exceptions of "Preservation Plan" and "ReUse" our assessment is that all of the CoreTrustSeal Requirements are applicable to any (meta)data service or (meta)data service component or function.

This is a first step in an internal planning and analysis process by the UK Data Service. It is shared in the interests of transparency and to provide a reference point for some engagement with peers³ on this topic. This version is a draft and should not be considered as final.

¹ <https://www.coretrustseal.org/>

² DRAFT Change Log and CoreTrustSeal Requirements 2023-2025 <https://doi.org/10.5281/zenodo.6669515>

³ E.g. *Information Architecture For Secure Trustworthy Data Services*, presented at IASSIST 2022. <https://doi.org/10.5281/zenodo.6822236>

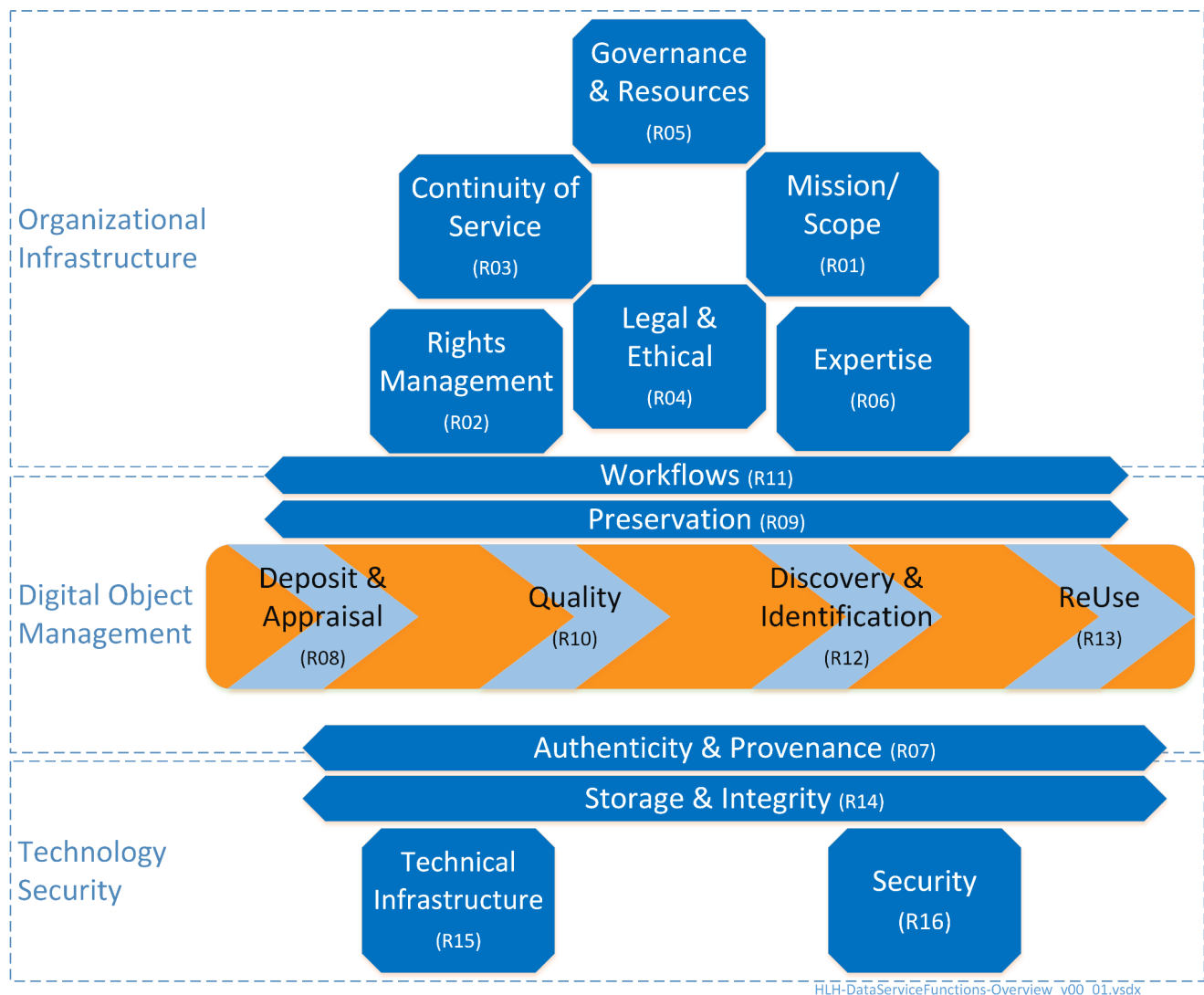
CoreTrustSeal Grouping	CoreTrustSeal. Proposed Headings for 2023-25 (Not yet final)	Applicable to Trustworthy Data Services (Non-preservation services)	Comments based on UK Data Service internal discussion
Organizational Infrastructure	Mission/Scope (R01)	Yes	Understanding the mission and scope of any service on offer is necessary for it to be assessed. With the exception of the specific CoreTrustSeal reference to preservation being a part of the mission, this is necessary for all services, whether or not they include preservation services.
Organizational Infrastructure	Rights (R02)	Yes	Different services may have different levels of rights, obligations, permissions and prohibitions in place. But a rights management framework is necessary for all services that touch (meta)data.
Organizational Infrastructure	Continuity of Service (R03)	Yes	Continuity, disaster recovery and succession planning are necessary to ensure the sustainability of any service, and to minimise the current and future risks to digital objects.
Organizational Infrastructure	Legal & Ethical (R04)	Yes	Any service should be able to demonstrate that it is aware of and complies with the legal, regulatory and ethical framework that it functions within.

Organizational Infrastructure	Governance & Resources (R05)	Yes	A clear system of governance and sufficient human and financial resources is necessary to deliver any effective and sustainable service.
Organizational Infrastructure	Expertise (R06)	Yes	The types and depth of expertise may vary. But any service should be able to demonstrate that it has, or has access to, appropriate expertise to operate the service.
Digital Object Management	Authenticity & Provenance (R07)	Yes	Any (meta)data service must be able to assert the Authenticity and Provenance of a digital object it provides access to, even if it does not undertake curation or preservation.
Digital Object Management	Deposit & Appraisal (R08)	Yes	There must be a clear deposit process. Criteria for accepting or rejecting offers (appraisal) must be present.
Digital Object Management	Preservation Plan (R09)	Partial	A preservation plan <i>may</i> only be required when there is a specific preservation remit for the data service. But ideally a storage-only or a service offering a level of curation that falls short of active long-term preservation would still be 'preservation aware' i.e. they would not take actions that could impact a future decision by a preservation service to actively preserve the (meta)data. A storage only service that restricted deposits to preservation-friendly formats would be an example.

Digital Object Management	Quality (R10)	Yes	For all services, quality must be assured through measures that assess and deliver standards compliance.
Digital Object Management	Workflows (R11)	Yes	During the transition from deposit to access, all services must be able to demonstrate that they have sufficiently developed and auditable Workflows to ensure complete and consistent management of processes.
Digital Object Management	Discovery & Identification (R12)	Yes	Resource discovery of digital objects' data and metadata is necessary for all services. Unique and persistent identification at an appropriate object level to support standard discovery functions, and potentially to very granular levels e.g. datum objects is a dependency for many other actions.
Digital Object Management	Data ReUse (R13)	Partial	Though only an active long term preservation service will ensure that (meta)data remain re-usable over time, other types of data service should be 're-use aware'. A storage-only service might restrict deposits to specific file formats or metadata schemas considered to be acceptable for re-use. A service offering a level of curation that falls short of preservation can still choose to ensure reusability at the initial point of access.
Technology & Security	Storage and Integrity (R14)	Yes	Necessary for all services. Ideally described to some community-agreed level covering multiple copies, in multiple locations on multiple media with acceptable integrity and recovery measures in place.

Technology & Security	Technical Infrastructure (R15)	Yes	Necessary for all services. Ideally described to some community-agreed level, covering key components and management approaches.
Technology & Security	Security (R16)	Yes	Necessary for all services. Ideally described to some community-agreed level covering key components and management approaches. Adapted to the sensitivity level and disclosure risk of the (meta)data being held.

Concluding Remarks



Overview of **Proposed** CoreTrustSeal Requirements Headings 2023-25

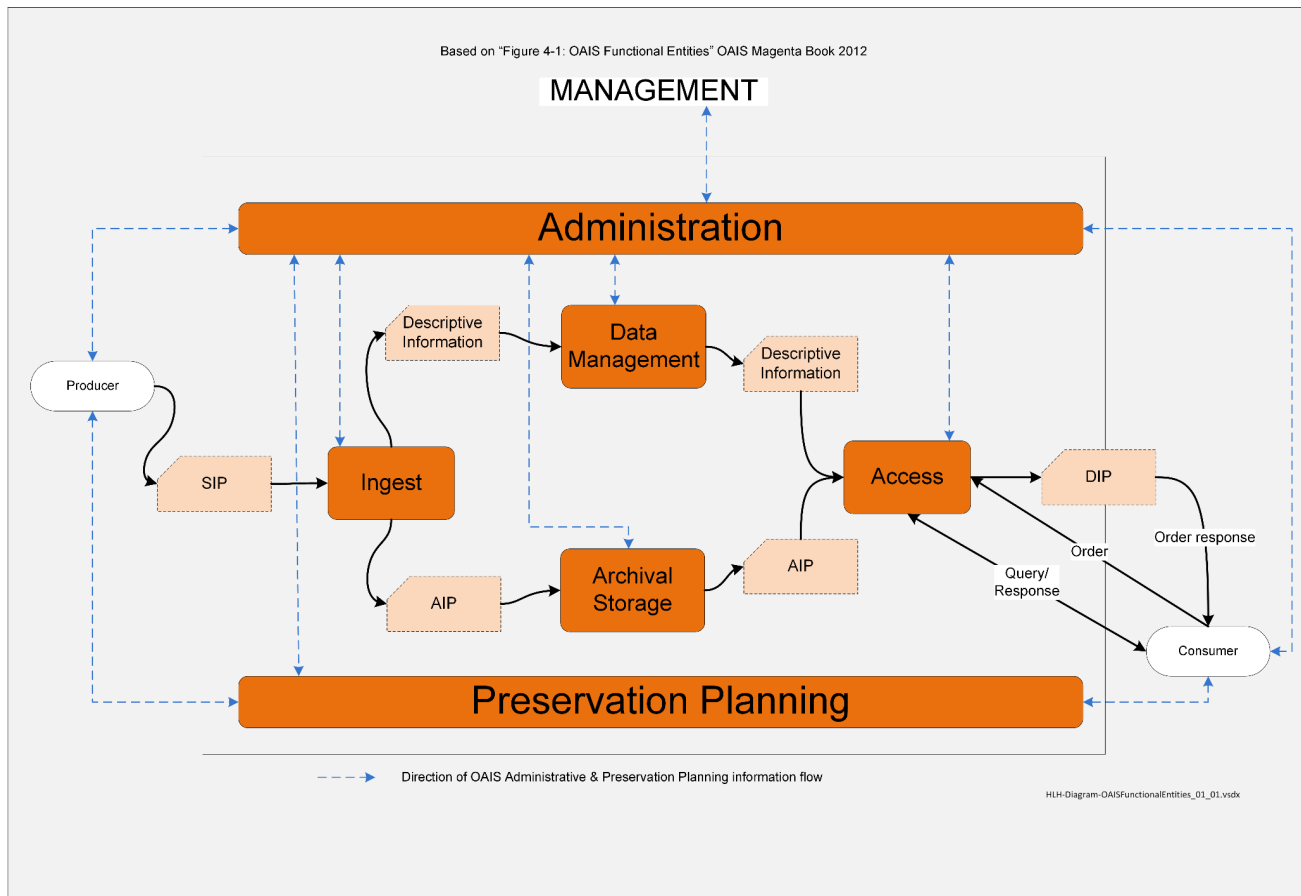
In this initial review of the proposed CoreTrustSeal Requirements headings for 2023-25 our assessment is that all of the CoreTrustSeal Requirements are applicable to any data service or data service component function with the exceptions of Preservation Plan and ReUse. Even in cases where a Data service/function is 'storage only' or offers a sub-preservation level of curation, the activities should ideally be 'preservation-aware' and 're-use aware' to enable a future decision to bring the data and/or metadata of a digital object under formal active long term preservation.

Comparing the diagram above to the OAIS⁴ functional entities in the diagram below, the CoreTrustSeal Requirements lack an Access function (though this is implied throughout and required as a condition of the Mission-R01) and an Ingest function (implied by deposit, followed

⁴ Reference Model for an Open Archival Information System (OAIS)
<https://public.ccsds.org/pubs/650x0m2.pdf>

by steps to ensure Quality for ReUse). The current UK Data Service functional model⁵ specifies Pre-Ingest (analogous to Deposit and Appraisal) separately from the Ingest function. The UK Data Archive and the UK Data Service comply with a number of standards that are more rigorous than CoreTrustSeal including ISO27001 for Information Security. This implies a more specific functional need for data and metadata services to have a policy and evidence framework to manage the link between practice and compliance.

Once the CoreTrustSeal Requirements for 2023-25 are finalised we will update this analysis and review the additional service functions necessary to align with the UK Data Service model.



OAIS Reference Model (2012) Functional Entities

⁵ UK Data Archive Preservation Policy
<https://dam.data-archive.ac.uk/controlled/cd062-preservationpolicy.pdf>