Candidate Membership & Mentoring

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What we will cover today

- Criteria for membership and how they are assessed
- Links between certification and maturity
- Levels of membership and a workflow
- How to approach certification: hurdles, pitfalls, good practice
- What are the remedies available to us?
- Some new ideas
Membership Workflow States

Failure to renew certification

Increased involvement from WDS and its members
My Institution's Norms, Resources, and Procedures

Verifying that the institution is aligned with these.

Legal, Ethical, Community Norms and Procedures

Verifying that the institution monitors compliance and takes corrective action

Certification Criteria

Verifying that criteria are aligned with these.

Self-Evaluation
Mentoring
Peer Review
Audit (ISO)

Verifying level of compliance

Subtle Difference ...
# Membership Maturity

<table>
<thead>
<tr>
<th>CTS Levels of Certification</th>
<th>CMM Levels of Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 – Not applicable</td>
<td>(Celebrate being here) 😊</td>
</tr>
<tr>
<td>1 – The repository has not considered this yet</td>
<td>Ad Hoc - ☕ ☕</td>
</tr>
<tr>
<td>2 – The repository has a theoretical concept</td>
<td>Conceptual understanding/ planning/ awareness</td>
</tr>
<tr>
<td>3 – The repository is in the implementation phase</td>
<td>Standardisation underway/ defined/ adopted</td>
</tr>
<tr>
<td>4 – The guideline has been fully implemented in the repository</td>
<td>Implemented and managed</td>
</tr>
<tr>
<td>5</td>
<td>Measured and optimised</td>
</tr>
</tbody>
</table>
General Considerations

● Maturity
  ○ It is not a requirement to achieve level 4 compliance for all criteria, provided that there are clear and documented plans for addressing the shortfall. It becomes a qualitative assessment in cases where many criteria require improvement.

● Provision of Evidence
  ○ Evidence must be publicly accessible, or in cases where provisions are confidential (SLAs, Security Arrangements) an excerpt must be provided
  ○ In cases where evidence is not in English, an English summary is additionally required as a publicly available document
Typical Hurdles to Certification

1. Developing procedures, policies, and selecting applicable standards
2. Meeting Criteria
3. Developing a programme and maintaining momentum
4. Obtaining institutional support and funding
Typical Issues and Pitfalls: Certification

● Institutional Focus and Level of Curation
  ○ Institutional repositories are generally not considered for certification if they perform level A curation, and offer no discipline-specific curation expertise. These repositories are very similar to generic/technical repository service providers (TRSPs).
  ○ CTS is engaging with the community to determine amended certification requirements that can accommodate distributed models (some aspects provided by a service such as Figshare, some aspects provided by the institution or repository, and so on).

● Evidence of Workflow Implementation
  ○ Develop publicly available workflow procedures and indicate whether they are executed manually, automatically, or in combination, whether they outsourced.
  ○ Avoid statements such as
    ■ ‘Curators look at metadata to determine overall completeness’
    ■ Rather ‘Curators follow a checklist to verify that mandatory elements are properly supplied, supplemented by an automated schema verification’
  ○ Record of institutional knowledge
Typical Issues and Pitfalls: Certification

- Lack of a Clearly Designated Community
  - Institutional repositories and general repository services often do not specify the community being served in detail. As a result, one cannot determine whether they are serving that community properly.

- Lack of Clearly Defined Certification Boundaries
  - What is being certified?
  - Clear indication of accession policy
  - Some data holdings and activities may not be in scope
  - Clear definition of the legal entity that holds responsibility
Typical Issues and Pitfalls: Certification

- **Continuity Planning**
  - Continuity planning is a critically important criterion
  - Focus on three aspects
    - Business continuity
    - Access and preservation continuity
    - Technical continuity

- **Access and Re-Usability**
  - Re-usability is greatly dependent on quality of metadata, and provision of domain-specific data services
  - Moreover, re-usability is further dependent on the extent to which semantics are aligned - using vocabularies, LOD services, and similar
Remedies that WDS and its Membership can Offer

1. Mentoring System
   a. Participate in regular progress meetings - indirect pressure to perform
   b. Provide access to and clarifications in respect of standard procedures and public evidence
   c. Provide letters of support
   d. Provide informal review of applications to CTS

2. WDS Resources
   a. Matching candidate repositories with one or more mentors
   b. Schema for development of evidence and materials (overleaf)
   c. Consolidated guidance resources

3. Webinars and Workshops
   a. Cloud and automation
   b. User and access management, cost allocation, fair availability of expensive platforms
   c. FAIR and interoperability
   d. Sustainability, user focus, measuring value to end users
## A Method for Structuring Response Content

<table>
<thead>
<tr>
<th>Policy and Business Planning-Level Responses</th>
<th>Procedural and Quality-Assurance Level Responses</th>
<th>Systems and Technical Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Governance, organisation, mission, sustainability</td>
<td>[R0], [R1], [R2], [R3], [R4], [R5], [R6]</td>
<td>[R8], [R9], [R10]</td>
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<tr>
<td>Digital Object Management</td>
<td>[R7], [R8], [R9], [R10], [R11], [R12], [R13], [R14]</td>
<td>[R9], [R12]</td>
</tr>
<tr>
<td>Technology and Infrastructure</td>
<td></td>
<td>[R15],[R16]</td>
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Suggested Documentation Scope

- **Mandate and Mission**
  - Annual Report, Review Publication
  - Articles of Incorporation
  - Institutional Website

- **Organisational Structure and Funding**
  - Outsource Service Level Agreements

- **Data Policy and License Regimes**

- **Business Continuity Plan**
  - Agreements with outsource partners
  - Access, Preservation, Knowledge

- **Conditions of Use**
  - License Provisions
  - Non-compliance

- **Governance and Expertise**
  - Steering Committee
  - Periodic Review
  - User and Community Feedback
  - Community Engagement
  - Staff and responsibilities/ experience

- **Guidance for Depositors**
  - Depositor agreement
  - Ethics and Privacy
    - Anonymisation Guidance
  - Appraisal norms
  - Standards and formats
  - License Guidance

- **Guidance for Curators**
  - General Workflow and Procedures Overview
  - Preservation Plan
  - Ingest and Appraisal Procedure
    - Data and Metadata Quality
    - Ingest criteria (ethics, license, …)
  - Storage Procedures
  - Preservation Procedures
  - Backup and Failover Provisions
  - Persistent Identifiers
  - Dissemination

- **Guidance for Users**
  - Conditions of Use
  - Data Access Procedures
  - Comments and Feedback
To be considered as part of our information gathering survey

- Members that have resources and funding for outreach and capacity building exercises
- Members that have open source repositories for curation and preservation software (metadata management, discovery, fixity, PIDs, ...)
- Members that are willing to serve as sounding boards/mentors
Some New Ideas …

● Federated Curation - Curation as a Service (Members or Networks)
  ○ Assists under-capacitated domain repositories
  ○ Allows generalist repositories to provide better service
  ○ Cements the role and usefulness of established domain repositories

● Body of Knowledge for Each Discipline (WDS Guidance Resources)
  ○ Scope of documentation
  ○ Maturity model for digital repositories - especially in terms of data management
  ○ Avoid duplication - how?
    i. ESIP, GEO, ILTER, RDA, …

● Formal, curated metrics of usefulness
  ○ … but will penalise new repositories