

## Assessment of product against OAIS compliance requirements

Product name: **Archivemata**

Sources consulted: Archivemata – Documentation

Date of assessment: 19/09/2013

Assessment performed by: Christopher Fryer, Northumberland Estates

Scoring: Use 0 to 3 range, where the requirements are: not met (0), partially met (1), fully met (2), exceeded (3).

Score weighting uses Craig Borvsowich's *Constructing a Weighted Matrix* (2006).

TOTAL = Weight x Score.

| Requirement                    | Necessity   | Met? | How met  | Comments  | Weight | Score | TOTAL |
|--------------------------------|-------------|------|--|---|--------|-------|-------|
| 001: ingest mixed content      | Essential   | Y    | Archivemata implements a default ingest to access workflow that is compliant with the ISO-OAIS functional model. The web dashboard allow users to process, monitor and control the Archivemata ingest processes. | <i>Content to be ingested needs to be transferred to the Virtual Machine running Archivemata. In coming releases, the dashboard will support a transfer backlog linked to accession data as well as indexing, analysis, arrangement and minimal description of transfer(s) into SIP(s).</i> | 5      | 2     | 10    |
| 002: import records from EDRMS | Conditional | N    | No explicit support for EDMRS exports mentioned. No indication of future consideration on the Archivemata roadmap.   | <i>Lower-level metadata imports are mentioned, i.e. metadata to be attached to subdirectories and files within a SIP. Could in theory support import of EDRMS records but requires extensive manual</i>   | 2      | 0     | 0     |

| Requirement                     | Necessity | Met? | How met  | Comments      | Weight | Score | TOTAL |
|---------------------------------|-----------|------|--|---------------|--------|-------|-------|
|                                 |           |      |  | <i>input.</i> |        |       |       |
| 003: AIP creation               | Essential | Y    | Part of the Ingest process. After normalisation is approved, the SIP runs through a number of micro-services, including processing of the submission documentation, generation of the METS file, indexing, generation of the DIP and packaging of the AIP. |               | 5      | 2     | 10    |
| 004: UID assignment             | Essential | Y    | Assigns a unique universal identifier and sha-256 checksum to each file in the /objects/ directory.  |               | 5      | 2     | 10    |
| 005: virus and quarantine       | Essential | Y    | Uses ClamAV, parses the output and creates a PREMIS event. If a virus is found, the SIP is automatically placed in quarantined folder.   |               | 5      | 2     | 10    |
| 006: file format identification | Essential | Y    | Identification / Characterisation: FITS (Bundles file utility, fident, DROID, JHOVE, FIDO, Tika, mediainfo).   |               | 5      | 2     | 10    |
| 007: validation                 | Essential | Y    | Identification / Characterisation: FITS (Bundles file utility, fident, DROID, JHOVE, FIDO, Tika, mediainfo).   |               | 5      | 2     | 10    |
| 008: checksums                  | Essential | Y    | The physical structure of an information package includes checksum. Checks any checksum files that were placed in folder of the transfer prior to moving the transfer into Archivematica.  |               | 5      | 2     | 10    |
| 009: technical                  | Essential | Y    | Built in technical metadata  |               | 5      | 1     | 5     |

| Requirement                | Necessity | Met? | How met   | Comments   | Weight | Score | TOTAL |
|----------------------------|-----------|------|---|--|--------|-------|-------|
| metadata extraction        |           |      | extraction incorporated into FITS output.   |  |        |       |       |
| 010: descriptive metadata  | Essential | Y    | Uses Dublin Core and other best practice metadata standards.  | <i>GUI Dublin Core template to indicate field mapping to ISAD(G) added in release 0.10. Needs testing to confirm functionality. No mention of specific resource discovery metadata standards (e.g. OAI-PMH).</i> | 5      | 1     | 5     |
| 011: preservation metadata | Essential | Y    | Uses METS, PREMIS and other best practice metadata standards. Generates a basic METS file. Designed to capture the original order of the transfer. A copy of the METS file is automatically added to any SIP generated from the transfer. | <i>This interface also allows users to easily add or edit metadata.</i>  | 5      | 2     | 10    |
| 012: permanent storage     | Essential | Y    | Once ingest is complete, selecting a location to "Store AIP" in the Actions drop-down menu compresses and zips the AIP and moves it into Archival storage. A remote network mounted directory can be configured for location of AIP's.    | <i>Archivematica does not provide permanent storage itself. External storage would have to be procured.</i>  | 5      | 1     | 5     |
| 013: managed storage       | Essential | Y    | The AIP directories are broken down into UUID quad directories for efficient storage and retrieval. Archivematica uses a directory tree structure to store AIPs.  | <i>Archivematica allows directories and sub-directories, though it's not clear how much the Archivist can control these features.</i>  | 5      | 1     | 5     |
| 014: error-checking        | Essential | N    | No mention of ability to perform integrity checking on storage.   | <i>External storage could provide this functionality, e.g. Arkivum uses</i>  | 5      | 0     | 0     |

| Requirement                                 | Necessity   | Met? | How met  | Comments   | Weight | Score | TOTAL |
|---|-------------|------|--|--|--------|-------|-------|
|   |             |      | media.   | <i>active integrity checking at all times.</i>                                 |        |       |       |
| 015: AIP to DIP transformation              | Essential   | Y    | Ability to create lower quality presentation copies used for dissemination.  |  | 5      | 2     | 10    |
| 016: technical metadata in database         | Essential   | Y    | During archival storage, the AIP is moved into its storage repository.   | <i>As of the 0.10 release, all METS metadata is indexed and searchable.</i>    | 5      | 2     | 10    |
| 017: descriptive metadata in database       | Essential   | Y    | During archival storage, the AIP is moved into its storage repository.   |  | 5      | 2     | 10    |
| 018: preservation metadata in database      | Essential   | Y    | During archival storage, the AIP is moved into its storage repository.   | <i>As of the 0.10 release, all METS metadata is indexed and searchable.</i>    | 5      | 2     | 10    |
| 019: rights metadata in database            | Conditional | Y    | During archival storage, the AIP is moved into its storage repository.   |  | 2      | 2     | 4     |
| 020: database ease of use                   | Essential   | Y    | Database can be used out of the box in a relatively straightforward manner. Further customisation and support may require developer. | <i>Open source deployment. Dependent on community for further refinements.</i> | 5      | 1     | 5     |
| 021: database queries on objects and events | Essential   | Y    | View the files and metadata description for information object.  |  | 5      | 1     | 5     |
| 022: database updates                       | Essential   | Y    | Edit descriptive metadata on any information object.   |  | 5      | 2     | 10    |
| 023: database reports                       | Essential   | ?    | No explicit information found.   |  | 5      | 0     | 0     |
| 024: user requests                          | Conditional | ?    | No explicit information found.   |  | 2      | 0     | 0     |
| 025: inventories and reports                | Essential   | Y    | Creates inventories for all file formats and digital objects but does not produce reports on their                                   |  | 5      | 1     | 5     |

| Requirement               | Necessity   | Met? | How met  | Comments | Weight | Score | TOTAL |
|---------------------------|-------------|------|--|----------|--------|-------|-------|
|                           |             |      | metadata.  |          |        |       |       |
| 026: audit trails         | Conditional | Y    | View the files and metadata description for information object.  |          | 2      | 1     | 2     |
| 027: automated agreements | Optional    | ?    | No explicit information found.   |          | 0      | 0     | 0     |
| 028: rights policies      | Conditional | Y    | PREMIS rights added prior to normalisation.  |          | 2      | 2     | 4     |
| 029: migration            | Essential   | Y    | Archivematica's primary preservation strategy is to normalise files to preservation and access formats upon ingest. Maintains the original format of all ingested files to support migration and emulation preservation strategies. Various normalisation options available:<br>1) Normalise for preservation and access<br>2) Normalize for preservation<br>3) Normalize for access<br>4) Do not normalize. |          | 5      | 2     | 10    |
| 030: policy enactment     | Optional    | Y    | The Format Policy Registry (FPR) is how Archivematica manages preservation planning using format policies. A format policy indicates the actions, tools and settings to apply to a file of a particular file format.   |          | 0      | 2     | 2     |
| 031: template design      | Optional    | Y    | Supports management of schemas used for content description.   |          | 0      | 2     | 2     |
| 032: DIP creation         | Essential   | Y    | Creates a DIP containing access copies of the objects, thumbnails  |          | 5      | 2     | 10    |

| Requirement                   | Necessity | Met? | How met   | Comments  | Weight | Score | TOTAL |
|-------------------------------|-----------|------|---|---|--------|-------|-------|
|                               |           |      | and a copy of the METS file.  |   |        |       |       |
| 033: DIP delivery             | Essential | Y    | Archivematica provides a dashboard to allow the browsing, searching, viewing and downloading of DIP's.  |   | 5      | 2     | 10    |
| 034: AIP to DIP audit         | Essential | Y    | View the files and all metadata (description only) for any information object. No audit trail included for transformation of AIP into a DIP.              |   | 5      | 1     | 5     |
| 035: access rights            | Essential | Y    | The dashboard provides a simple cookie-based user authentication system. Users can be created, modified and deleted.                                      | <i>Access levels are not possible in current version, only creation of new users.</i> | 5      | 2     | 10    |
| 036: managed access           | Essential | Y    | Partially, see 032.   |   | 5      | 1     | 5     |
| 037: consumer front end       | Essential | Y    | Archivematica provides a dashboard to allow the browsing, searching, viewing and downloading of DIP's.  |   | 5      | 2     | 10    |
| 038: finding aid support      | Essential | Y    | Archivematica can upload DIP's to a limited amount of access systems (AtoM and CONTENTdm). AtoM is bundled with Archivematica as a default access system. | <i>Neither CALM nor ISAD(G) is mentioned.</i>   | 5      | 1     | 5     |
| 039: representations          | Essential | Y    | Download any manifestation (representation) of an entire information object or selected file.   |   | 5      | 2     | 10    |
| 040: readers and access tools | Essential | ?    | No explicit information found.  |   | 5      | 0     | 0     |
|                               |           |      |   | <b>TOTAL SCORE:</b>   |        | 57    | 254   |