

AWDI – Governance

Governance of AWDI

The Australian Water Data Infrastructure (AWDI) aims to provide a framework for the delivery of water related data associated with point or regional locations.

Why governance is required

To deliver on the aims of AWDI a range of tools need to be defined, described and those definitions and descriptions published. Such tools will need to be amended to meet technical changes and stakeholder need. Once the definition has been made, there needs to be a regime of governance for those tools and their descriptions. Governance of the definitions allows the continued usefulness of the infrastructure. Without governance, the system either stagnates or is likely to disintegrate due to uncontrolled variation.

What requires governance

The AWDI framework contains a number of objects including:

- models (including data storage, data transfer, metadata, and querying);
- schemas (for implementing models);
- vocabularies (code lists);
- AWDI profiles (including compliance tests);
- quality standards;
- registry for publishing service descriptions;
- Issues register; and
- output stylesheets.

Each of these objects needs to be governed independently allowing for any necessary changes to meet evolving stakeholder needs. Such changes to the objects and concepts must be managed through a set of policies and mechanisms (the governance model). The documentation of the governance model allows for consistent application of the policies.

Collectively these objects, concepts, and the process by which they are governed would be known as the AWDI reference model. The collation of the descriptions is defined as a description of the reference model.

Roles within the governance model

AWDI must be dynamic, considering new concepts and technologies as they become available, and integrating them where appropriate. Reviews of the working environment will result in AWDI continually changing; such changes can only be committed to by the custodian.

The roles¹ within the governance regime will include:

- Governing Body² – authority to: set rules; standards; and delegate responsibility
△ Non technical role.
- Model Custodian – authority to endorse AWDI artefacts.
△ Technical to non-technical role.
- Originators - generation of documentation (original and revisions)
△ Semi to highly technical role.

¹ Roles may overlap.

² Governance nor custodianship equate to ownership; to make AWDI work the water community needs to “own” it. As the pieces of AWDI are potentially generated by disparate sections of that community the copyright usually remains vested in those entities, but with an ability for the whole community to share.

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- Editors – consideration of presentation of documentation
△ Semi to highly technical role.
- Reviewers – to make suggestions of changes to models and documents
△ Technical and non-technical role
- Document managers/publishers - distributors of documentation
△ Non-technical role.
- Reference implementation managers – standard implementation deliverer
△ Technical role.
- Registry Managers - distributors of documentation
△ Semi technical role.

Note: custodianship can be transferred, with agreement of the parties.

Please refer to Annex A for allocation of roles and their sphere of authority and responsibility that each role has.

How the roles interact in the development and endorsement of objects within the AWDI framework is set out as a workflow in Annex B.

Allocation of roles for the governance of AWDI

1 Governing body

A Collaborative governance model allows the close alliance with the development of the framework. To maintain complementarity, collaborative arrangements between the governing bodies of similar frameworks need to be established. Complementarity is managed by ensuring that fora exist so that potential inconsistency can be discussed prior to implementation. The collaborative model allows relatively rapid response to changes in requirements, however the inter-framework interoperability reviews are critical and non-trivial.

- Responsibilities of the Governing body – authority to set rules and standards and delegate responsibility:
 - Define the scope of the AWDI model (including its possible deprecation);
 - Set the standards to be used in AWDI:
 - Code list content
 - Description method
 - Data quality nomenclature
 - Data capture, and analysis nomenclature
 - Delegate responsibility for the generation and revision of potential AWDI artefacts
 - Delegate responsibility for the publication and management of AWDI artefacts

2 Model Custodian

The model custodian is responsible for ensuring that the artefacts under the AWDI banner comply with the rules set down by the AWDI Governing body. In addition they need to be suitably technical to identify possible enhancements to or potential gaps in the framework.

- Responsibilities of the Model Custodian – authority to endorse AWDI artefacts:
 - Identification of the need for potential AWDI artefacts, or revision of existing artefacts;
 - Agree that artefacts and revisions should exist under the AWDI banner.
 - Audit the artefacts (new or and revisions) for compliance with the rules set by the governing body;
 - Ensure that AWDI artefacts are adequately described and published.

3 Originator

It would be inappropriate to set restrictions on the role of originator, as to limit the potential sources of material would be counter-productive.

The Originator should not be the designated Editor or Reviewer of their own material.

- Responsibilities of the Originators - generation of documentation:
 - Including schemas, tests, model diagrams and textual descriptions:
 - Generation of original documentation; and
 - Generation of document revisions.

4 Editor

Editors will need to be chosen on the basis of their skills base being appropriate to the task required.

The Editor should not be the Originator.

- Responsibilities of the Editors – consideration of presentation of documentation:
 - Including textual descriptions, schemas, tests and model diagrams:
 - Edit original documentation;
 - Edit revised documents; and
 - Managing change requests.

5 Reviewer

Reviewers will also need to be chosen on the basis of their skills base being appropriate to the task required. Ideally there should be more than one person reviewing a development.

Reviewers will need a broad perspective of the issues and knowledge of other allied developments.

Reviewers do not change the content of the document, they comment on its content only.

The Reviewer should not be the Originator.

- Responsibilities of the Reviewers – to make suggestions of changes to models and documents:
 - Handling change requests:
 - Assessing impact of changes;
 - Assessment of mechanisms for implementing changes;
 - Assess alignment of AWDI with external IT environments; and
 - Assess alignment of AWDI with client requirements.

6 Document Manager/Publisher

Management and publication of the documents generated for AWDI needs to be done consistently and methodically, ensuring an appropriate version control mechanism has been instigated. The material should be hosted to allow appropriate access whenever the material is required. Although specific version control software is not necessarily required, the review process is likely to be hampered without some form of version control tools being used. . The roles of document managers and document publisher are likely to be assigned to an organisation, and the specific tasks allocated within that organisation. Logically the roles sits within one of the Australian Government agencies collaborating in AWDIP. The document manager need not be the document publisher.

Neither the document manager nor publisher are authorised to modify the documents they manage.

- Responsibilities of the Document managers/publishers - distributors of documentation:
 - Including textual descriptions, schemas, tests and model diagrams:
 - Distribution of original documentation; and
 - Distribution of version controlled revisions to documentation.

7 Reference Implementation Managers

Management and publication of the reference implementation is critical to ensuring that service providers and service users are able to check how the system should respond. The reference implementation needs to be stable and semi-permanent as the service being offered will be identified in documentation. The managers of the reference implementation need to provide a clean, service that adheres to the most current authorised AWDI model.

As part of the reference implementation a “test harness” should be provided to allow potential users to interact with the service at a pre-determined basic level, presenting valid queries and responses

- Responsibilities of the Reference Implementation Managers – standard implementation deliverer:
 - Publish a service that demonstrates the standard (full) implementation of AWDI; and
 - Update implementation once changes have been made official.

8 Registry Managers

Management and publication of the registries is important as it allows potential users to identify useable services, presenting an overview of the service provided, and the location from which those services are available. A registry that allows users to identify suitable services by the associated service profiles simplifies the requirements on the service provider, users and Registry Manager.

The Registry Managers need not have direct water data related responsibilities.

Responsibilities of the Registry Managers - distributors of documentation:

- Publishing descriptions of implementation implementations:
 - Publishing descriptions of implementations;
- Handling notification of changes in implementation instances:
 - Adoption, and Decommissioning;
 - Publishing descriptions of changes to implementations;
- Monitoring implementation instances:
 - Regular performance/availability;
 - Conformance/compliance; and
 - Failure handling.

AWDI governance workflow

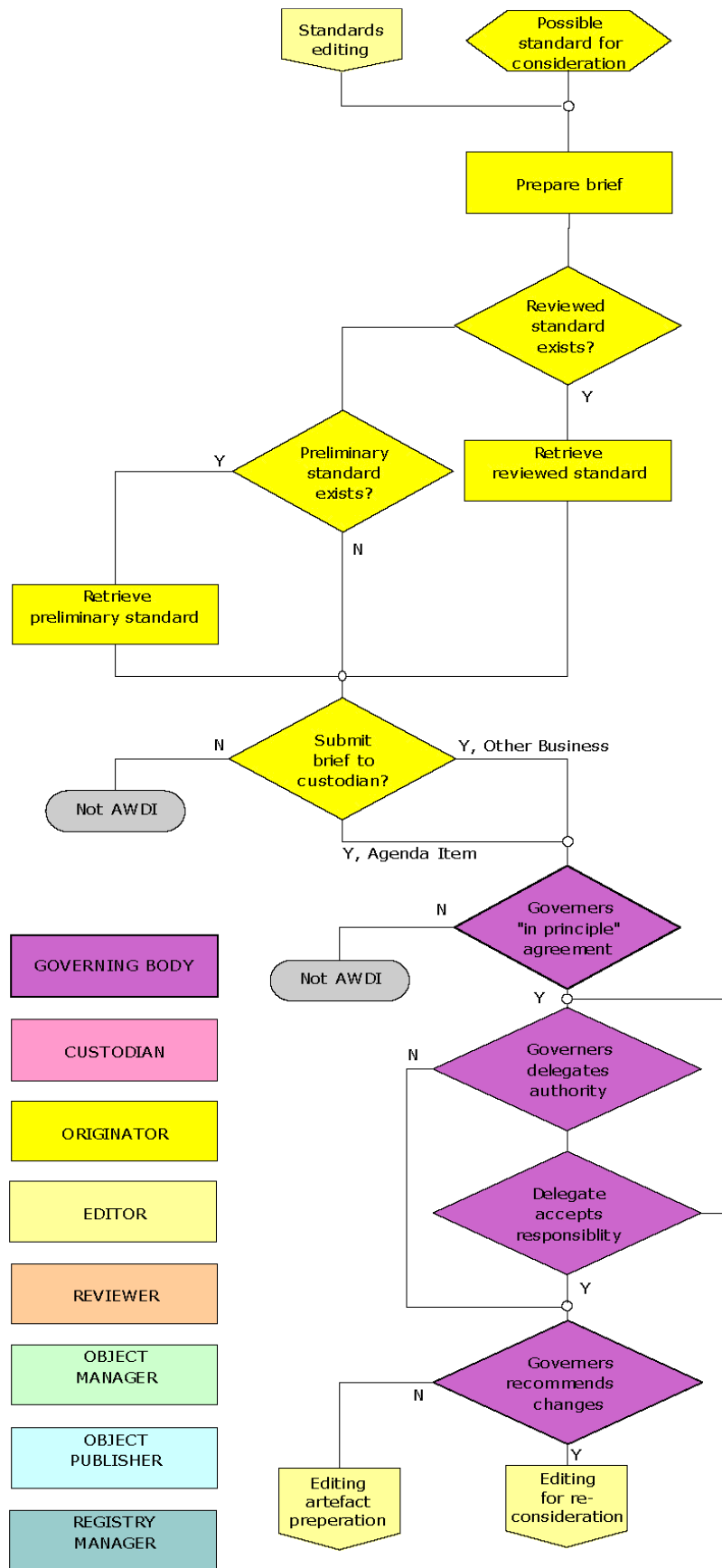
Workflow within the governance framework can be considered in three discrete units:

- the standards decision process “what rules define AWDI and its objects” (fig B1);
- the artefact decision process “should this object be part of AWDI” (fig B2);
- the editing process “making sure the object is suitable” (fig B3); and
- the publishing process “making it known that the object is part of AWDI” (fig B4).

Please note that the adopt, adapt and invent principle is part of this process; as a result a large number of the objects being generated are descriptive and document how an object that is part of another domain (eg OGC) is to be incorporated.

The custodian, when considering an object for inclusion in AWDI, may accept the object (proceed to publishing) as well as recommend that additional supporting work needs to accompany that document (proceed to editing).

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- GOVERNING BODY
- CUSTODIAN
- ORIGINATOR
- EDITOR
- REVIEWER
- OBJECT MANAGER
- OBJECT PUBLISHER
- REGISTRY MANAGER

Figure B1 AWDI standards decision workflow

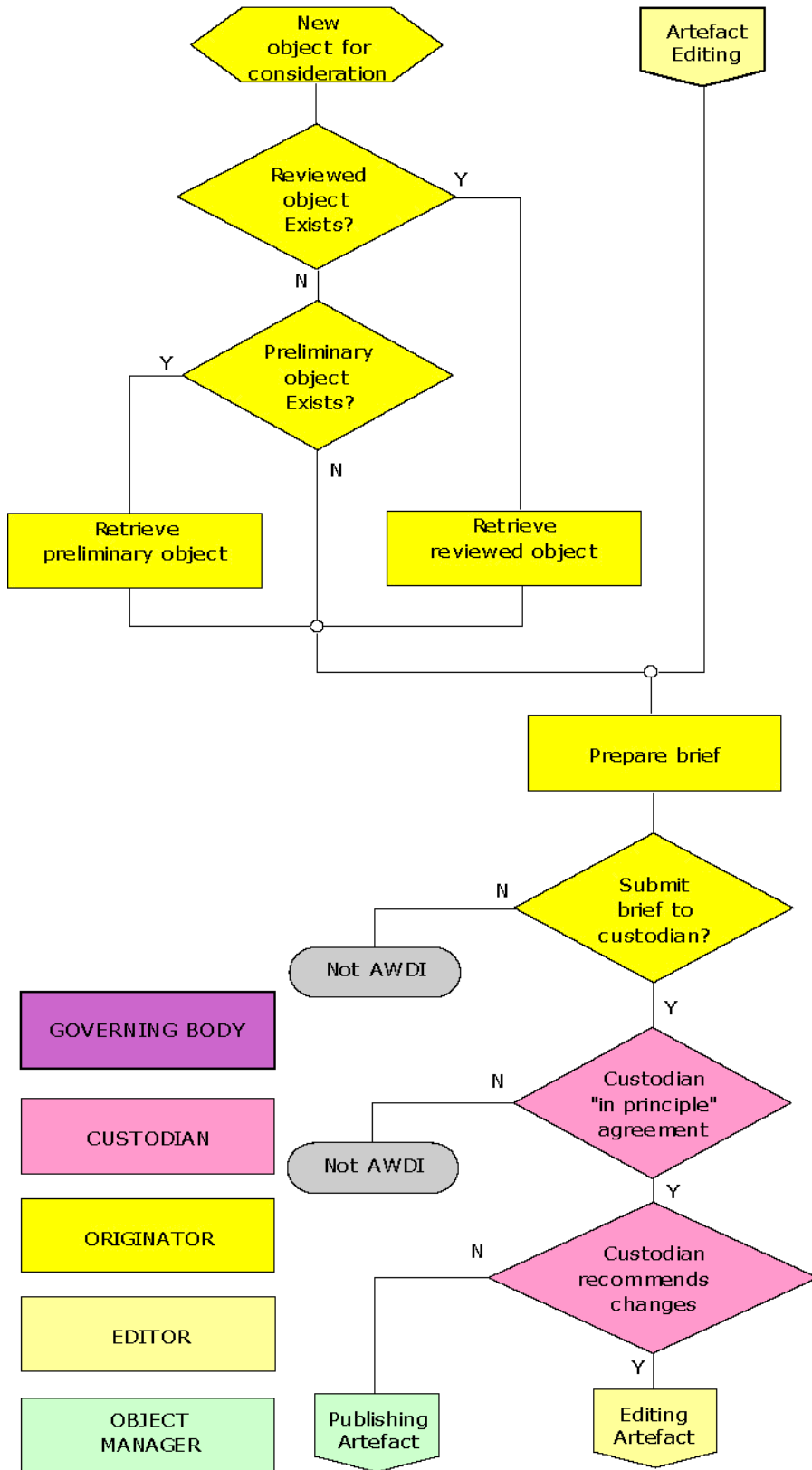


Figure B2 AWDI artefact decision workflow

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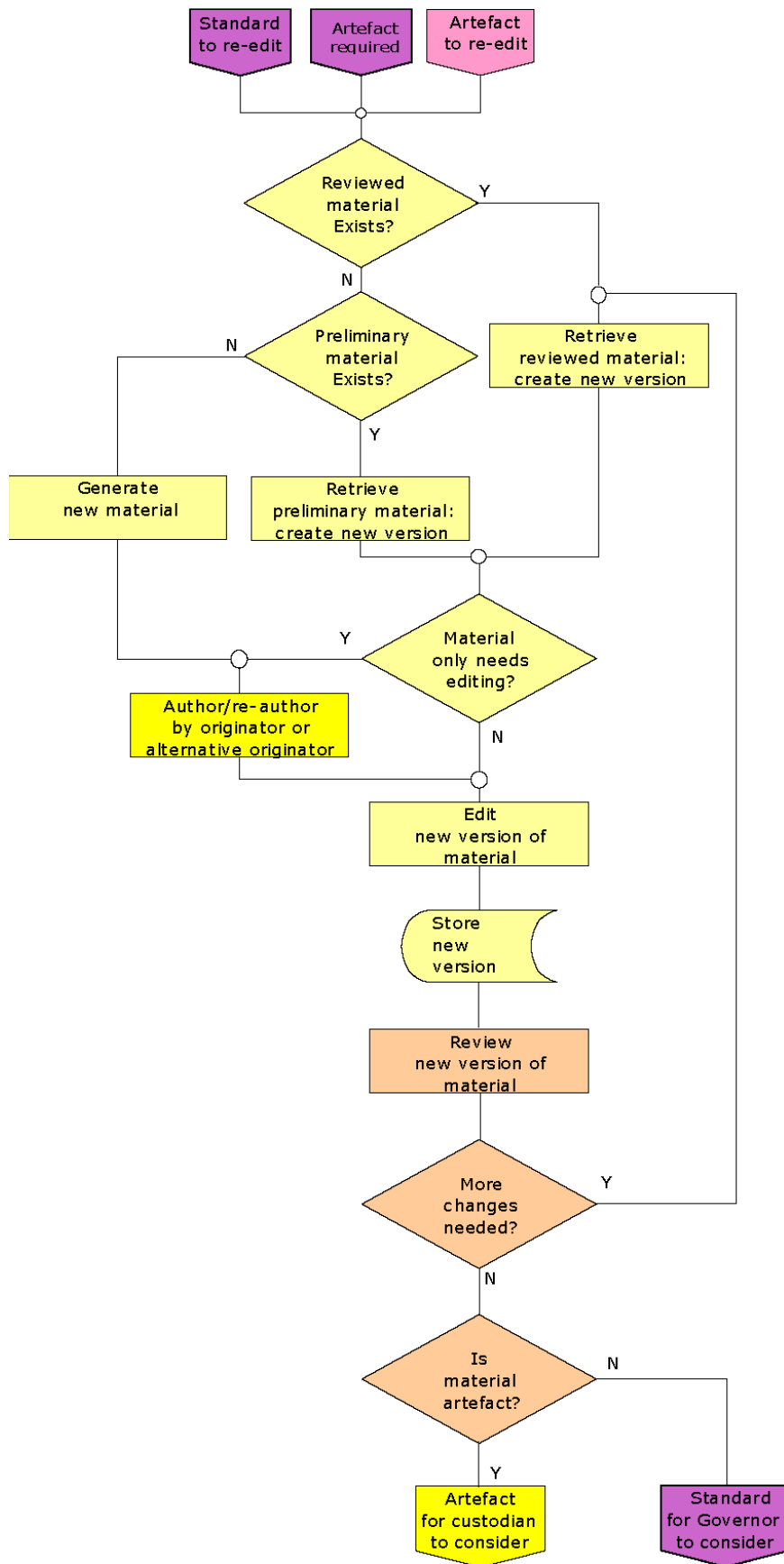


Figure B3 AWDI editing workflow

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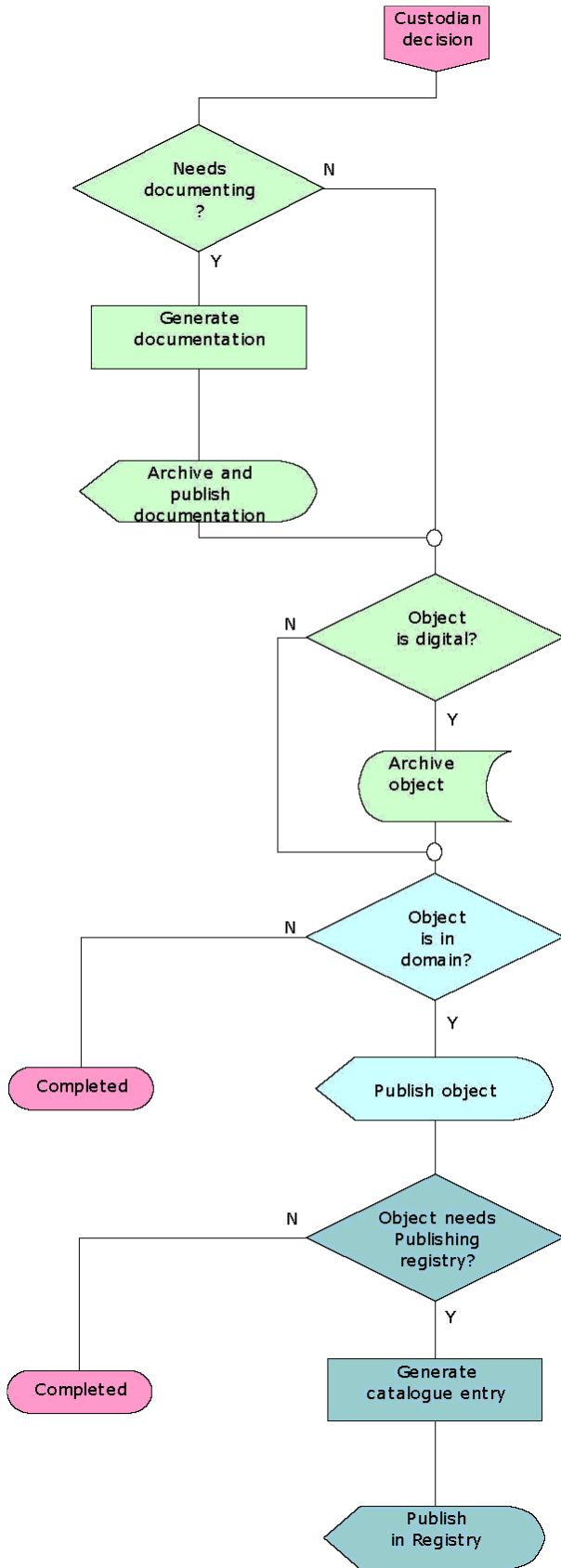


Figure B4 AWDI publishing workflow