

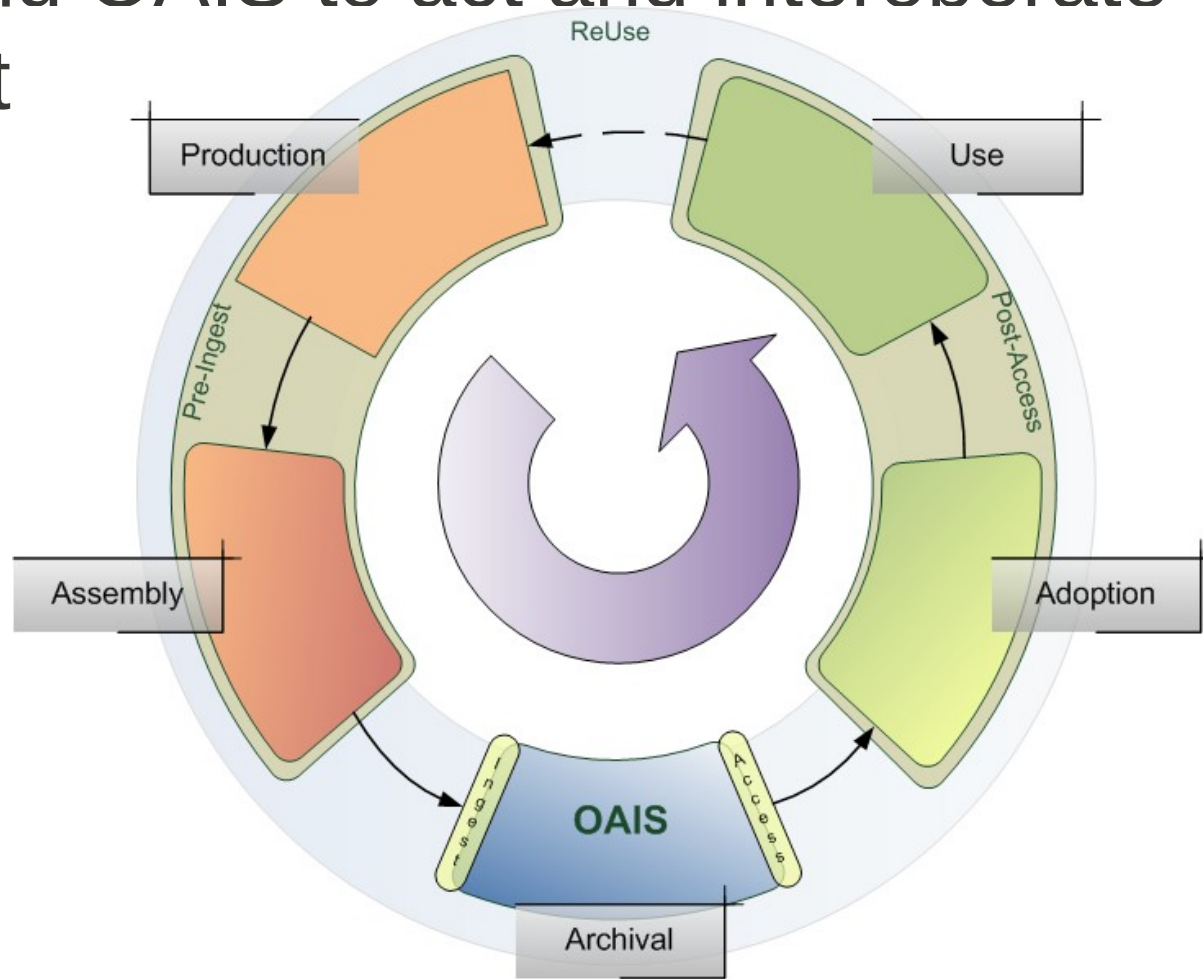
The SHAMAN Integrated Project

- **Sustaining Heritage Access through Multivalent ArchiviNg**
 - 4 years duration, €12 Million budget, 18 partners from 9 European countries + US
- Development of alternative technological approach to digital preservation
 - Grid-based production system supporting the virtualization of data and services
 - Semantic technologies focusing on capturing of context for enhancing long-term access and reuse
- Validation on different types of content and organizational needs
 - Published scientific information in libraries
 - Industrial design and engineering
 - Securing access to data resources in e-science applications



SHAMAN Information Lifecycle

- Extending OAIS to act and interoperate beyond t



Policies

- What are policies?
- Are there different categories?
- How do I execute a policy?
- How do I store a policy?
- How do I exchange policies?

What are Policies?

- Policies describe what needs to be done
 - Contains constraints on system.
 - Constraints can come from sources outside of domain (e.g. legal constraints).
- Written in domain specific language
- Usually plain text (unstructured in a sense).

Policy Example 1

Metadata Policy for information describing items in the repository

1. Access to some or all of the metadata is controlled.
2. The metadata may be re-used in any medium without prior permission for not-for-profit purposes provided the repository is mentioned.
3. The metadata must not be re-used in any medium for commercial purposes without formal permission.

Data Policy for full-text and other full data items

1. Access to some or all full items is controlled.
2. Single copies of full items can be:
 - (a) displayed or performed in any format or medium
 - (b) for personal research or study, educational, or not-for-profit purposes without prior permission or charge.provided:
 - (a) the authors, title and full bibliographic details are given
 - (b) a hyperlink and/or URL are given for the original metadata page
 - (c) the original copyright statement is given
 - (d) the original rights permission statement is given
 - (e) the content is not changed in any way
3. Full items must not be harvested by robots

**Generated by OpenDOAR
(thanks to G. Knight KCL)**

Policy Example 2

Bitstream preservation

The digital repository will undertake preservation of all bitstreams for the period of time that the digital resources have archival value. To preserve the bitstream, the digital repository commit to performing the following activities:

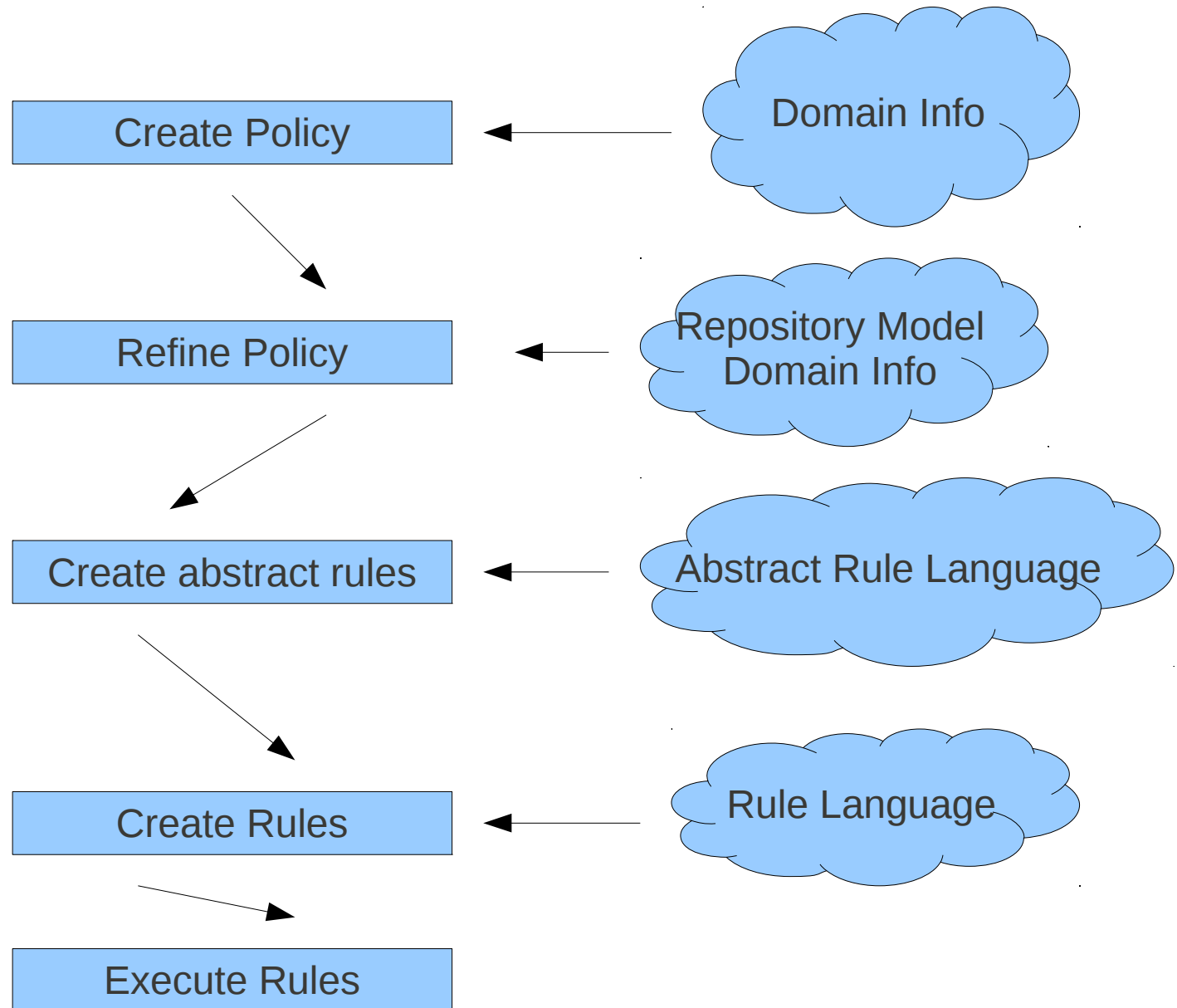
1. Store digital resources on a minimum of two media types located in different physical locations.
 2. Generate a fixity for each digital resource at the point of ingest into the digital repository
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1. Monitor the integrity of the digital resource on an ongoing basis, through verification of fixity values.
 2. Undertake restoration activities in the event that verification actions determine that the digital resource has been modified, through restoration from backup media

Are there different types of policies?

- We think so:
 - Policies on Access
 - Policies on Ingestion
 - Policies on Preservation
 - Policies for each service (aka SLA)
- Is there a further division into policies for projects/domains?
 - In case one wants to access content stored in a different repository.

How do I execute a Policy?

Easy!



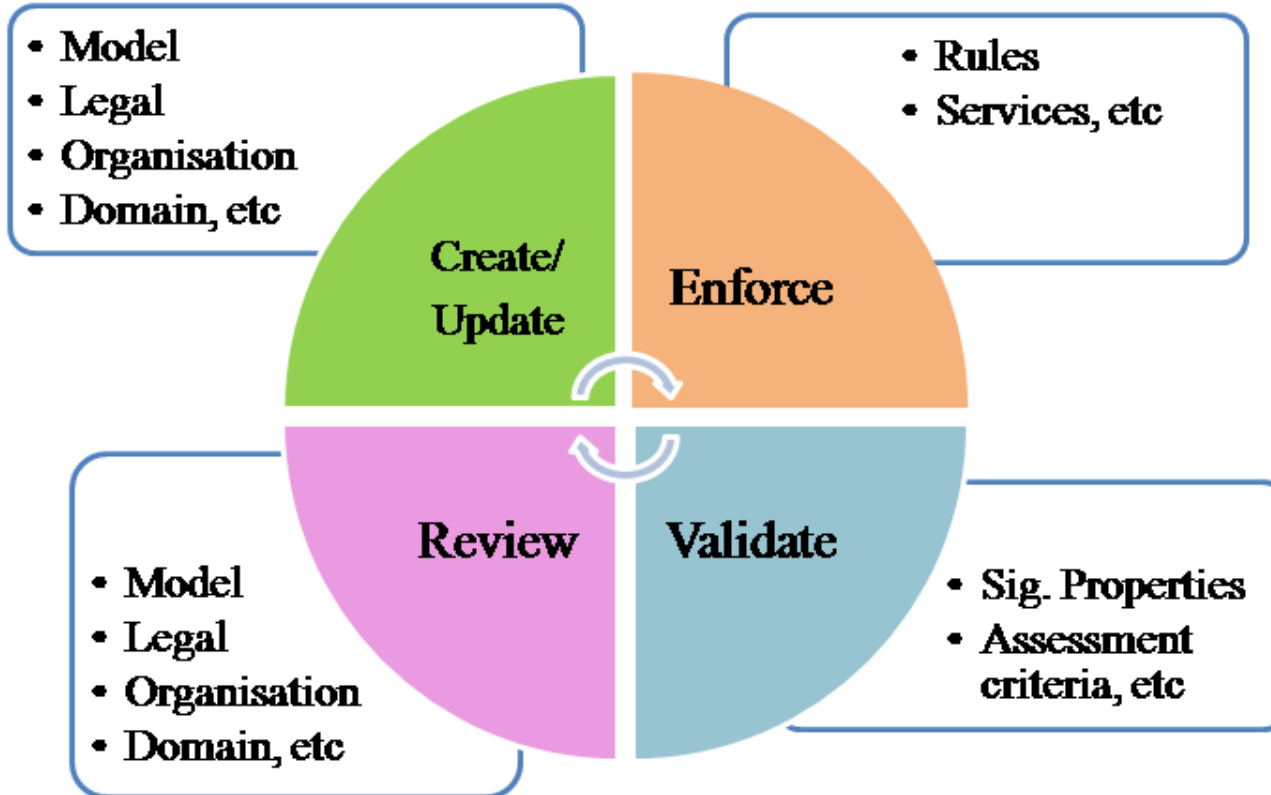
How do I execute a Policy?

- But, is it easy??
 - How can I be sure the rule actually implements the policy?
 - How can I make sure I know which rule belongs to which part of the policy?
 - How can I make sure the rule was executed?
 - How can I make sure the derivation process is correct (is there more than one correct)?

How do I store a Policy?

- Again sounds, trivial, but perhaps not:
 - Change control (updates to the policy)
 - Require re-validation of whole chain (implications of change).
 - Meta-policies (for review of policy, handling change control etc).
 - Capture enough 'policy context' so we can still understand what it's on about in the future.
 - What about the format?
 - SWRL, RuleML, is there something 'long lasting'?
 - RIF (in which case whats the rule language)?

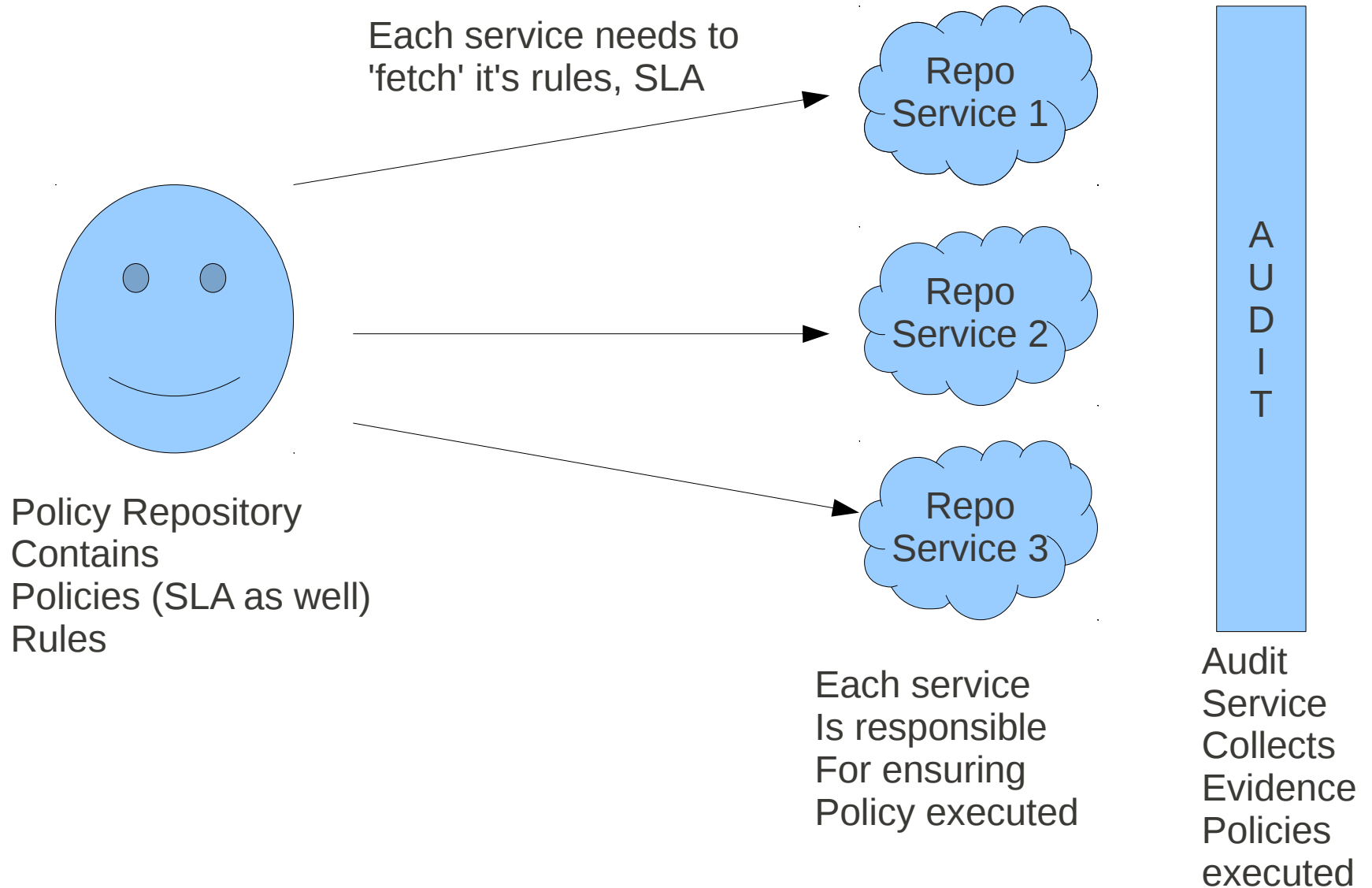
Policy Life-cycle



How do I exchange Policies?

- Difficult.
- Some 'services' may be restricted to certain admin domains.
- Some data may be restricted to certain admin domains.
- How do we get around this?
- What about conflicting policies (e.g. one policy may require some information to be redacted and another may forbid this)? Do we need lawyers?

Where do they fit?



Summary

- Back to where we started.
- What are policies?
- Are there different categories?
- How do I execute a policy?
- How do I store a policy?
- How do I exchange policies?