



FAIRSFair

Fostering Fair Data Practices in Europe

CoreTrustSeal+FAIR DPC FAIR Forever Webinar

Hervé L'Hours 2021-03-18



FAIRsFAIR partners

Data Archiving and Networked Services



UNIVERSITEIT VAN AMSTERDAM



Universidade do Minho



FAIRsFAIR in a nutshell

Call: H2020-INFRAEOSC-5c

Budget: 10 million euro

Length: 36 months

Starting date: March 1 2019

22 partners from 8 MS
6 core partners



**Science & Technology
Facilities Council**





DATA PRACTICES

◆ Reports

- ◆ FAIR requirements for persistence and interoperability
- ◆ Guidelines for ontology design and vocabulary interoperability
- ◆ Basic framework for services enabling FAIR (including software)

◆ Solutions for interoperability and machine accessibility for FAIR-aligned repositories

◆ Prototype for interoperability of repositories

◆ Workshops and hackathons: Recommendations for FAIR Semantics and Semantics in FAIR



DATA POLICY

◆ Reports

- ◆ Recommendations on data policy and analysis of practice
- ◆ Integration of meta-data catalogues
- ◆ White paper on alignment and synchronisation around FAIR, Open Science and EOSC

◆ Support programme for repositories to reach FAIR compliance



CERTIFICATION

- ◆ European network of trustworthy repositories enabling FAIR data
- ◆ Support and guidance for certification of data repositories
- ◆ Tool to identify relevant trustworthy certified repositories
- ◆ Pilots to support the assessment of FAIR data in trustworthy repositories



TRAINING, EDUCATION AND SUPPORT

◆ Reports

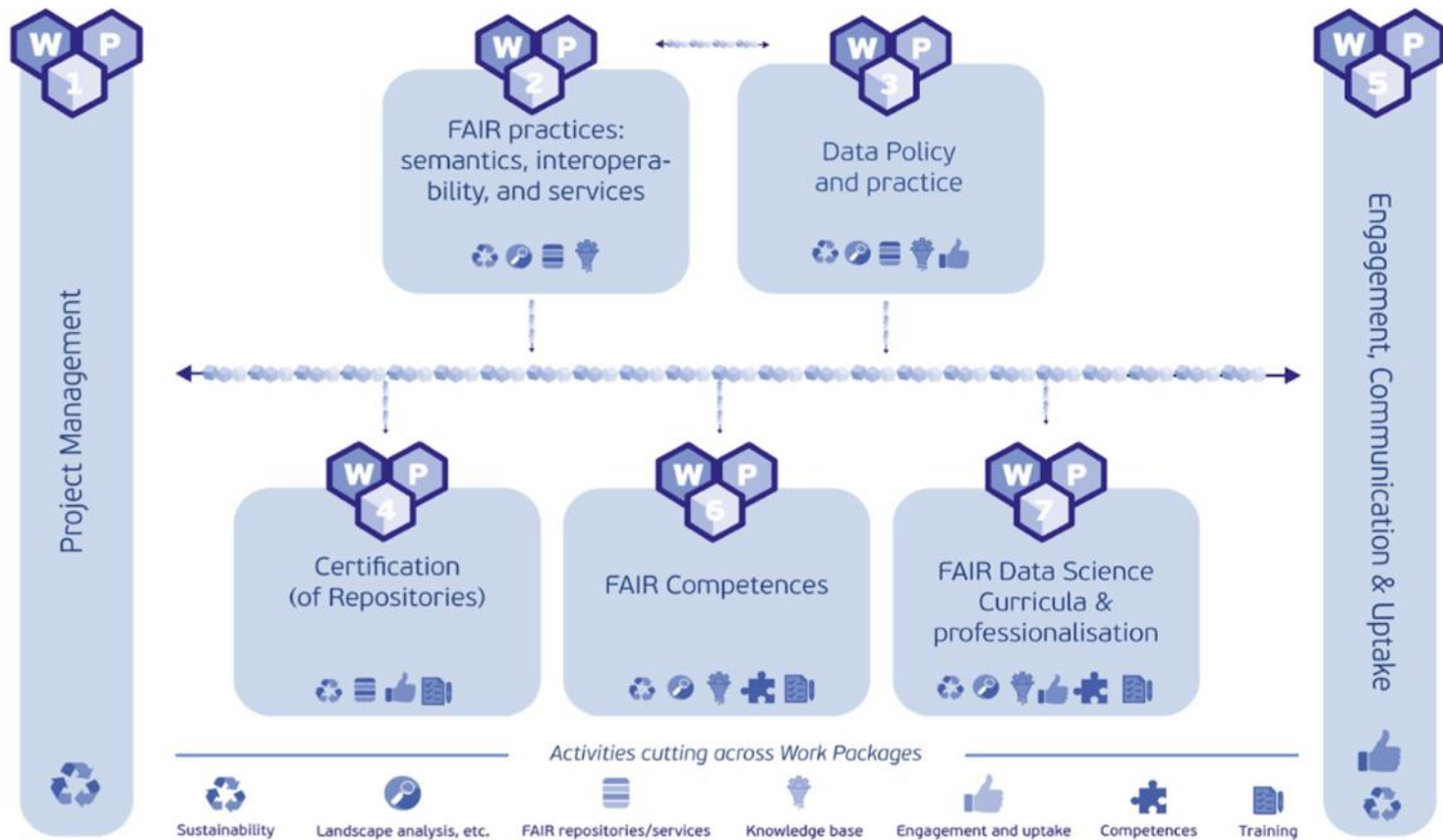
- ◆ FAIR data in European higher education
- ◆ Training for researchers in FAIR data science and its impact
- ◆ **FAIR competence centres tailored to different communities**
 - ◆ Three annual schools in core data skills for researchers
 - ◆ Five instructor training (train-the-trainer) events
- ◆ **FAIR competence framework for higher education**
 - ◆ Three annual FAIR data education stakeholder workshops
- ◆ **FAIR competences adoption handbook for universities**
 - ◆ Three workshops on integrating FAIR data competences
 - ◆ Case studies on good practices in FAIR competences education

MAIN OUTPUTS

March 2019 - February 2022



Work Packages



Support for Repositories

All repositories can improve their practices and become more **FAIR-enabling**.

Examples of support areas we are working on:

- Trustworthy repository certification support
- Improving the findability of repositories
- How and when to make use of tools like F-UJI and FAIR-Aware

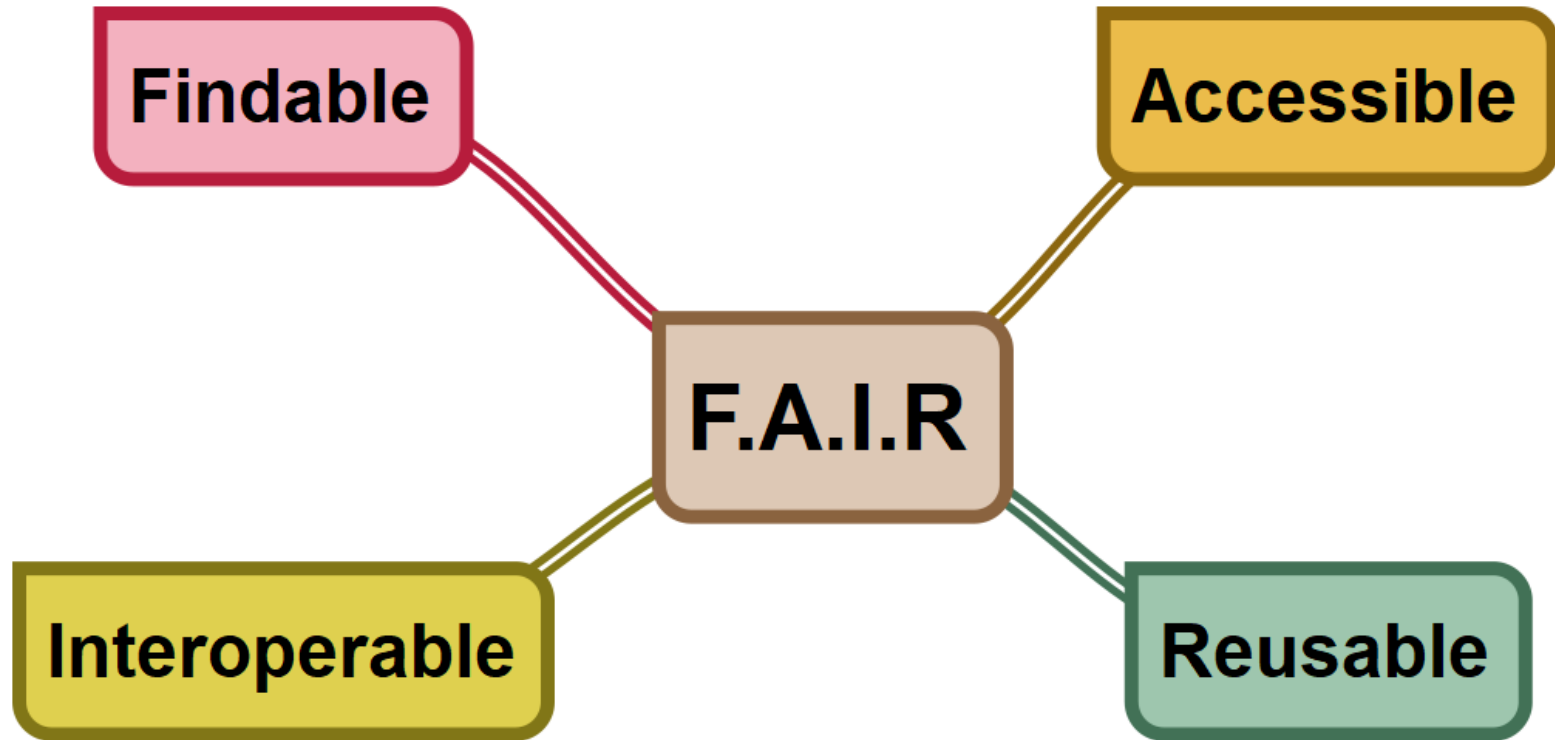


FAIRsFAIR's Transition Support
Programme for Repositories

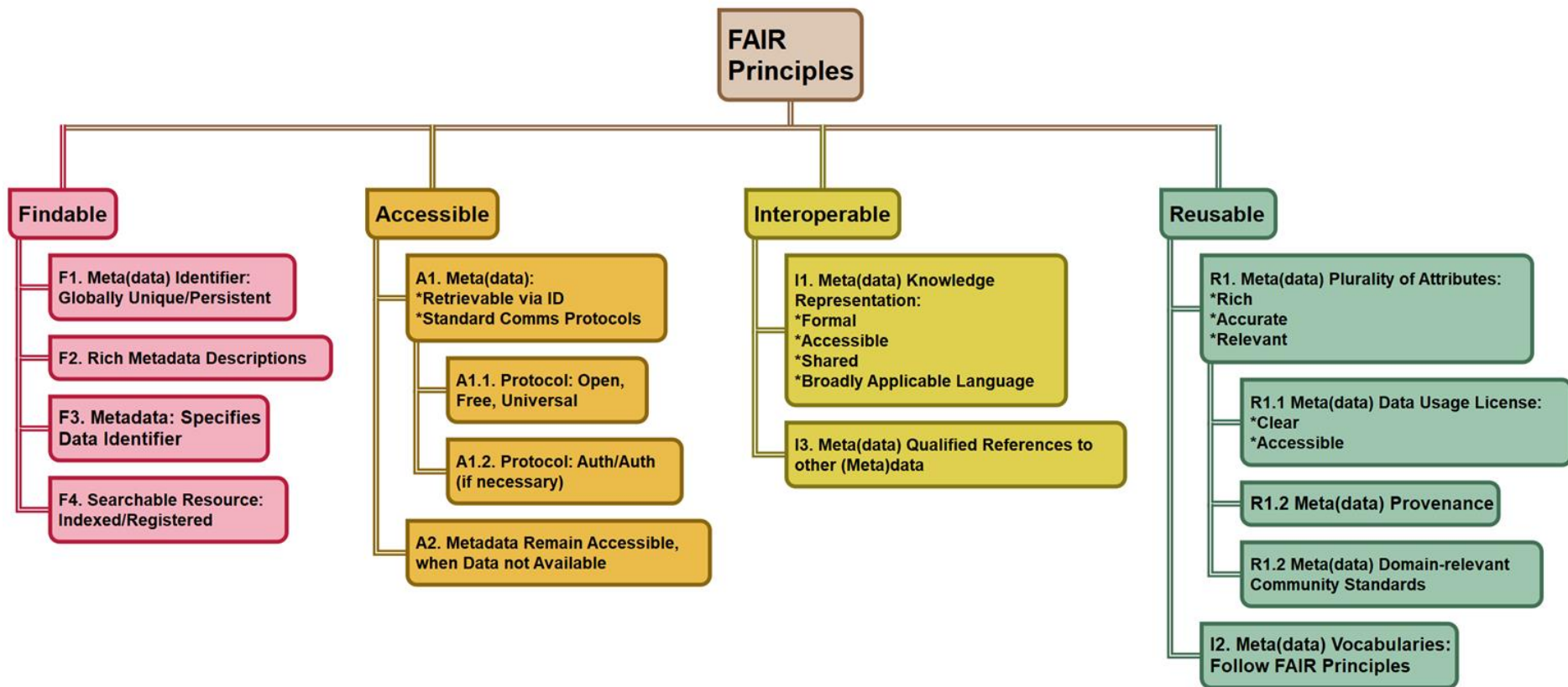


D3.5
[10.5281/zenodo.4058340](https://zenodo.org/record/4058340)

FAIR (meta)data



FAIR (meta)data Principles






FAIR

Data Object Assessment Metrics



Fifteen minimum viable metrics proposed by FAIRsFAIR for the systematic assessment of FAIR data objects. These metrics are based on indicators proposed by the [RDA FAIR Data Maturity Model Working Group](#), on the WDS/RDA Assessment of Data Fitness for Use [checklist](#), and on prior work conducted by project partners such as [FAIRdat](#) and [FAIREnough](#)

- Building on prior global indicators & initiatives
- Refine and revise metrics through iterations (v0.4)
- <https://fairsfair.eu/fairsfair-data-object-assessment-metrics-request-comments>


FAIRSFair
 Fostering Fair Data Practices in Europe

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[FAIR Landscape](#)
[Tools & Software](#)
[Events](#)
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[Outreach](#)

¹While FAIR principles may apply to any digital objects, we are concerned with the subset of digital objects: research data that are collected, measured, or created for purposes of scientific analysis.

✓	FsF-F1-01D - Data is assigned a globally unique identifier
✓	FsF-F1-02D - Data is assigned a persistent identifier
✓	FsF-F2-01M - Metadata includes descriptive core elements (creator, title, data identifier, publisher, publication date, summary and keywords) to support data findability
✓	FsF-F3-01M - Metadata includes the identifier of the data it describes
✓	FsF-F4-01M - Metadata is offered in such a way that it can be retrieved by machines
✓	FsF-A1-01M - Metadata contains access level and access conditions of the data
✓	FsF-A2-01M - Metadata remains available, even if the data is no longer available
✓	FsF-I1-01M - Metadata is represented using a formal knowledge representation language
✓	FsF-I1-02M - Metadata uses semantic resources
✓	FsF-I3-01M - Metadata includes links between the data and its related entities
✓	FsF-R1-01MD - Metadata specifies the content of the data
✓	FsF-R1.1-01M - Metadata includes license information under which data can be reused
✓	FsF-R1.2-01M - Metadata includes provenance information about data creation or generation
✓	FsF-R1.3-01M - Metadata follows a standard recommended by the target research community of the data
✓	FsF-R1.3-02D - Data is available in a file format recommended by the target research community

Please [login & comment below](#) citing in the subject line the Metric Identifier No. you are referring to – e.g. "FsF-R1.3-01M"

LEARN MORE

<https://www.fairsfair.eu/fairsfair-data-object-assessment-metrics-request-comments>



An online FAIRness assessment of published research datasets. The tool is based on [14 out of 15 core FAIR object assessment metrics](#) developed within the project.

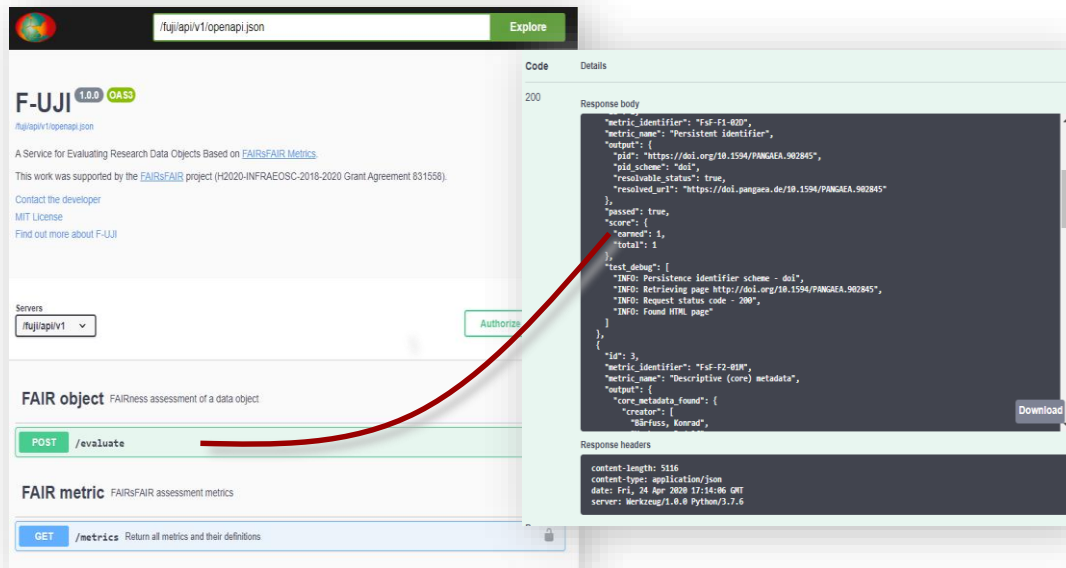
F-UJI adheres to existing web standards and [PID resolution services best practices](#) and utilises external registries and resources such as re3data and Datacite APIs, SPDX License List, RDA Metadata Standards Catalog, and Linked Open Vocabularies (LOV).

TRY THE TOOL

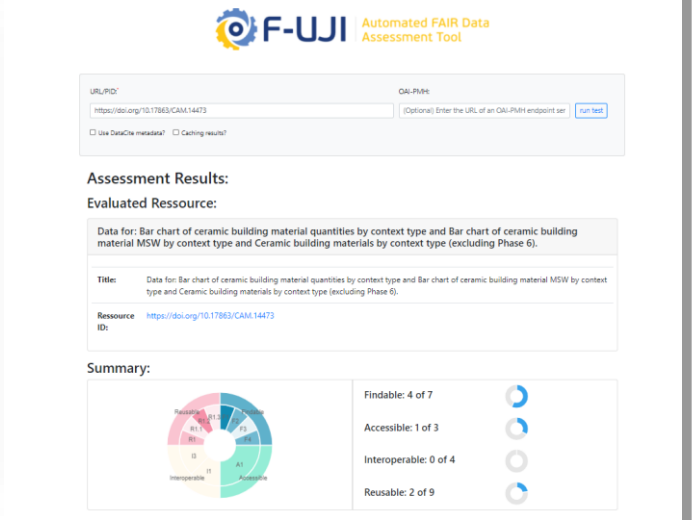
<https://www.fairsfair.eu/f-uji-automated-fair-data-assessment-tool>



Automated FAIR Data Assessment Tool



Machine actionable assessment tool



Web based graphical user interface

Alignment of FAIR data assessment initiatives

Avoid
duplicate efforts



Disciplinary practices



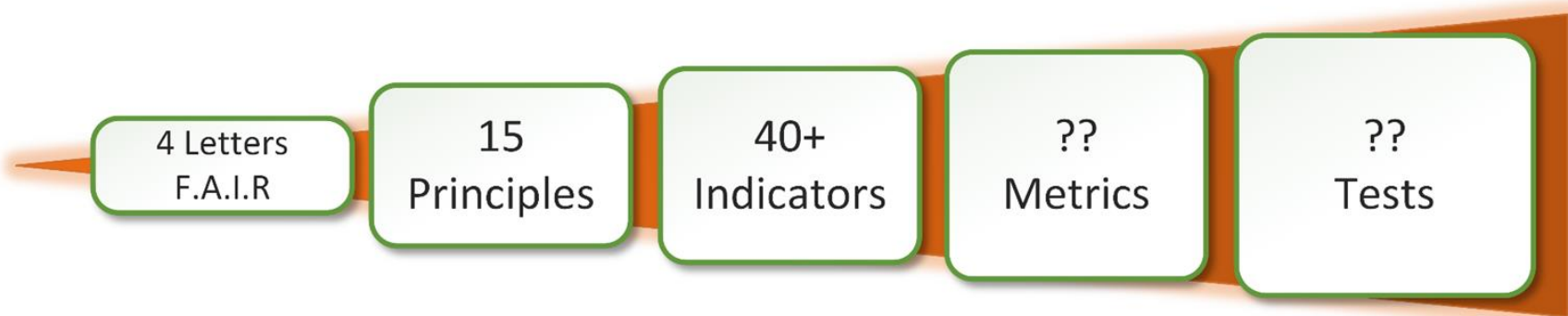
<https://www.fairsfair.eu/news/fair-assessment-and-certification-eosc-region-report-available>



Find synergies



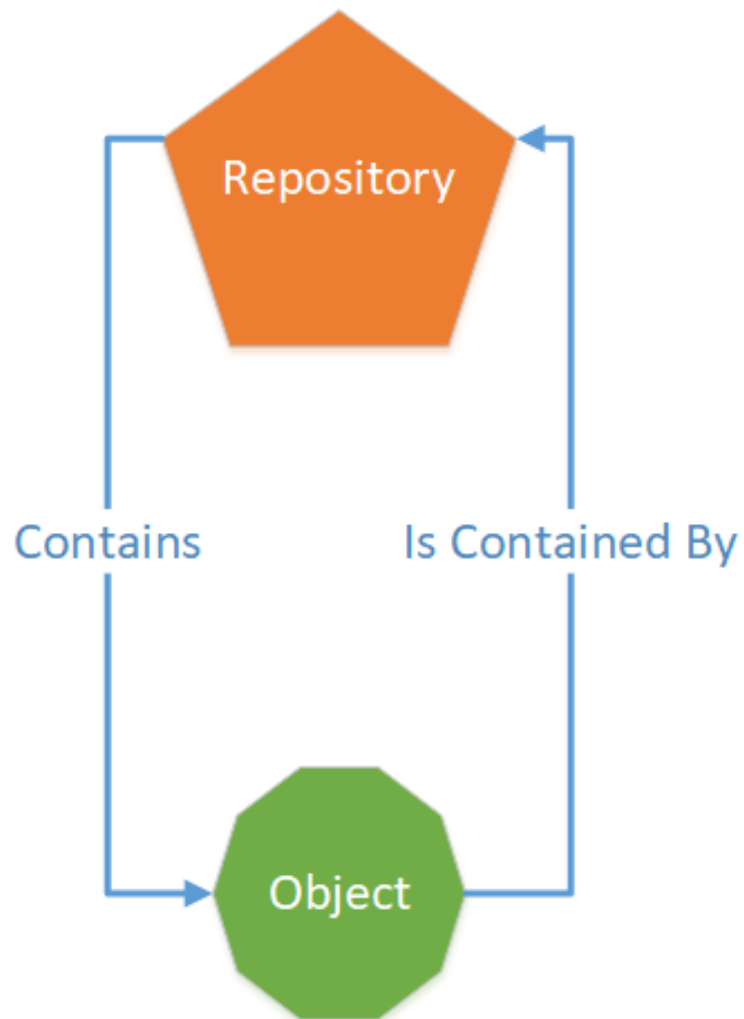
FAIR Principles, Indicators, Metrics and Tests



HLH-FAIR-AcronymPrinciplesIndicatorsMetricsTests_02_00.vsd

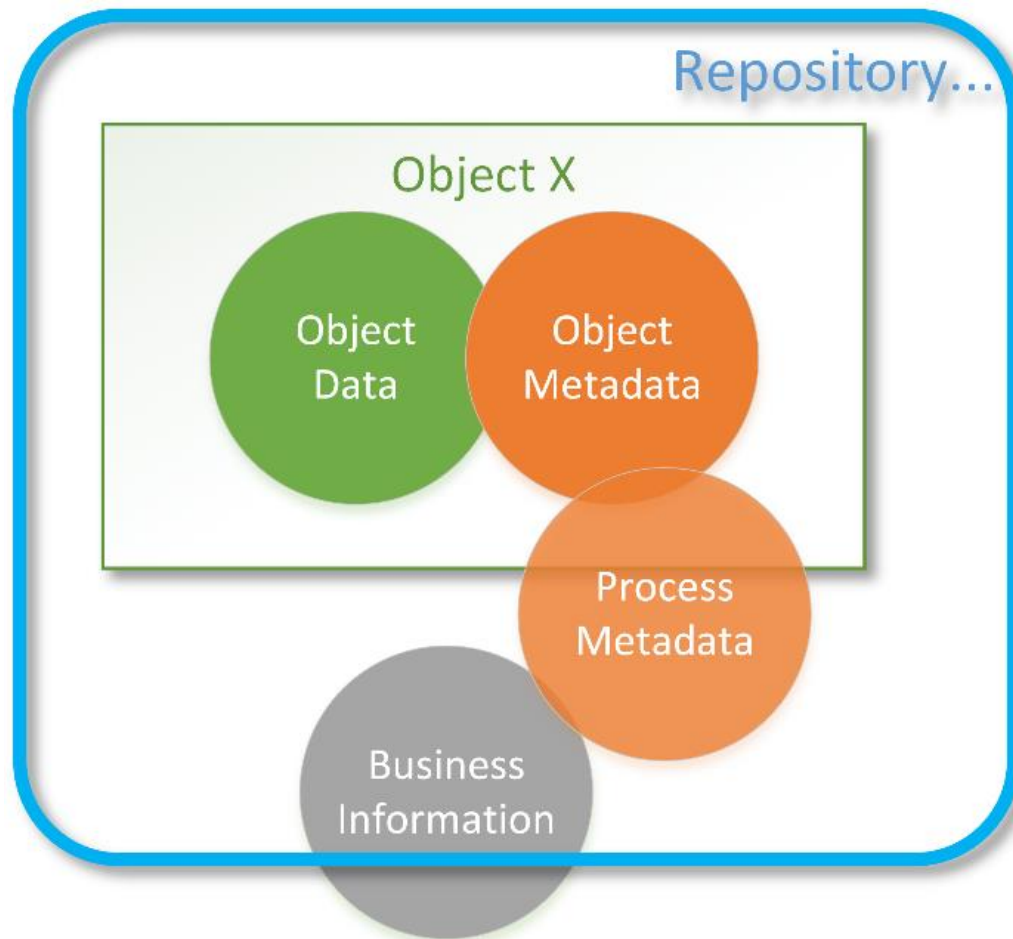


Context: Repositories and Objects

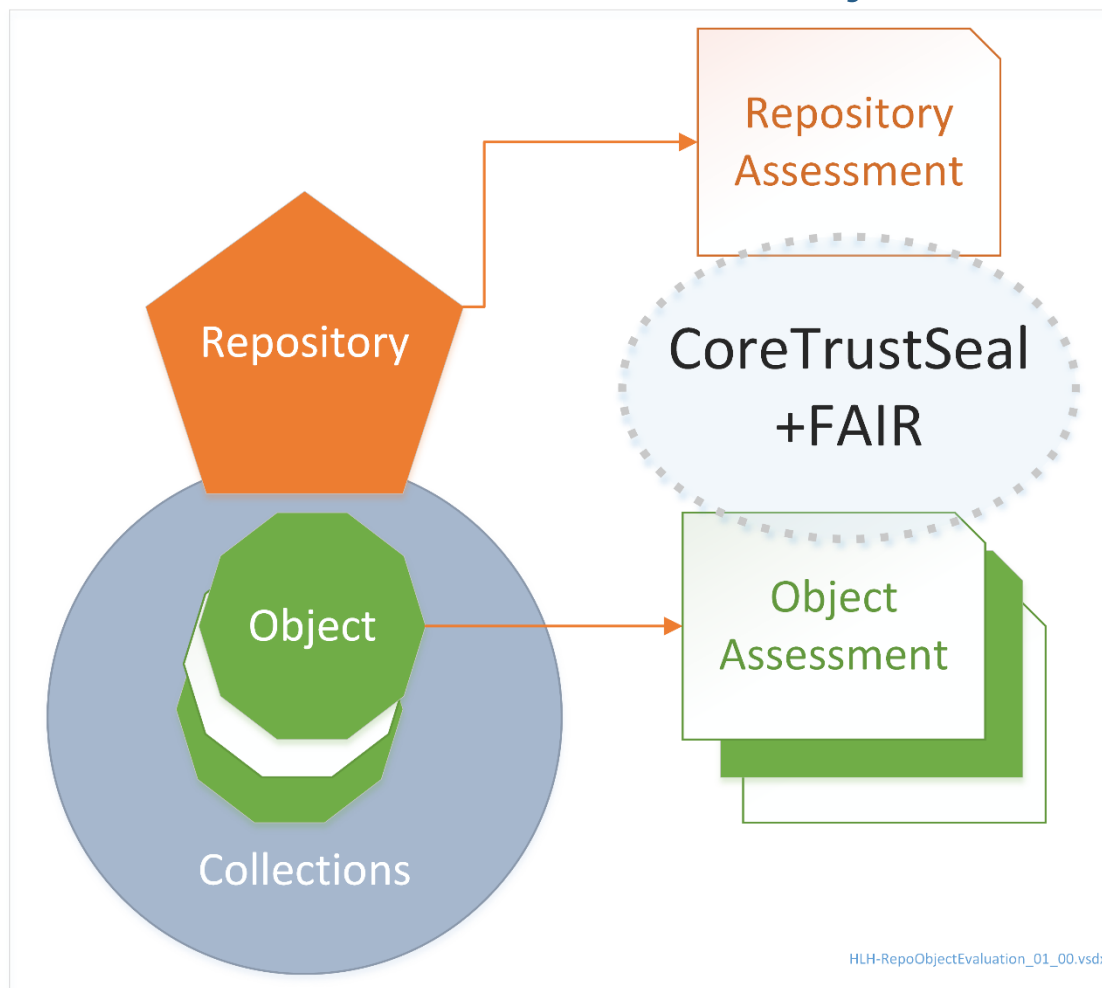


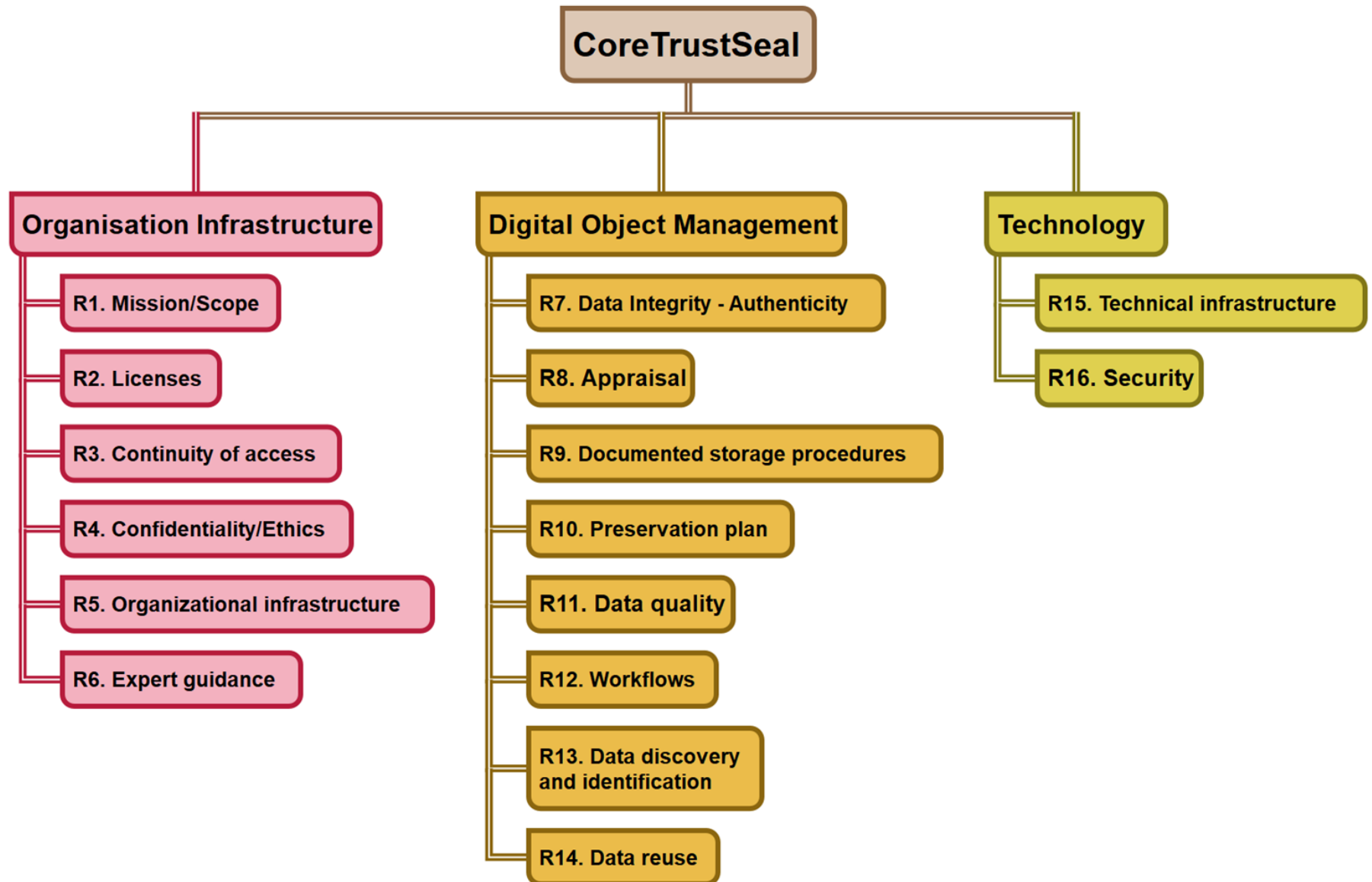
Repository ObjectMetadata A_00_01.vsdv

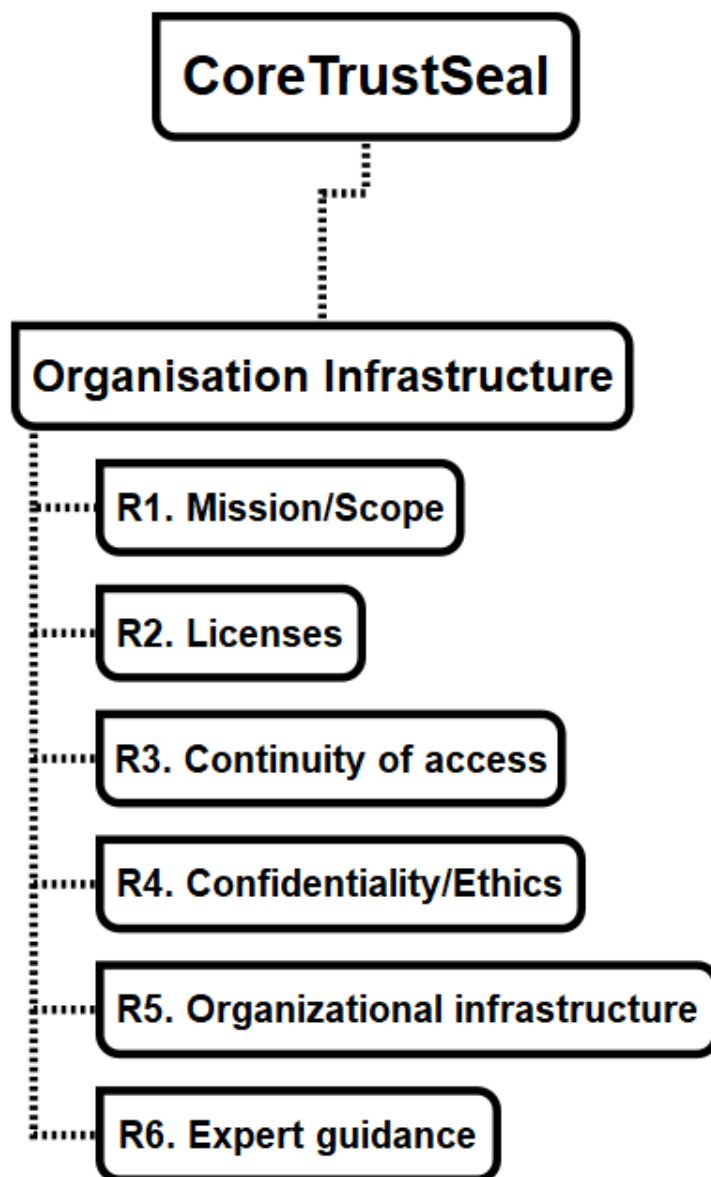
Objects (Data & Metadata) vs Repositories (Process & Business Information)

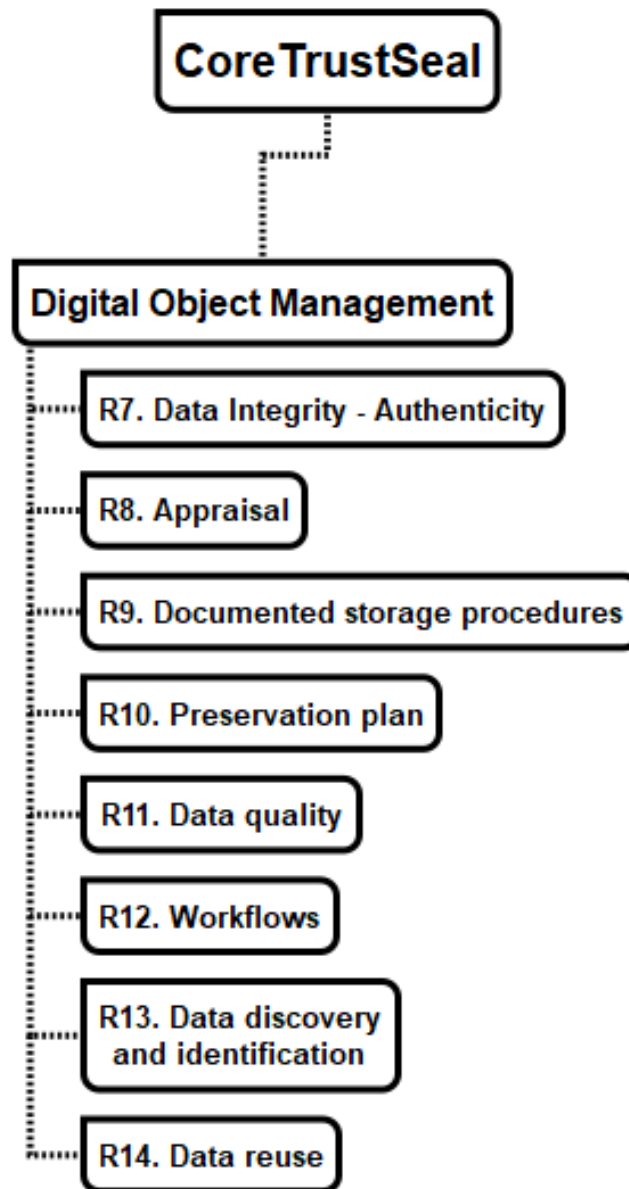


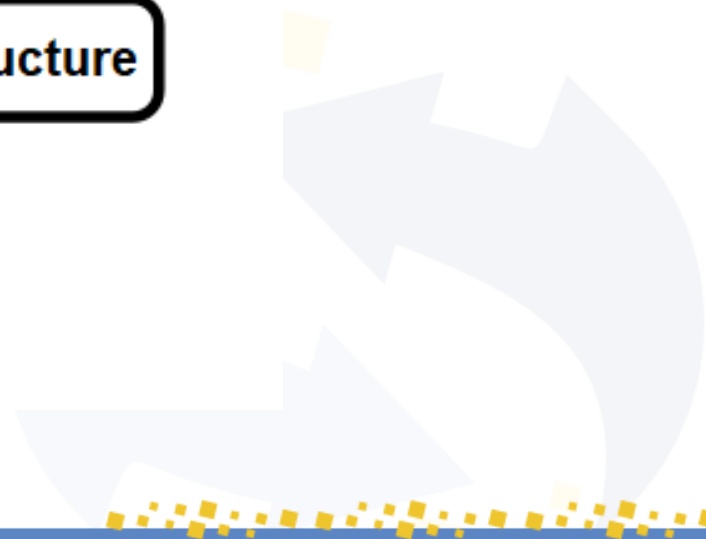
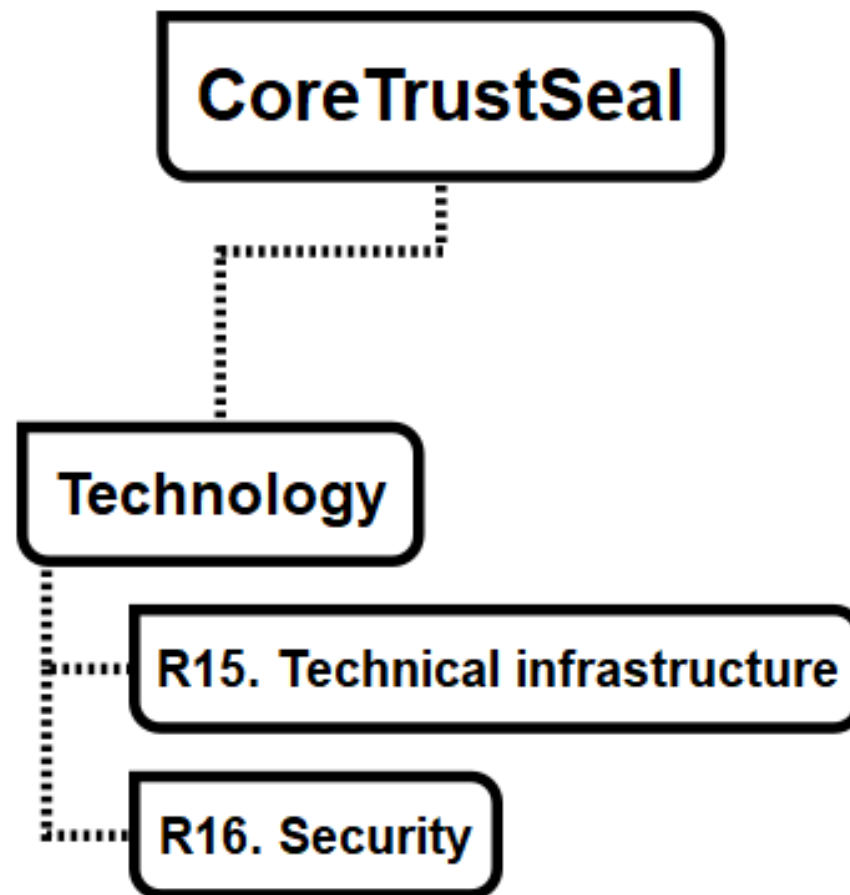
CoreTrustSeal+FAIR: Repositories as Context for Objects



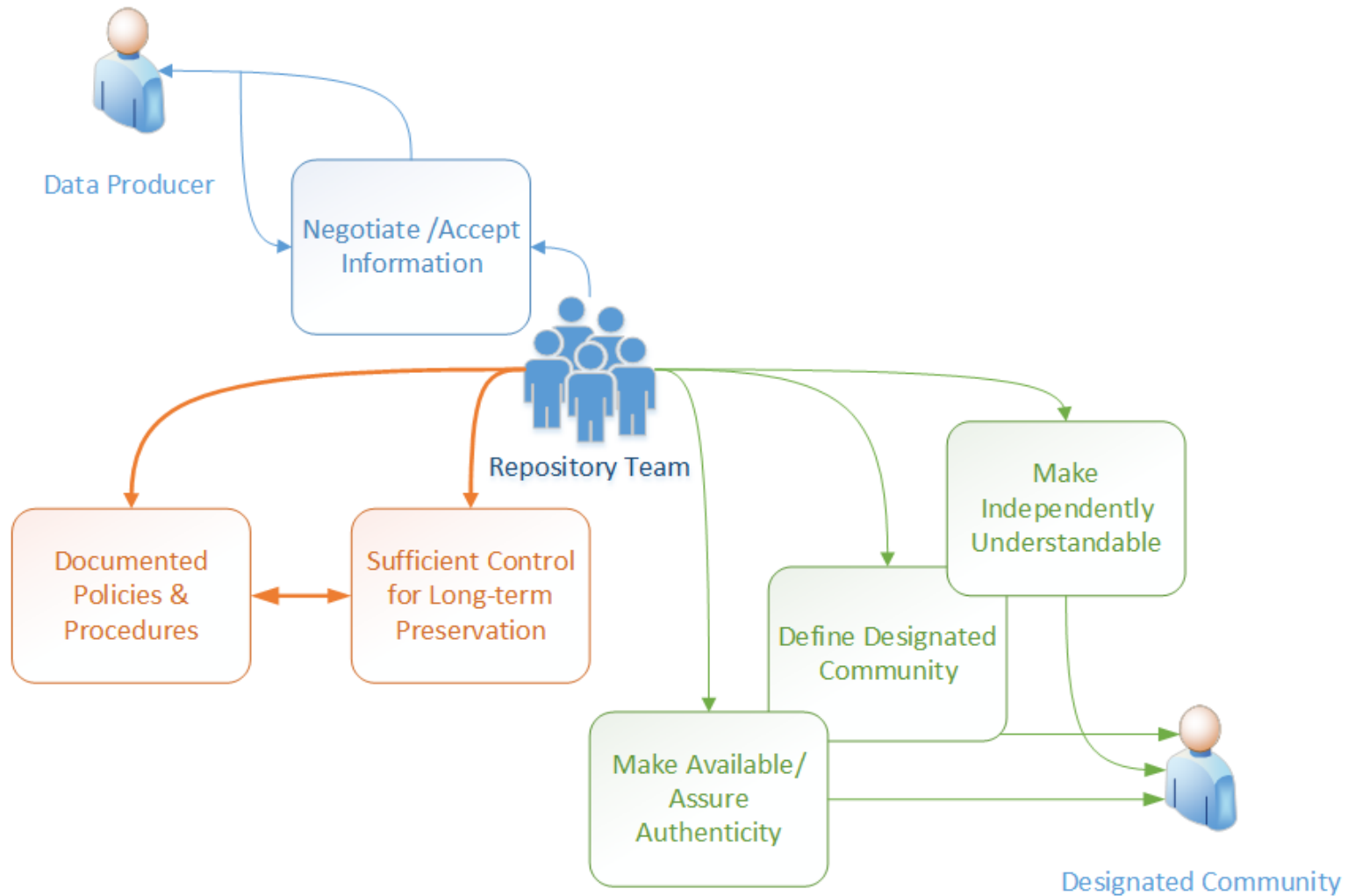




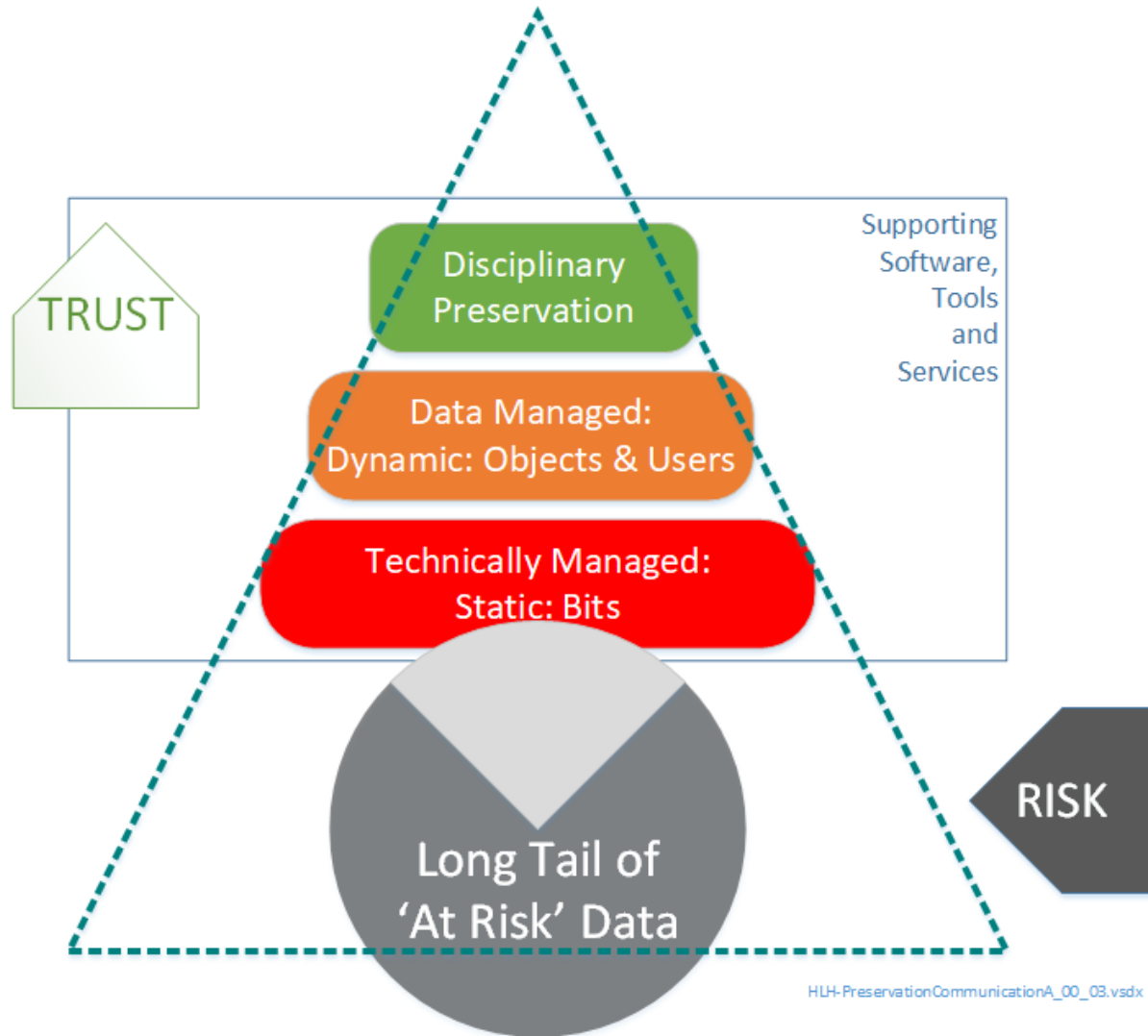


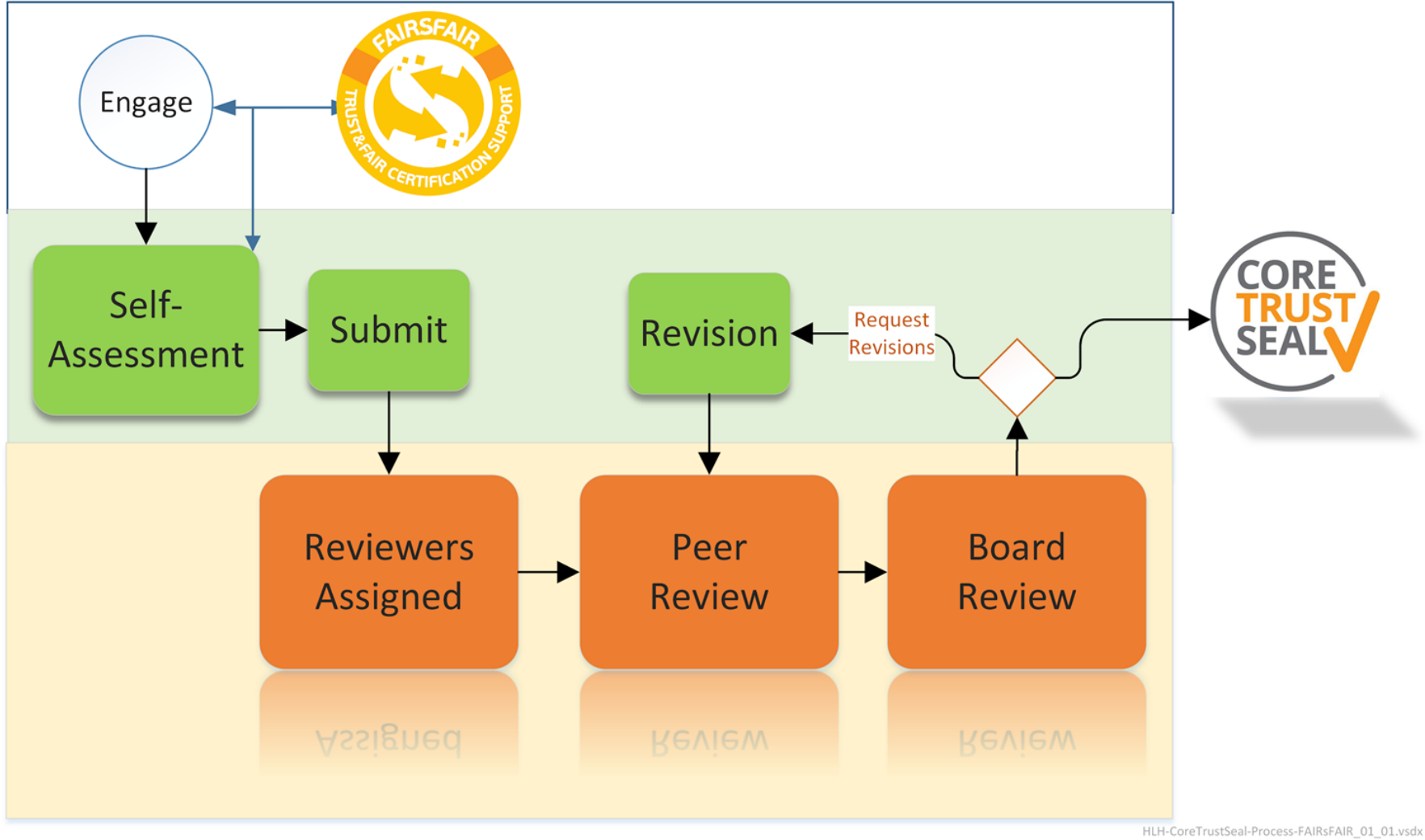


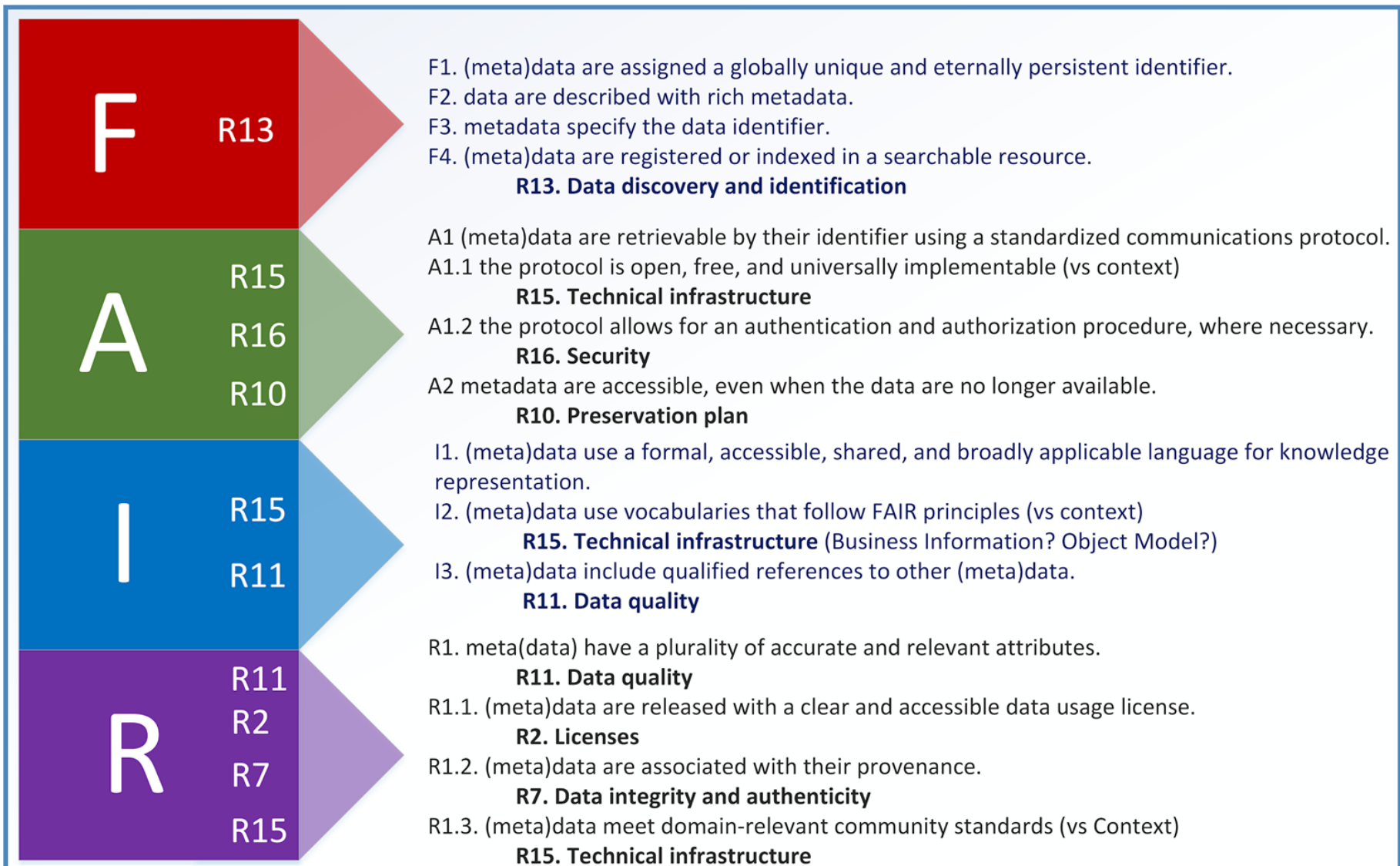
TDR Mandatory Responsibilities (OAIS)



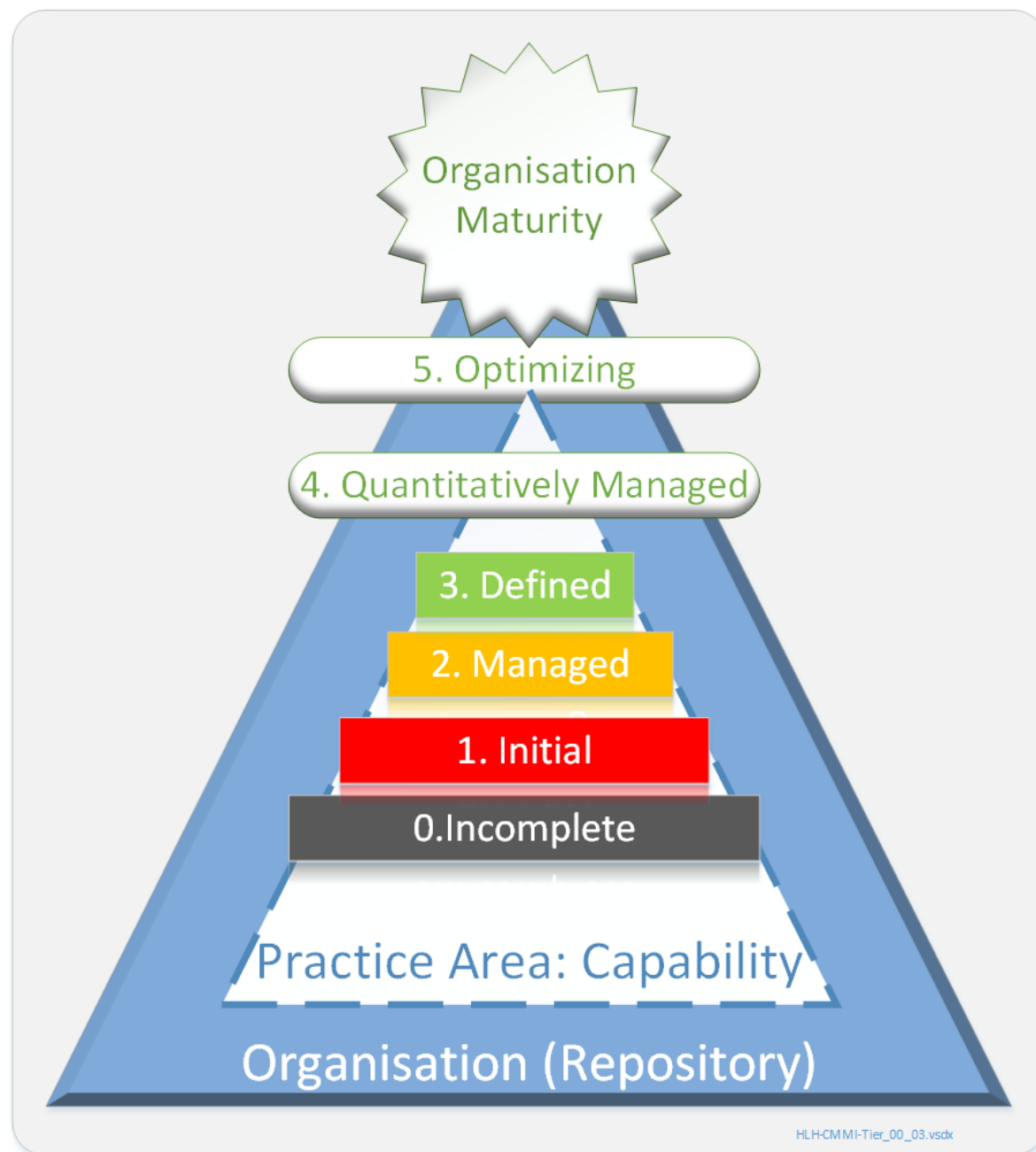
Storage>Curation>Preservation>



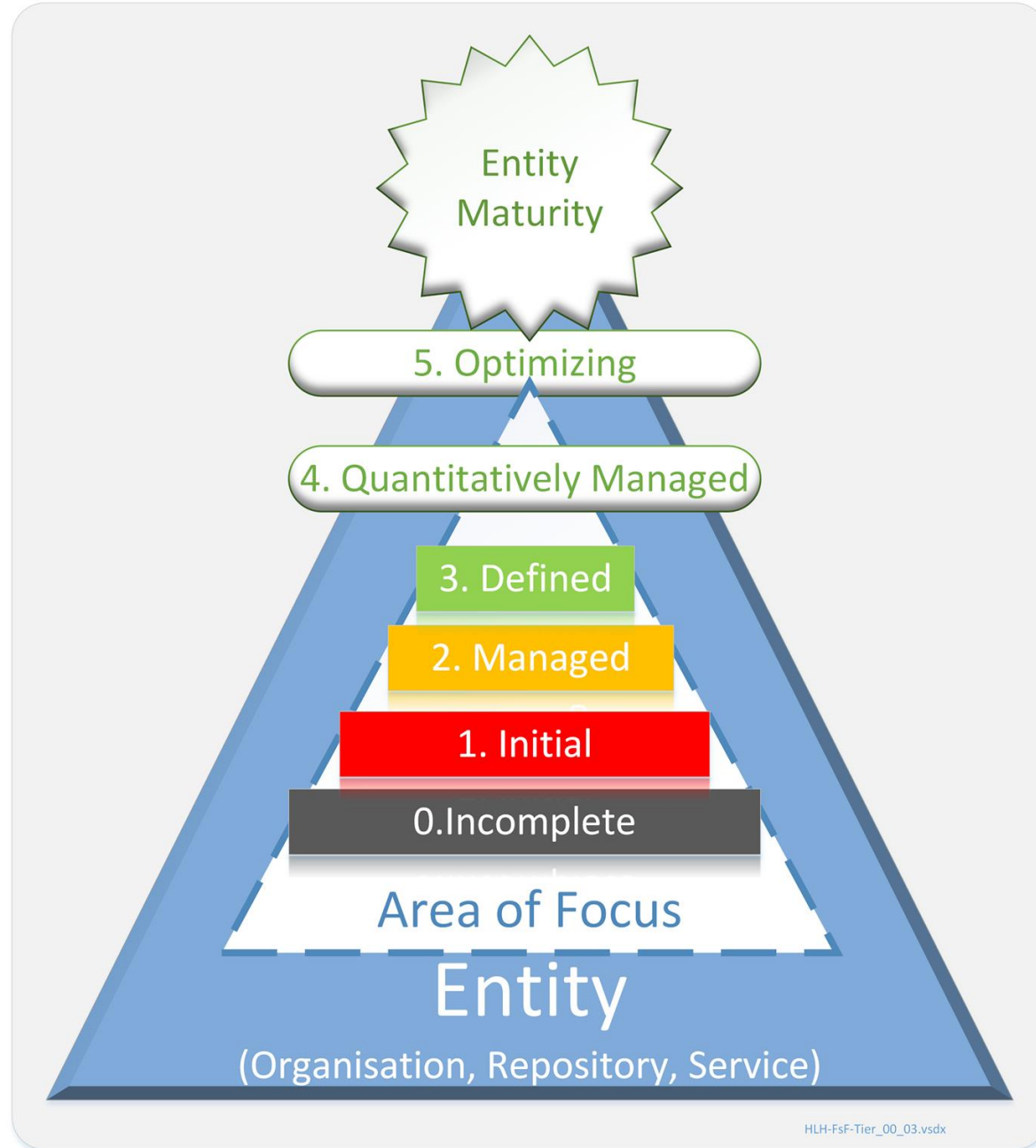




Capability/ Maturity (CMMI)



Capability/
Maturity
CoreTrustSeal+FAIR



- Integration
- Elaboration
- Extension

Integration



R01. Mission/Scope
R02. Licenses
R03. Continuity of access
R04. Confidentiality/Ethics
R05. Organizational infrastructure
R06. Expert guidance
R07. Data integrity and authenticity
R08. Appraisal
R09. Documented storage procedures
R10. Preservation plan
R11. Data quality
R12. Workflows
R13. Data discovery and identification
R14. Data reuse
R15. Technical infrastructure
R16. Security

Elaboration

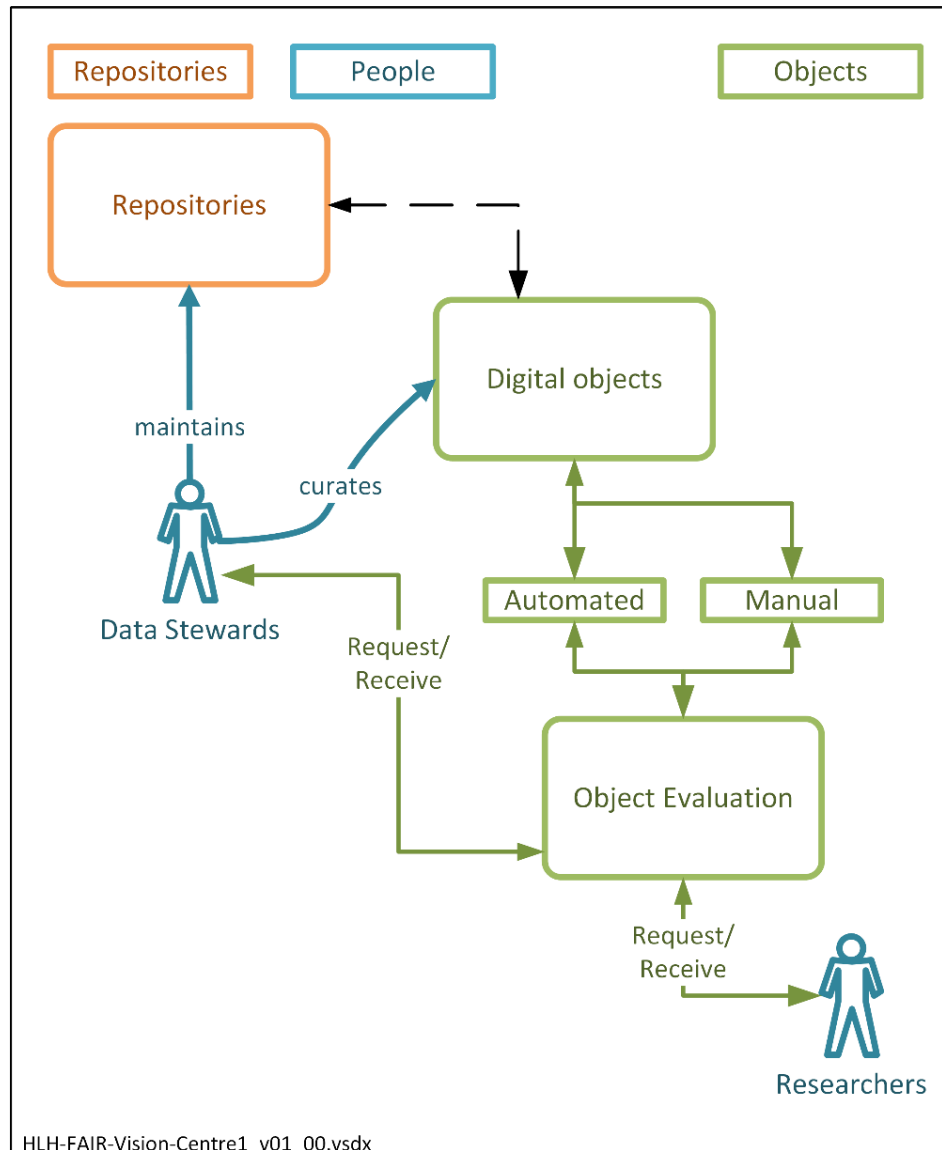


Extension

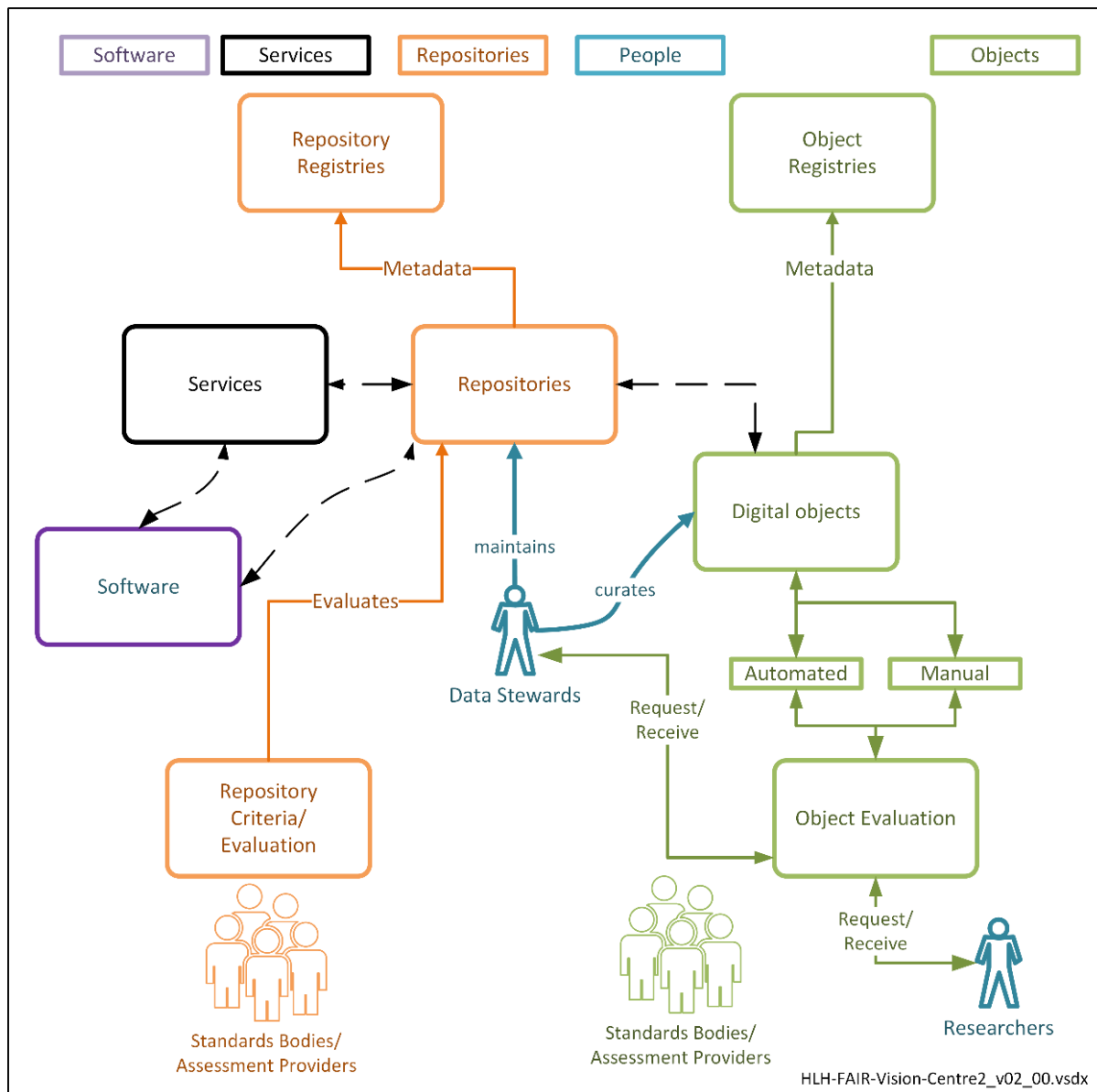


+RNN. CoreTrustSeal

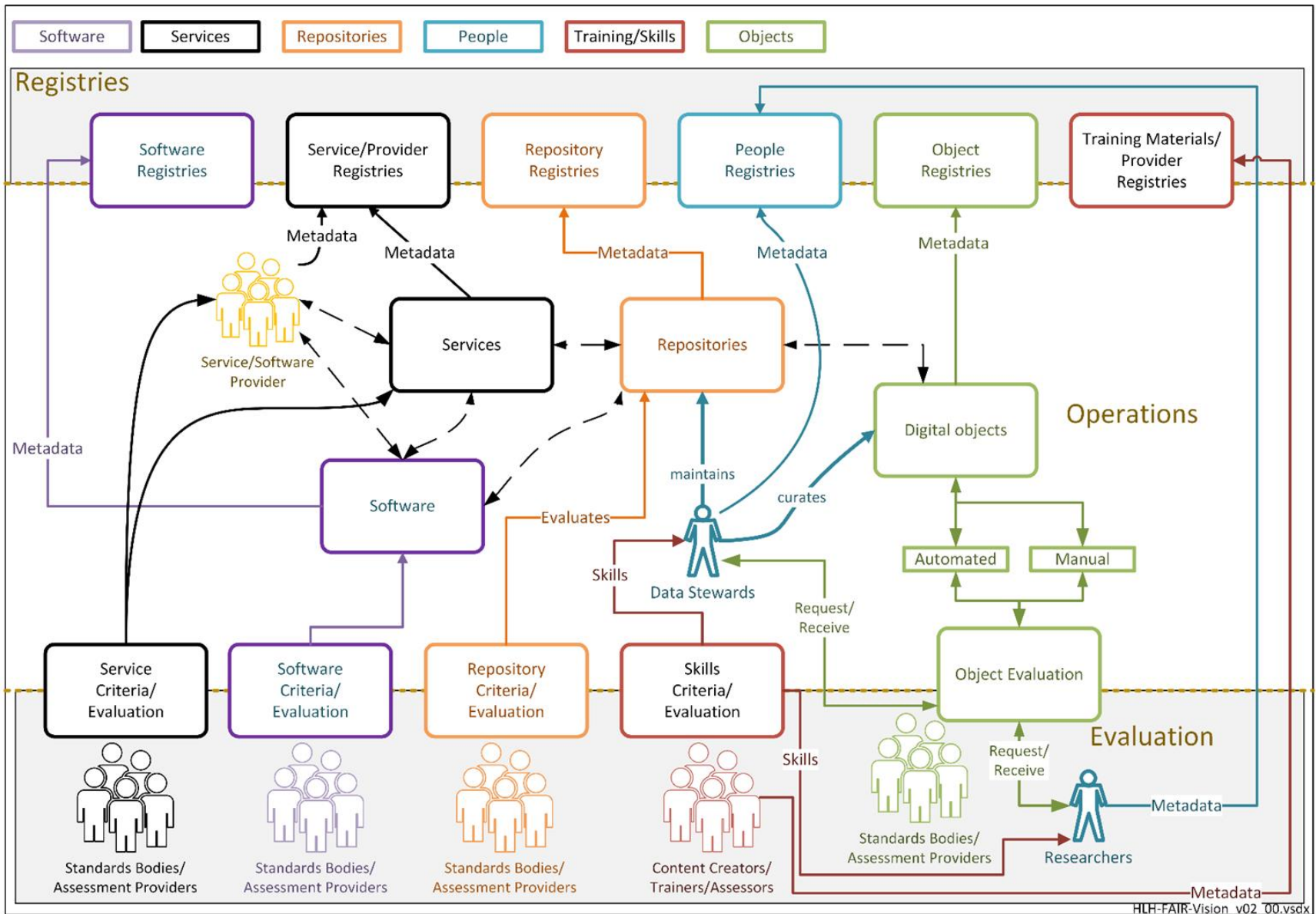
European Open Science Cloud (EOSC): Vision



European Open Science Cloud (EOSC): Vision



European Open Science Cloud (EOSC): Vision



HLH-FAIR-Vision_v02_00.vsd

Selected References

- **SSHOC**
 - SSHOC D8.2 Certification plan for SSHOC repositories <https://doi.org/10.5281/zenodo.3725868>
- **EOSC-Nordic**
 - Certification support seminar on FAIR data <https://www.eosc-nordic.eu/certification-support-seminar-on-fair-data/>
- **CESSDA**
 - CESSDA Working Groups <https://www.cessda.eu/About/Working-Groups>
 - Overview of Support Approaches <https://doi.org/10.5281/zenodo.4020399>
- **CoreTrustSeal**
 - Extended Guidance <https://doi.org/10.5281/zenodo.3632533>
 - Glossary <https://doi.org/10.5281/zenodo.3632563>
 - Conversational CoreTrustSeal <https://doi.org/10.5281/zenodo.4033966> (Unofficial)
- **FAIRsFAIR**
 - M4.2 Draft Maturity Model Based on Extensions and-or Additions to CoreTrustSeal Requirements <https://doi.org/10.5281/zenodo.4003598>
 - M4.5 Evaluation of Procedures and Processes of Certification Mechanisms Provided <https://doi.org/10.5281/zenodo.3738965>
 - FAIR Ecosystem Components: Vision <https://zenodo.org/record/3565428#.X7GPLGj7SUk>