

Economists Online as a building block of a VRE solution

OAI6 Conference, Geneva
18 June, 2009

Benoit PAUWELS - Université Libre de Bruxelles

Agenda

- NEEO project
 - Facts
 - Infrastructure
 - Economists Online portal
- EO Data model
 - extensibility
- Enrichment of publications in EO
 - metadata
 - datasets
- EO and OAI-ORE

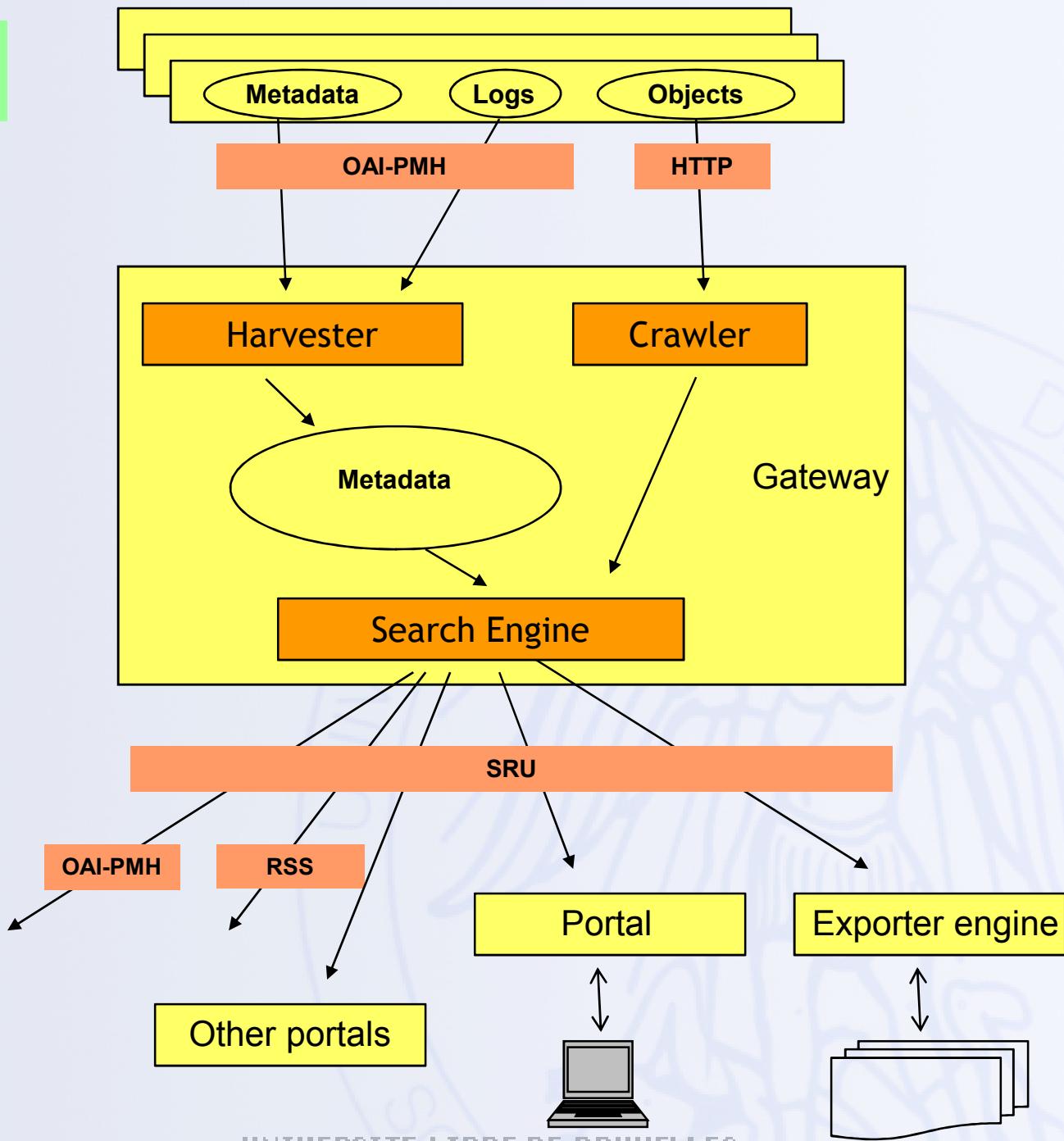
Acknowledgements

- Thomas Place - Universiteit van Tilburg
- Peter van Huisstede - Erasmus Universiteit Rotterdam
- Fred Vos - Universiteit van Tilburg

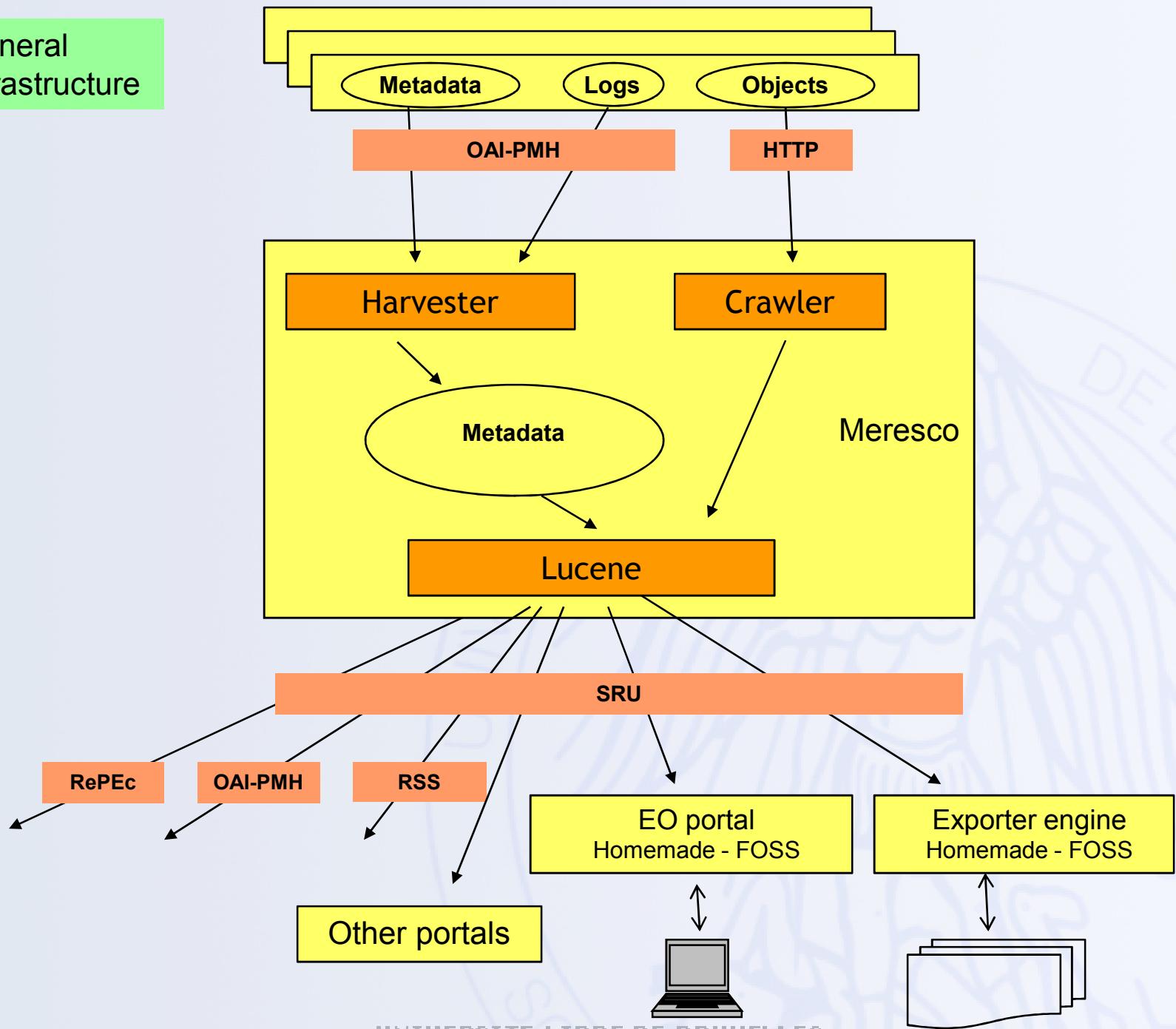
NEEO project - facts

- Key objectives
 - Improve usability and global visibility of economics research
 - Provide easier and open access to high-quality multilingual academic output of leading economics institutes and their researchers
 - Via a sustainable portal with aggregated and enhanced metadata enabling an infrastructure for new services
- Background
 - 18 partners (LSE, Oxford, Tilburg, Leuven, UCL, ...)
 - Initiated by Nereus - 23 academic institutions/libraries with strengths in economics
 - eContentPlus, €2m, 30 months (Sep 2007 - March 2010)

General infrastructure



General infrastructure



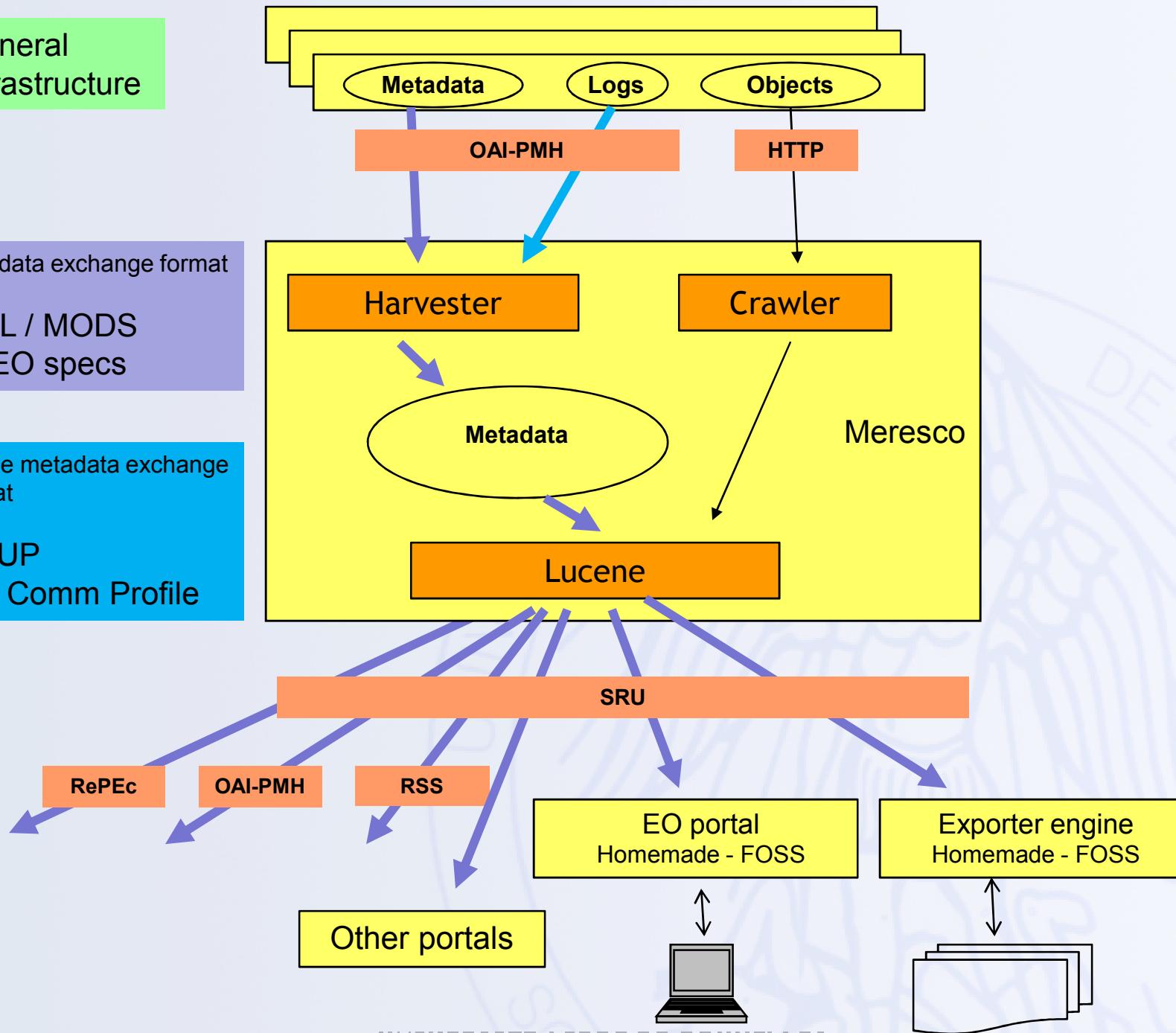
General infrastructure

Metadata exchange format

DIDL / MODS
NEEO specs

Usage metadata exchange format

SWUP
OAI Comm Profile



EO portal - main features

- EO Gateway
 - harvesting 20 institutional repositories + all RePEc archives
 - +/- 800.000 bibliographic references | +/- 650.000 publications available online | +/- 250.000 open access
 - Lucene indexing; Meresco FOSS (<http://www.cq2.nl>)
- EO portal
 - search & find, facets, sorting, links to OA full-text, download statistics, permalink, OpenURL
 - export: APA citations, RIS; complete publication lists for registered authors (PDF | RTF) ; Coins/Zotero
 - full text searching
 - every search = 1 RSS feed
 - MLIA: search query English, find also French publications
 - public launch 28 January 2010
- Open standards:
 - Information exchange: OAI-PMH, SRU, RSS, OpenURL
 - Metadata formats: MPEG-21/DIDL, MODS, DDI, COINS, ReDIF, RDF/FOAF, SWUP

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- use "" for exact expressions, e.g. "European Union"
- use OR, AND, NOT to combine terms, e.g. (growth OR sell) AND trade
- use * as a wildcard, e.g. econom* (to find economy, economist, etc.).

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Economists Online content is being combined with RePEc archives to provide a new information service to the economist.

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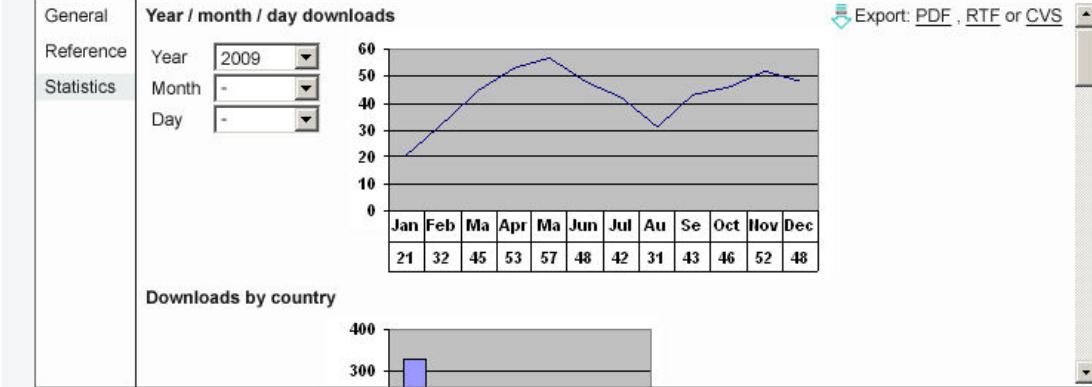
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DIDL[1]

Item[1]

Descriptor/Identifier (persistent identifier)

Descriptor/modified

Item[1..∞] (of type *descriptiveMetadata*)

Descriptor/type (« descriptiveMetadata »)

Descriptor/Identifier (persistent identifier)

Descriptor/modified

Component/Resource -- representation by value (XML)

Item[0..∞] (of type *objectFile*)

Descriptor/type (« objectFile »)

Descriptor/Identifier (persistent identifier)

Descriptor/modified

Component/Resource -- representation by ref. (URL)

Item[0..1] (of type *humanStartPage*)

Descriptor/type (« humanStartPage »)

Component/Resource -- representation by ref. (URL)

EO Data model

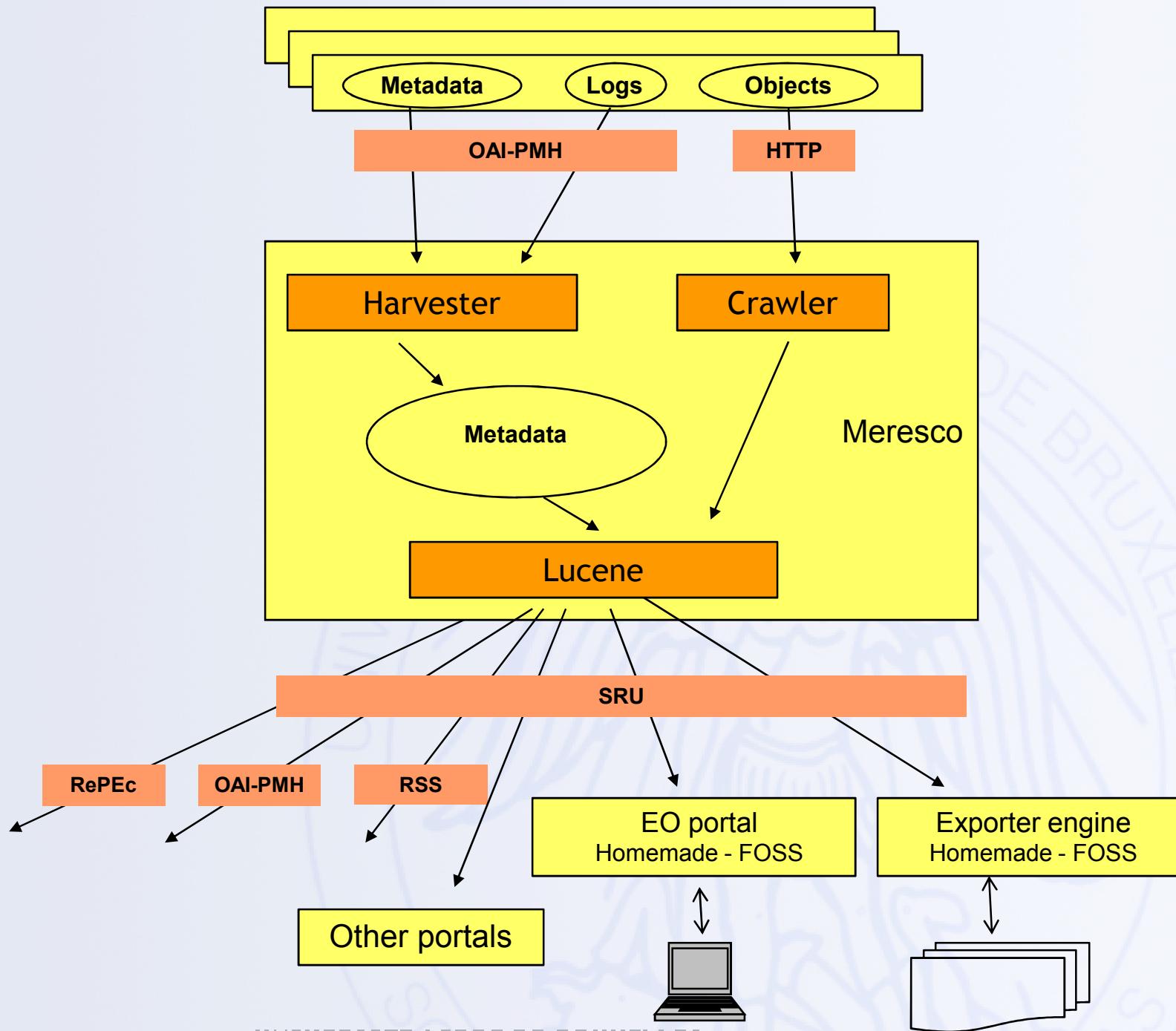
- Publication is described as a compound object
- Representation as an MPEG21/DIDL document according to NEEO application profile
- Aggregation of 3 types of components
 - *descriptiveMetadata* (MODS)
 - *objectFile*
 - *humanStartPage*

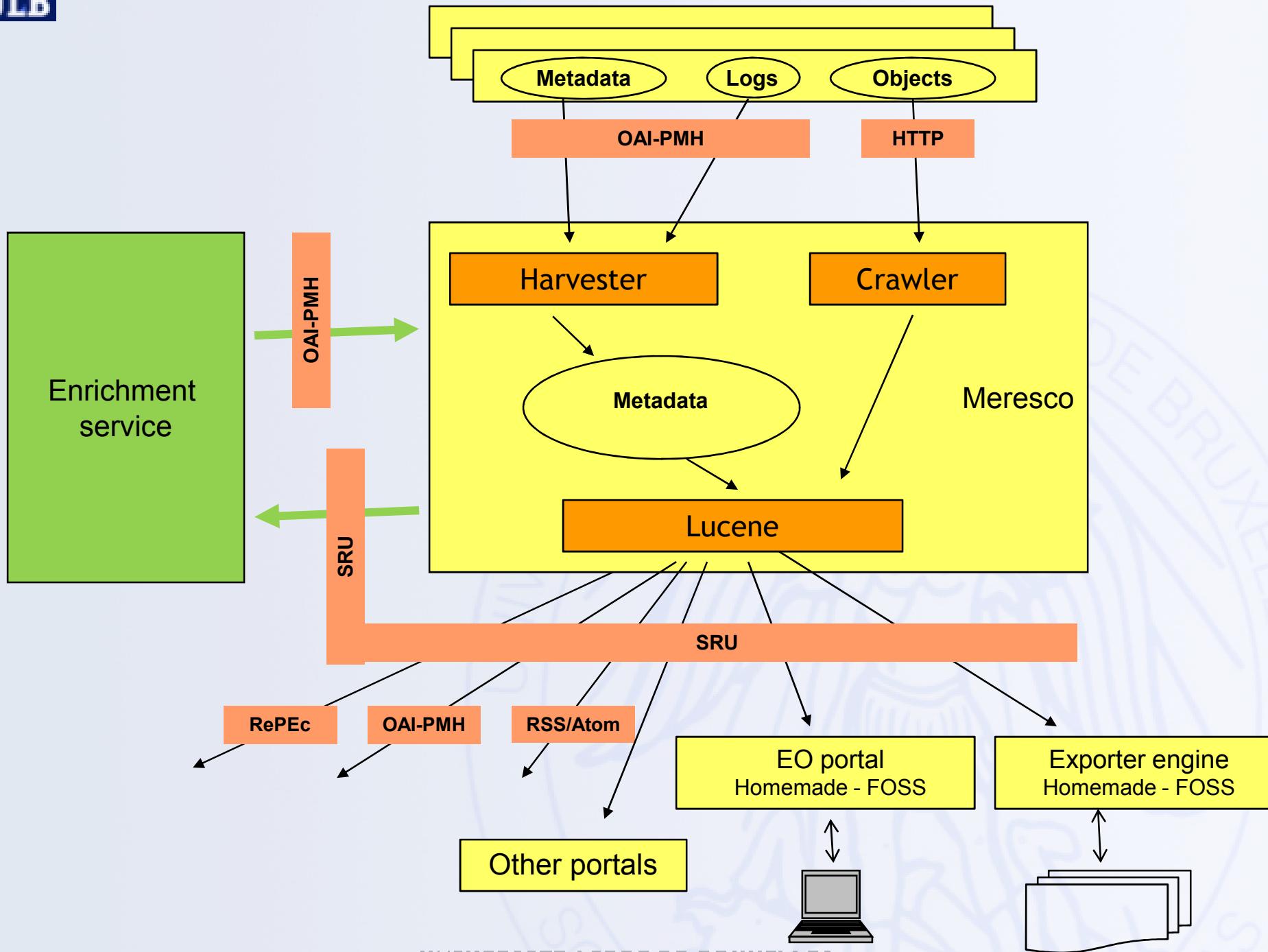
EO Data model

- Compound object
 - persistent identifier
 - modified date
- Each component
 - persistent identifier
 - modified date
 - type: URI
 - info:eu-repo/semantics/descriptiveMetadata
 - info:eu-repo/semantics/objectFile
 - info:eu-repo/semantics/humanStartPage

EO Data model

- “descriptiveMetadata” component
 - representation ‘by-value’
 - MODS v.3.2; NEEO application profile; Digital Author Identifier
- “objectFile” component
 - representation ‘by-ref’; object file at some network location
 - additional properties: version, accessRights, ...
- Extensibility
 - additional components: enrichment
 - vocabularies:
 - typing of components
 - properties of components
 - by-value / by-ref





Enrichment in EO

- Types of enrichment in EO
 - Automatically generated JEL codes
 - Automatically created reference lists
 - Generate text version of PDF object file
- Enrichment process in EO
 1. ES gets records to be enriched from EO, over SRU
 - Based on date of request for enrichment of certain type and version
 - Based on flag set in EO record
 2. ES creates enrichment record(s)
 3. ES makes enrichment records available to EO, over OAI-PMH
 4. EO harvests enrichment records from ES and integrates into original record
 5. EO reuses enrichment information in its services:
 - Full text searching
 - Index & present JEL and references through portal

Enrichment in EO

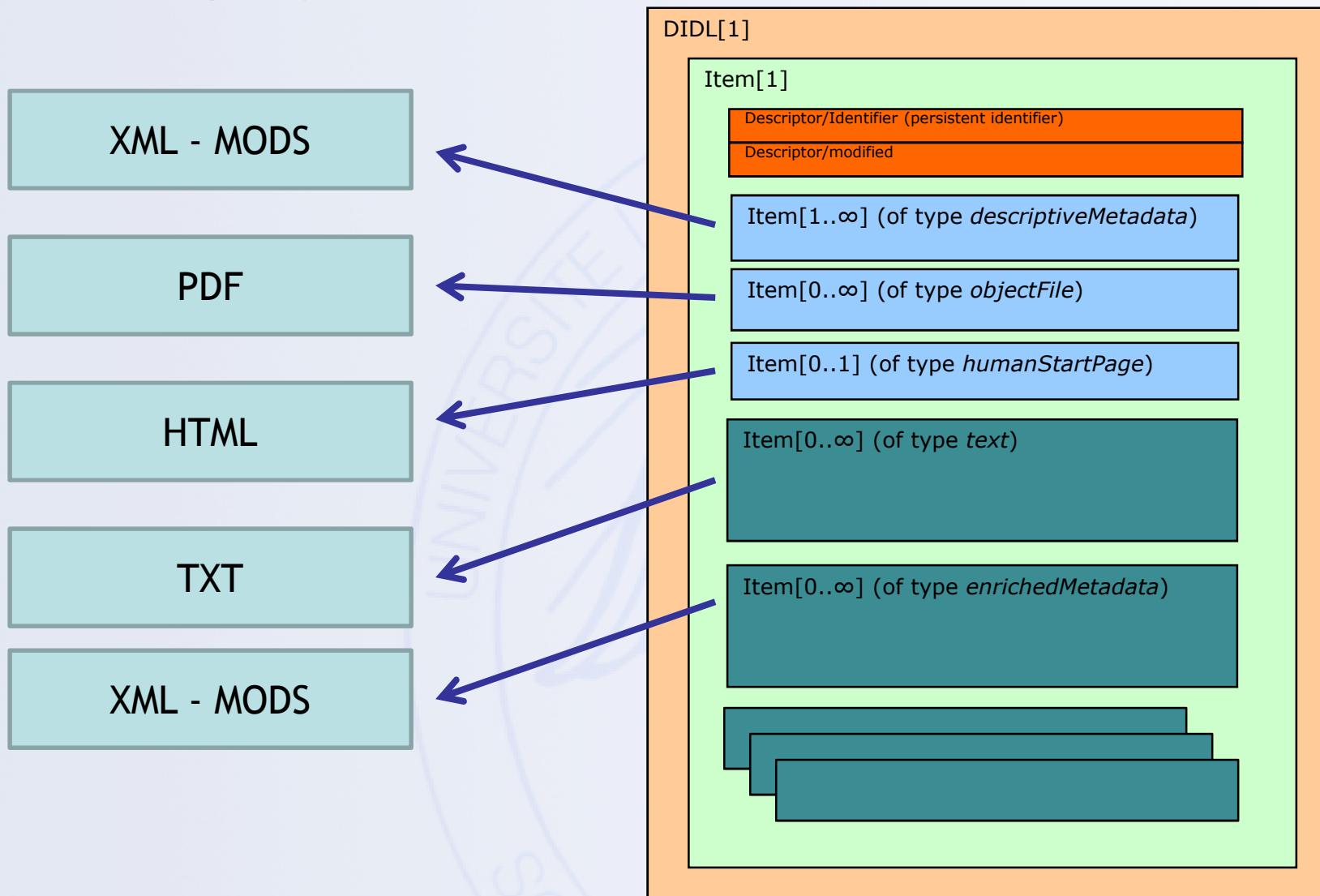
- Status of implementation

- Prototype on the way
 - Text: by-ref
 - JEL / references : by-value (XML/MODS)
- Unclear on vocabulary for typing of extra components
- Full specs in project deliverable

Enriched publication / by-ref

IR / ES

EO



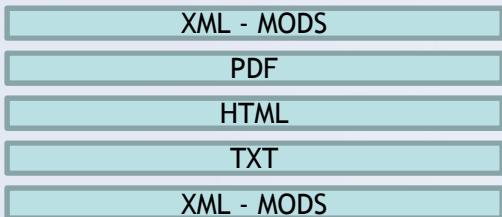
Other types of enrichment

- (Peer-) review of a publication
 - third party reviews publication and makes resulting text available as ...
 - compound object (metadata, object files, ...)
 - extra component in original compound object
- Datasets
 - compound object of
 - metadata : DDI
 - object files: SPSS, XLS, ...
 - software components
 - ...
 - extra component in original compound object
 - NEEO
 - prototype for enrichment of publications with datasets
 - Hosted Dataverse repository / DDI metadata
 - represent as DDI or DIDL ?

Enriched publication

IR / ES

EO



DIDL[1]

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Descriptor/Identifier (persistent identifier)

Descriptor/modified

Item[1..∞] (of type *descriptiveMetadata*)

Item[0..∞] (of type *objectFile*)

Item[0..1] (of type *humanStartPage*)

Item[0..∞] (of type *text*)

Item[0..∞] (of type *enrichedMetadata*)

Item[0..∞] (of type *review*)

Item[0..∞] (of type *dataset*)

Review

Descriptor/Identifier (persistent identifier)

Descriptor/modified

Item[1..∞] (of type *descriptiveMetadata*)

Item[0..∞] (of type *objectFile*)

Dataset

Descriptor/Identifier (persistent identifier)

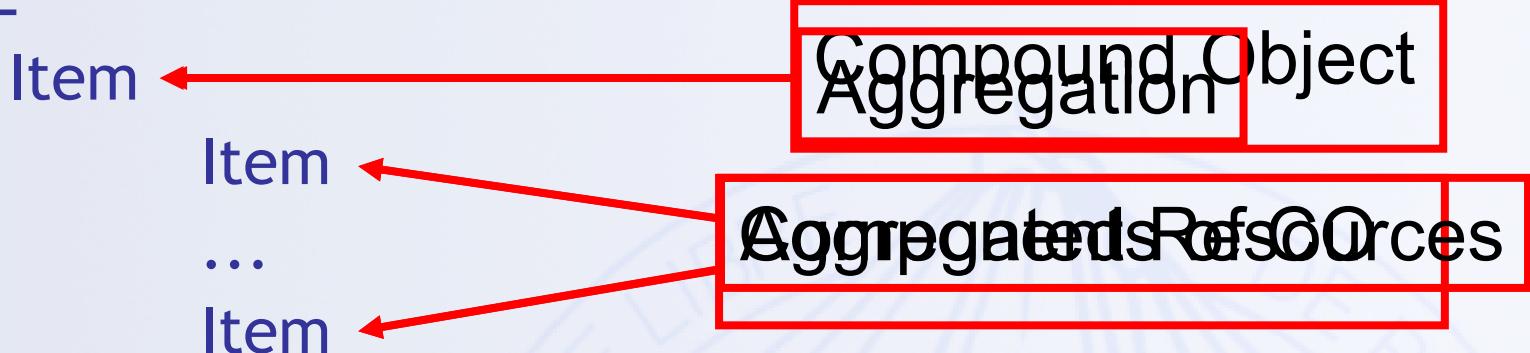
Descriptor/modified

Item[1..∞] (of type *descriptiveMetadata*)

Item[0..∞] (of type *objectFile*)

EO and OAI-ORE

- DIDL



- Enriched publication

- aggregation of resources
 - aggregation of aggregations

- Mapping DIDL to ORE ResourceMap (Atom)

- XSLT transformation : DIDL 2 Atom

- All NEEO compatible repositories are ORE-aware
- All EO publications and their components are URI addressable
- All EO publications can be used in ORE-based applications

Some references

- NEEO technical guidelines
 - [http://homepages.ulb.ac.be/~bpauwels/NEEO/WP5/WP5 Technical guidelines.pdf](http://homepages.ulb.ac.be/~bpauwels/NEEO/WP5/WP5_Technical_guidelines.pdf)
- NEEO DIDL application profile
 - <http://drcwww.uvt.nl/~place/neeo/didl%20application%20profile.doc>
- NEEO MODS application profile
 - <http://drcwww.uvt.nl/~place/neeo/Use%20of%20MODS%20for%20institutional%20repositories-version%201.1.doc>
- NEEO technical guidelines for the exchange of usage metadata / SWUP ContextObject
 - [http://homepages.ulb.ac.be/~bpauwels/NEEO/WP5/WP5 Usage metadata guidelines.pdf](http://homepages.ulb.ac.be/~bpauwels/NEEO/WP5/WP5_Usage_metadata_guidelines.pdf)
- Dataverse
 - <http://thedata.org/>
- NEEO project web site (deliverables, contacts, ...)
 - <http://www.neeoproject.eu/>