



# The Semantics of Cultural Heritage

Marco de Niet  
The DEN Foundation

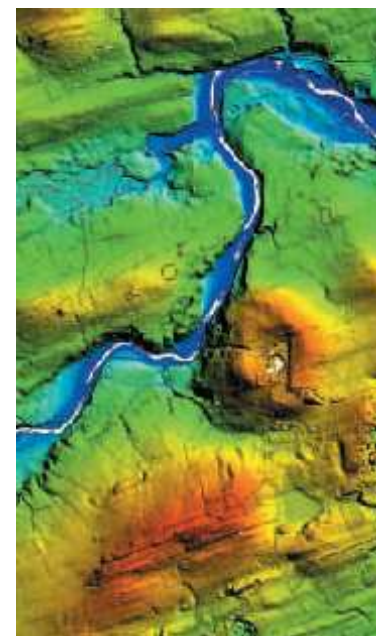
Seminar The Digital Future of Cultural Heritage  
Leuven, 21 January 2010

# Topics



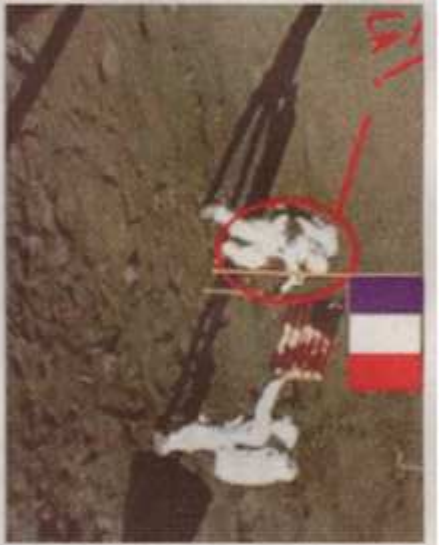
1. Heritage and semantics
2. Traditional ways to create semantic information about heritage
3. Current use of semantic information
4. Future developments

# Heritage = Observation



Nov 16 42. Kapittel. 11. Nov. 4. 100. Tot het beekennen  
eener jaarlycke vergadering voor bezwaantaken  
aanden Geerechten van de Conynge ingesetelt  
tot herziening van het reglement, nopens de  
Sinnelycke weeskliede bij de verichtingen  
des Willems, enz. — Bet liest fiast





# Sarkozy was erbij

ROTTERDAM. Hij was erbij, bij de val van de Muur. Dat claimde de Franse president Nicolas Sarkozy zondag op zijn Facebookpagina. Dat veroorzaakte onmiddellijk een trend op Internet: Sarkozy als Napoleon, bij de landing op de maan, bij het Jalta-akkoord, als Beatie, bij de moord op JFK, in de finale van de WK '98, bij de bevrijding van Orléans, bij de invasie van Normandië en op het Plein van de Hemelse Vrede.

# Semantics



Information is an essential ingredient of cultural heritage

- This information is multiformat: text, image, audio, video, oral, contextual, 3D, ...
- This information can be factual, precise, historically correct, outdated
- This information can also be personal, associative, satirical, multi-layered

# Digital Heritage



There are three faces to digital heritage:

## **'Digital only' heritage**

Digital by origin (e.g. electronic art, electronic archives, digital photographs).

## **Digitised heritage**

Cultural artefacts that (did) exist in the physical world and have been reproduced with digital technology (e.g. scans of paper objects, photographs of paintings, encoded audio or video, reconstructions of monuments).

## **Digital information about cultural heritage objects**

E.g. structured object descriptions, collection level descriptions, x-ray scans of paintings, knowledge organisation systems like thesauri and ontologies, etc.



## 2. Traditional ways to create semantic information about heritage

# Metadata



One can distinguish two types of metadata:

## 1. Metadata for management

- restricted information (price, insurance value)
- technical metadata (material, format)
- structural metadata (components)
- preservation metadata (actions needed)

## 2. Metadata for use by third parties

- content, derived from heritage object
- context


[Home](#) | [About](#) | [Search](#) | [Results](#) | [Previous searches](#) | [MyFolder](#) | [Blank order form](#)
[Add to My folder](#)
[Catalogue/authority record errors?](#) Use our [Error Report Form](#)

## Full Record

**Format options:** [Standard format](#) [Summary](#) [MARC tags](#)
**Record 8 out of 157**
[← Previous record](#)
[Next record →](#)

|                         |                                                                                                                                                                                            |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>System number</b>    | 013895929                                                                                                                                                                                  |
| <b>Title</b>            | <ul style="list-style-type: none"> <li>• <a href="#">The Banbury Herald, Oxford Times &amp; Midland Counties Advertiser, 1868 imperfect.</a></li> </ul>                                    |
| <b>General note</b>     | <ul style="list-style-type: none"> <li>• <a href="#">England — Oxfordshire — Banbury.</a></li> </ul>                                                                                       |
| <b>Added Place name</b> | <ul style="list-style-type: none"> <li>• <a href="#">Banbury Herald, Agricultural Journal, and Advertising Chronicle no.1-155 (10 Jan. 1861-24 Dec. 1863)</a></li> </ul>                   |
| <b>Continues</b>        | <ul style="list-style-type: none"> <li>• <a href="#">Continues: The Banbury Herald, Agricultural Journal, and Advertising Chronicle. - no.1-155 (10 Jan. 1861-24 Dec. 1863)</a></li> </ul> |
| <b>Related item</b>     | <ul style="list-style-type: none"> <li>• <a href="#">Newspaper Library: no.252-339 (27 June 1867-27 Feb. 1869)</a></li> </ul>                                                              |
| <b>Holdings note</b>    | <ul style="list-style-type: none"> <li>• <a href="#">Year 1869</a></li> </ul>                                                                                                              |
| <b>Serial holdings</b>  | <ul style="list-style-type: none"> <li>• <a href="#">Year 1868</a></li> </ul>                                                                                                              |
| <b>Serial holdings</b>  | <ul style="list-style-type: none"> <li>• <a href="#">Year 1867</a></li> </ul>                                                                                                              |
| <b>Serial holdings</b>  | <ul style="list-style-type: none"> <li>• <a href="#">1867 EW M26696 NPL Request</a></li> </ul>                                                                                             |
| <b>Shelfmark</b>        | <ul style="list-style-type: none"> <li>• <a href="#">1867; Unfit for use EW 889 [1867] NPL Request</a></li> </ul>                                                                          |
| <b>Shelfmark</b>        | <ul style="list-style-type: none"> <li>• <a href="#">1868 EW 972 [1868] NPL Request</a></li> </ul>                                                                                         |
| <b>Shelfmark</b>        | <ul style="list-style-type: none"> <li>• <a href="#">1869; Unfit for use EW 1619 [1869] NPL Request</a></li> </ul>                                                                         |
| <b>Shelfmark</b>        | <ul style="list-style-type: none"> <li>• <a href="#">1868 EW M26696 NPL Request</a></li> </ul>                                                                                             |
| <b>Shelfmark</b>        | <ul style="list-style-type: none"> <li>• <a href="#">1869 EW M26696 NPL Request</a></li> </ul>                                                                                             |

[← Previous record](#)
[Next record →](#)




## Cephalus and Procris

 Read this page

Cephalus and Procris

N



 [Extra large view of the image](#)

This enormous tapestry, measuring around three-and-a-half by five metres, was one of a series of wall hangings featuring stories of the goddess Diana. Ensembles of depictions of Diana were given as wedding presents on many occasions. Here Diana is portrayed with her entourage in the foreground. In the background scenes from the story of Cephalus and Procris are shown - the actual subject of the design. It is a story that Ovid related in his 'Metamorphoses'.

[Next](#)

**Title**  
Cephalus and Procris

**Year**  
c. 1610

**Artist**  
Frans Solenning (Tapestry weaver)

**Technique**  
Tapestry, wool and silk on wool chain

**Dimensions**  
345 x 520 cm

**Object number**  
BK.195A.69-B



't Stad  
is van  
iedereen.

[loket](#)

[sitemap](#) [zoek](#) [contact](#)

## Archievenoverzicht

## Archiefkenmerken

Archiven van de stad Antwerpen

### Beschrijving

BE SA 44032

Bestuur van de stad

### titel

Interne werking van de stad

### datering

Publieke taken

### beschrijvingsniveau

Gemeenten voor hun aanbechting bij of fusie met A

### actor

Archiven van stedelijke VZWs, Intercommunales e

### actor

Gemeentelijk Autonoom Havenbedrijf Antwerpen

### Inventarisnummers

Modern Archief. Planarchief

Indien een winkelkarretje verschijnt, kan u daar op klikken om het archiefdocument te reserveren of aan te vragen.

Private archieven

### Inventarisnummer

Bedrijven en verenigingen

### Beschikbaarheid

Advocaten

### Omvang

Bank- en verzekeringswezen

### Medium

Bouw en immobiliën

Buurt- en beroepsverenigingen

Caritatieve verenigingen

Cultuur, sport en recreatie

Bijartclub Wit-Rood

Borghoutse Kunstkring, brochure voor de r

Borghoutse Kunstkring, brochure voor de r

| Inventarisnummer | Beschikbaarheid | Omvang | Medium |
|------------------|-----------------|--------|--------|
| BA # 1024        | Beschikbaar.    |        |        |

© 2009 FelixArchief - [Dudelaesuwennui 29](#), 2000 Antwerpen - open van dinsdag tot en met vrijdag van 8.30 tot 16.30 uur, archiefstukken opvragen tot 15.30 uur

tel: +32 (0)3 338 94 11 - fax: +32 (0)3 338 94 10 ] - [contact](#): [stadsarchief@stad.antwerpen.be](mailto:stadsarchief@stad.antwerpen.be)

Find: eu

[Next](#)

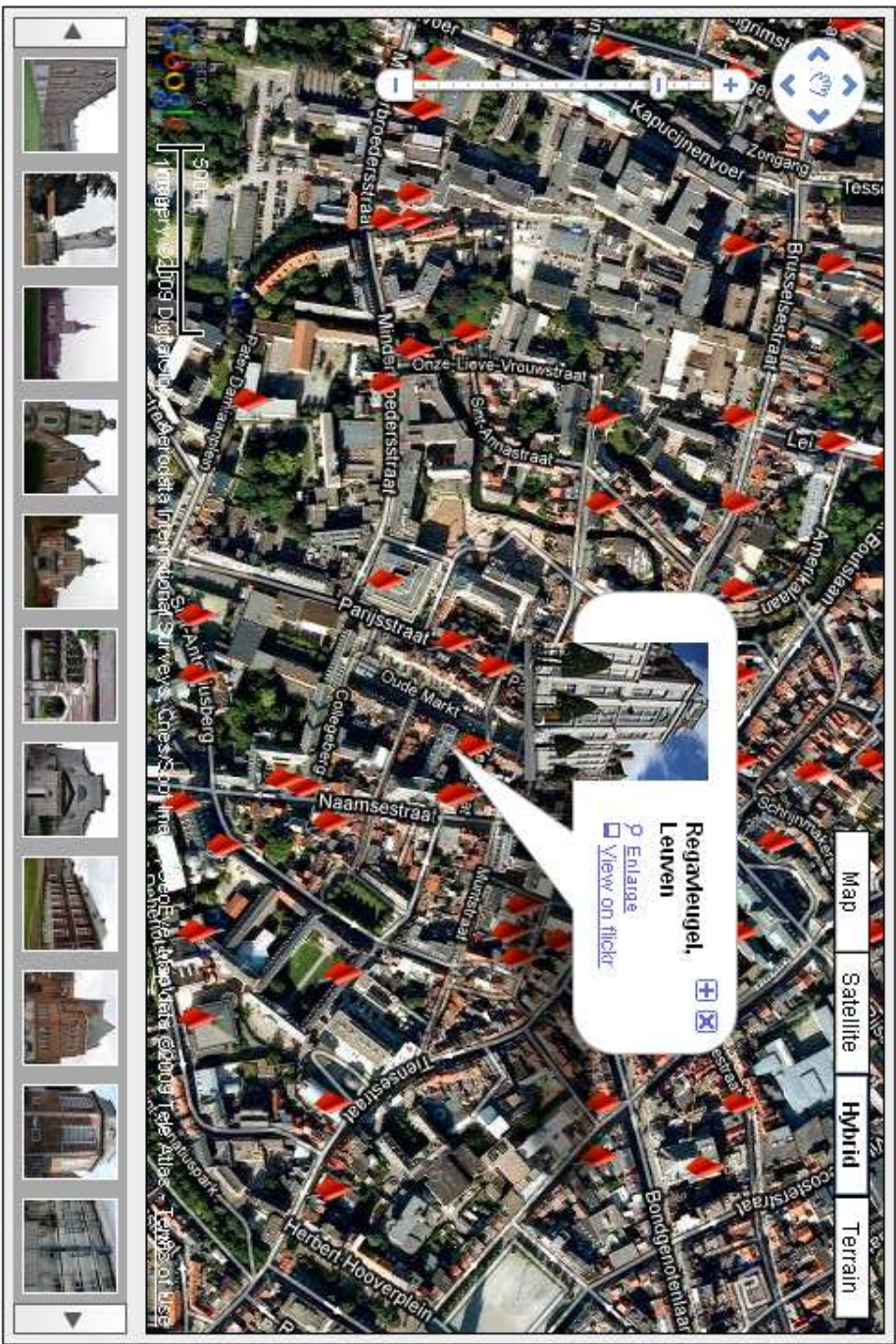
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Match case



# Leuven



[+]  
Full screen  
+ Share this

Help mee om deze kaart aan te vullen: stuur ook je eigen erfgoedfoto's door!

Created with **iMapFlickr**

## Erf-goed.be

Deze website verzamelt foto's van beschermde monumenten en landschappen in Vlaanderen en Brussel. Er staan al **6700 foto's** op de website. Erf-goed.be is een project van ArcheoNet.be, de website waarop je dagelijks nieuws vindt over erfgoed.

### Zoek gemeente

Leuven

### Zoek thema

Select Category

### Meer info

Achtergrond

Meewerken?

Foto's doorsturen

Pers

Dank

## Foto's gezocht: Jo Crepain

Vlaams minister Geert Bourgeois heeft vijf gebouwen uit de bouwperiode van architect Jo Crepain

## Twitter

Sinds kort kan je ons ook volgen via Twitter. Dat is een internetdienst waarbij gebruikers korte berichten presenteren over Erf-goed.be op de

## DISH 2009

Op 9 december gaven we een presentatie over Erf-goed.be op de

Translate this page into

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### Digital Collections

BY SUBJECT

BY SPATIAL COVERAGE

BY PERIOD

Institutions

BY INSTITUTION TYPE

BY LOCATION

Services

BY AUDIENCE

BY SUBJECT

BY SPATIAL COVERAGE

BY PERIOD

BASKET

ABOUT MICHAEL

STORIES

LATEST EDITORIAL

CLICKABLE MAP



USER PREFERENCES

Home > Browse (digital collections) > By subject > Culture

Record 13/5941

[Back to list] [Previous] [Next]

Title of collection

## Wellcome Images

### Description

Wellcome Library image collection: 160,000+ images, comprising historical images from the Wellcome Library's own collections of books, pictures and archives; clinical and healthcare images selected from the UK's leading teaching hospitals, universities, general practitioners and photographers; and images from the biomedical sciences, covering the full range of scientific imaging techniques.

*This record is also available in [fr](#), [en](#), [cy](#), [es](#), [ee](#), [pl](#), [it](#), [sv](#), [de](#), [el](#), [nl](#), [hu](#), [bg](#), [sk](#), [es](#), [lv](#)*

### Language

English

### Digital format

JPEG

### Legal status

Rights Reserved

### Subject

Art; Religion; Belief; History; Archaeology; Genealogy; Religious history; Mythology; Work environment; Local history; Visual arts; Architecture; Decorative arts; Fine arts; Graphic arts; Handicrafts; Photography; Plastic arts; Theatre; Museums; Leisure; Play; Sport; Tourism; Social and human sciences; Social policy and welfare; Disabilities; Population; Black and ethnic minority groups; Children; Older people; Human settlements and land use; Human settlements; Landscape; Buildings and the built environment; Buildings and the build environment; Buildings; Education; Science; Earth sciences; Meteorology; Environmental sciences and engineering; Environment; Natural resources; Biology; Natural sciences; Anthropology; Botany; Zoology; Medical sciences; Health & lifestyle; Pharmacology; Systems of medicine; Therapy; Technology; Archives; Libraries; Politics and government; International conflicts; Armed forces; Economic and social development; Agriculture; Industry; Manufacturing and transport engineering; Materials and products; Transport; Travel; Labour; Voluntary work; Voluntary work; Events; Historical events; Cultural events

### Spatial coverage

# Subject description










“WHO WHAT WHERE WHEN”

Heritage institutions use a large variety of tools for subject description (“knowledge organisation systems”)

- Keyword lists
- Vocabularies
- Dictionaries
- Taxonomies
- Thesauri
- Classification schemes
- Reference lists
- Ontologies
- ...

| ISO 3166-1 Country Char<br>2 Code |
|-----------------------------------|
| AD                                |
| AE                                |
| AF                                |
| AG                                |
| AI                                |
| AL                                |
| AM                                |
| AN                                |
| AO                                |
| AQ                                |

301.   **Burggraef, G. P. van den**  
(Belgian printmaker, 19th century) [500062163]  
**G. P. van den Burggraef**
302.   **Burssens, Jan**  
(Belgian painter, born 1925-2002) [500068919]  
**Jan Burssens**
303.   **Bury, Pol**  
(Belgian painter, sculptor, and graphic artist, 1922-2005)  
**Pol Bury**
304.   **Buschmann, Gustav**  
(Belgian painter and etcher, 1818-1852) [500028364]  
**Buschmann, Gustaaf**  
**Buschmann, Gustave**  
**Buschmann, Gustave François**  
**Gustav Buschmann**
305.   **Buschmann, Joseph Ernest**  
(Belgian poet, publisher, photographer, 1814-1853) [500]  
**Joseph Ernest Buschmann**
306.   **Buxin, Stephan**  
(French sculptor, born 1909) [500110380]  
**Stephan Buxin**  
**Stephen Buxin**
307.   **Buyck, Tony**  
(Belgian architect, active late 20th century) [500112349]  
**Tony Buyck**

expand all | collapse all

## 7 THE ARTS. RECREATION. ENTERTAINMENT. SPORT

- [-] 7.01/09 Special auxiliary numbers for art theory, techniques, periods, s
  - 7.01 Theory and philosophy of art. Principles of design, proportion,
  - 7.02 Technique. Craftsmanship
  - [+] 7.03 Artistic periods and phases. Schools, styles, influences
  - 7.04 Subjects for artistic representation. Iconography. Iconology. De
  - 7.05 Applications of art (in industry, trade, the home, everyday life)
  - 7.06 Various questions concerning art
  - 7.07 Occupations and activities associated with the arts and entert
  - 7.08 Characteristic features, forms, combinations etc (in art, entert
  - 7.091 Performance, presentation (in original medium)
- [+] 71 Physical planning. Regional, town and country planning. Landscape
- [+] 72 Architecture
- [+] 73 Plastic arts
- [+] 74 Drawing. Design. Applied arts and crafts
- 75 Painting
- [+] 76 Graphic arts. Graphics
- [+] 77 Photography and similar processes
- [-] 78 Music
  - [-] 78.01/09 Special auxiliary numbers for music
    - 78.01 Theory and philosophy of music
    - 78.02 Composition of musical works
    - 78.03 Periods and phases in the history of music. Musical schoo
    - 78.04 Subjects for musical representation. Programme music. III
    - 78.05 Applications of music in industry and trade, the home and
    - 78.06 Various questions concerning music
    - 78.07 Occupations and activities associated with music

## 7 THE ARTS. RECREATION. ENTERTAINMENT. SPORT

## 77 Photography and similar processes

- ⇒ [528.7](#) Photogrammetry: aerial, terrestrial
- ⇒ [535.2](#) Propagation and energetics of radiation: Photometry
- ⇒ [661.1](#) Special chemical industries
- ⇒ [681.7](#) Optical apparatus and instruments
- ⇒ [535.6](#) Colours and their properties. Colour theory

## 77-1/-8 Special auxiliary numbers for characteristics of photographic machinery, equipment

## 77.01/09 Special auxiliary numbers for photography

## 77.01 Theory, principles and nature of photographic phenomena

77.02 Photographic operations  
Including: Exposure. Developing. Processing. Printing

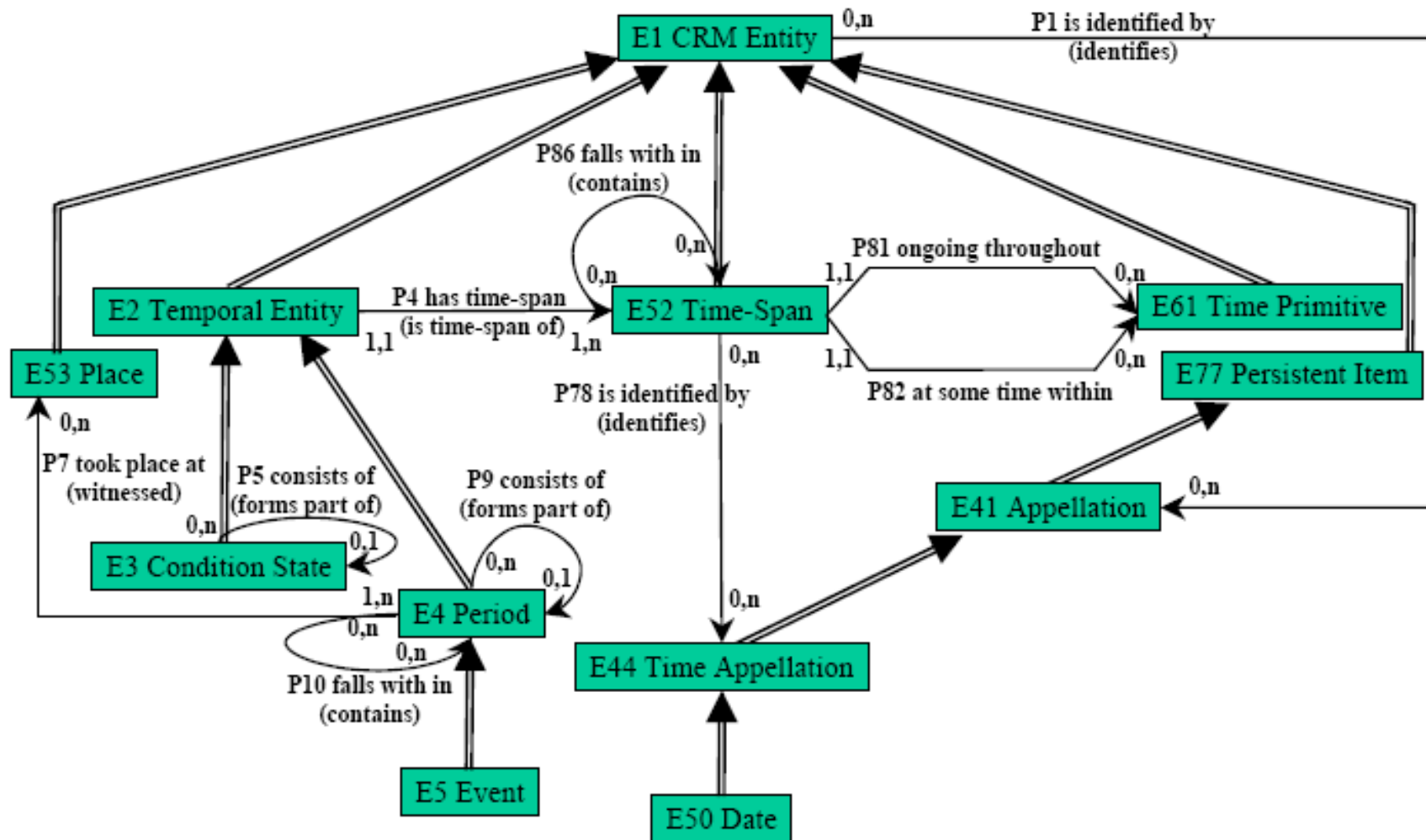
- ⇒ [771](#) Photographic equipment, apparatus and materials

## 77.03/08 Kinds of photography and photograph

77.03 Documentary photography. Photographic records and their interpretation  
Including: Scientific photography

This UDC Summary (UDCS) provides a selection of around 2,000 classes from the whole scheme which comprises more than 68,000 entries. Please send questions and suggestions to [udcs@udcc.org](mailto:udcs@udcc.org)

# CIDOC Conceptual Reference Model





### 3. Current use of semantic information

# Monitoring...



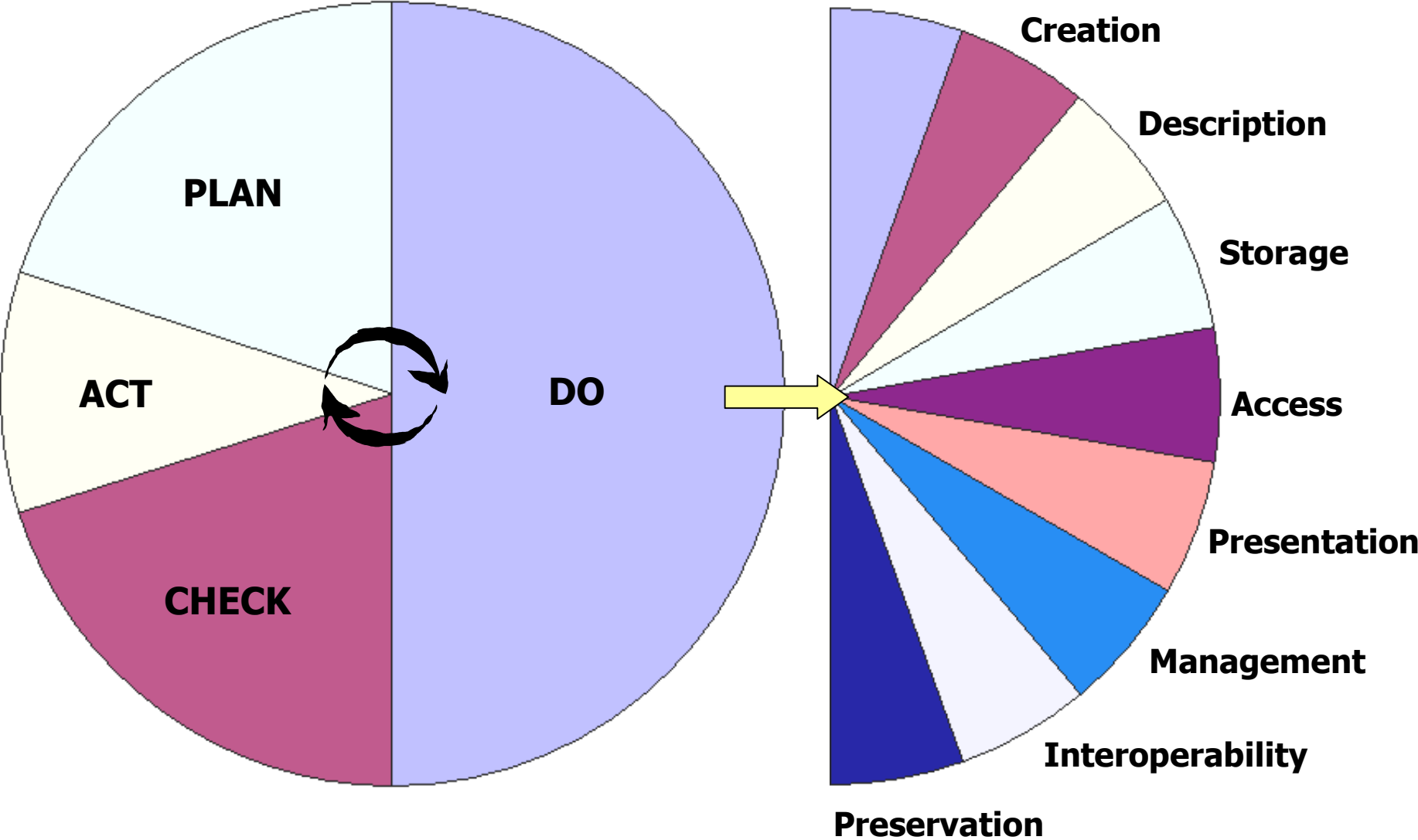
The DEN Foundation ('Digital Heritage Netherlands') is the Dutch ICT knowledge centre for cultural heritage.

DEN supports good digitisation practices at archives, museums and other heritage institutions.

DEN monitors the use of ICT by heritage institutions.



# Quality cycle for digitisation



# Making inventories



## Terminologiebronnen Cultureel Erfgoed

Zoek naar:

Zoek

Uitgebreid zoeken

| Naam of aanduiding                                                            | Korte omschrijving inhoud                                                                                                                                                                                                               | Initiatief van welke instelling(en)                                                                                                          |
|-------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Archeologisch Basis Register (ABR)                                            | Archeologie                                                                                                                                                                                                                             | RACM en Universiteiten                                                                                                                       |
| Art & Architecture Thesaurus/Nederlandstalig                                  | Kunst, architectuur, materiele cultuur                                                                                                                                                                                                  | Getty Research Institute; Nederlandse vertaling RKO met RDWZ                                                                                 |
| Aurora                                                                        | Zoölogie en geologie                                                                                                                                                                                                                    | Koninklijke Bibliotheek                                                                                                                      |
| Brinkman onderwerpen : toegekend in het kader van de Nederlandse Bibliografie | Alle disciplines                                                                                                                                                                                                                        |                                                                                                                                              |
| Categorie-indeling afbeeldingencollecties volkenkundige musea                 | Iconografie                                                                                                                                                                                                                             | Overleg volkenkundige Musea (thans Stichting Volkenkundige Collecties Nederland)                                                             |
| Classificatie Natuurmuseum Fryslan                                            | Natuur (planten, dieren, stenen) van Fryslan en/of Noord-Nederland. Schelpen van de wereld. Natuurillustraties. Vangapparaten en -hulpmiddelen.                                                                                         | Natuurmuseum Fryslan, als opvolger voor de verouderde TINNHM-database die ooit gezamenlijk met andere natuurhistorische musea is aangemaakt. |
| Eco Mare                                                                      | Natuurhistorische objecten, Cultuurhistorie Texel                                                                                                                                                                                       | Eco Mare                                                                                                                                     |
| Geschiedenis Nederland                                                        | Geschiedenis Nederland                                                                                                                                                                                                                  | Instituut Nederlandse Geschiedenis (ING)                                                                                                     |
| GIDS-thesaurus                                                                | In principe alle onderwerpen.                                                                                                                                                                                                           | Vereniging Openbare Bibliotheken                                                                                                             |
| GOO (Gemeenschappelijke onderwerpsontsluiting)                                | De GOO bestaat uit een numerieke classificatie (NBC) en een trefwoorden thesaurus (GTT). In principe omvat de GOO alle wetenschapsgebieden, maar het zwaartepunt ligt bij de humaniora en de rechtswetenschappen/ sociale wetenschappen | UKB                                                                                                                                          |
| ID-DOC handwerkhuizen Museum Oudere Technieken                                | On line hulpmiddel bij het identificeren van handwerkhuizen. Bevat benamingen, tekeningen en omschrijvingen, en een bibliografie (repertorium) van gebruikte bronnen.                                                                   | Museum voor de Oudere Technieken, Grinbergen (bij Brussel)                                                                                   |
| Lakenhal Thesaurus                                                            | Kunst; Kunstnijverheid; materiele cultuur                                                                                                                                                                                               | Stedelijk Museum De Lakenhal                                                                                                                 |



# Use of metadata-standards is scattered at best



Many metadata standards: DEN has registered over 30 metadata standards in use in the Netherlands alone.

“I know best”: many national, regional or local ‘flavours’ of metadata standards.

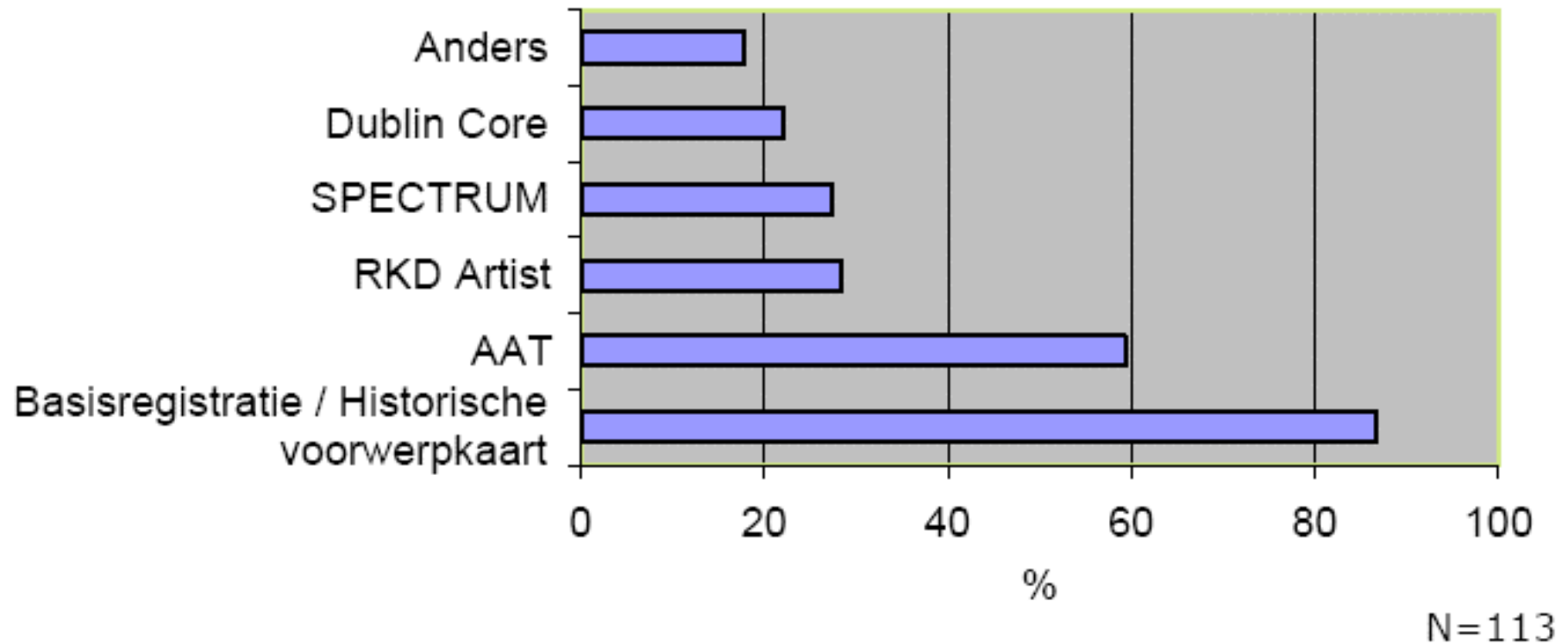
Many institutions still work with custom built datamodels in custom built databases.

Smaller institutions often lack knowledge about international metadata standards and depend largely on business partners.

# Knowledge in museums (NL) about metadata standards

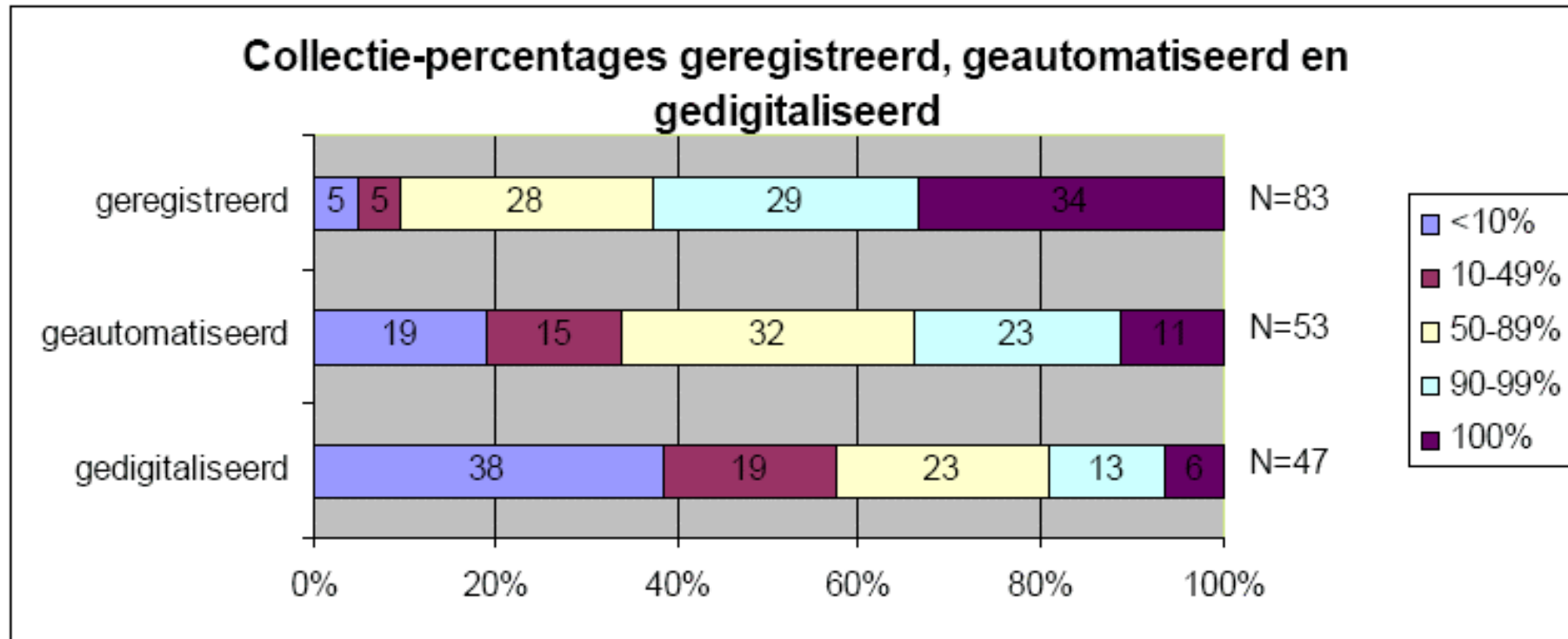


## Basisregistratie meest bekende standaard



*Source: Monitor ICT-gebruik in musea (Museumvereniging/DEN, april 2008)*

# Metadata created by museums



*Source: Monitor ICT-gebruik in musea (Museumvereniging/DEN, april 2008)*

# Availability of metadata



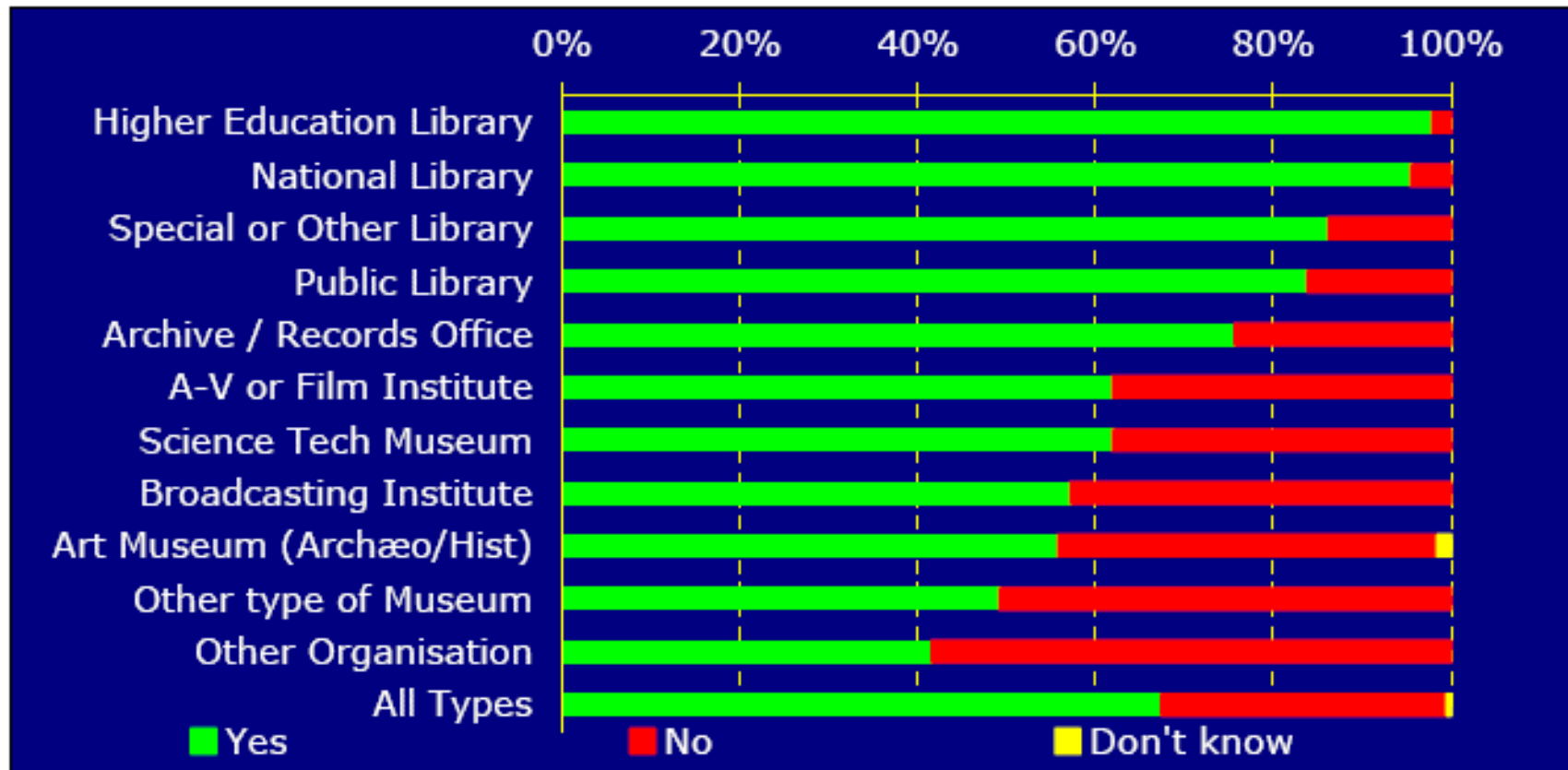
| <b>GEMIDDELD %</b>        | <b>DIGITALE BESCHR.<br/>PUBLIEK</b> | <b>DIGITALE BESCHR.<br/>PC INSTELLING</b> | <b>DIGITALE REPRO<br/>PUBLIEK</b> | <b>DIGITALE REPRO<br/>PC INSTELLING</b> |
|---------------------------|-------------------------------------|-------------------------------------------|-----------------------------------|-----------------------------------------|
| Archiefinstellingen       | 70%                                 | 57%                                       | 55%                               | 60%                                     |
| Bibliotheken <sup>9</sup> | 63%                                 | 72%                                       | 33%                               | 47%                                     |
| Musea                     | 31%                                 | 81%                                       | 35%                               | 68%                                     |
| <b>Totaal</b>             | <b>52%</b><br>n=92                  | <b>70%</b><br>n=93                        | <b>41%</b><br>n=93                | <b>61%</b><br>n=91                      |

**TABEL 2.6** DIGITALE BESCHRIJVINGEN EN REPRODUCTIES VIA INTERNET OF PC

*Source: The Digital Facts / Numeric-NL, February 2009)*



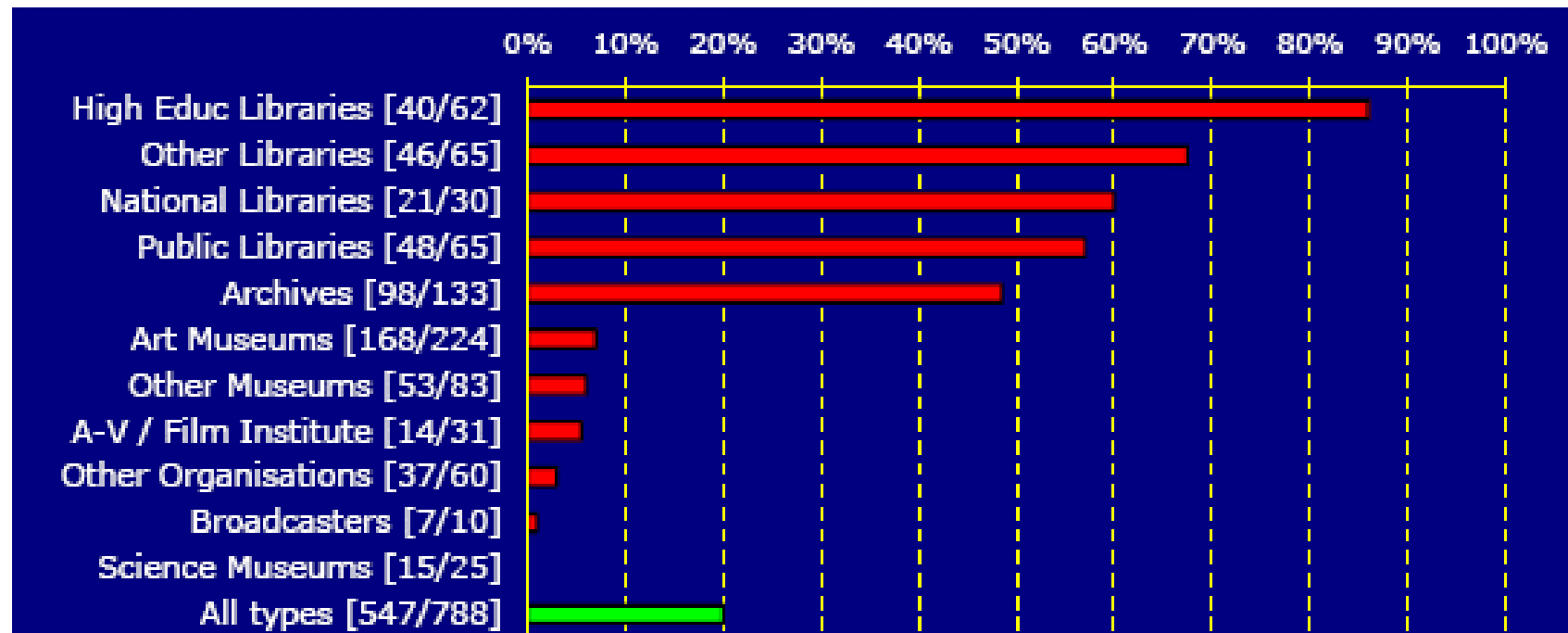
**Figure 13 Possession of online catalogues**



*Source: Numeric Final Report, July 2009*



**Figure 14 Proportion of digitised materials available on the internet**



*Source: Numeric Final Report, July 2009*



**"Digitised and on our website"  
is not equivalent to "available  
and useful to users"**

**- Mike\_Ellis (on Twitter yesterday)**

Josh Greenberg @DISH2009

Thursday, December 10, 2009

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# Challenges with heritage metadata



**Harmonisation:** Enabling cross searching between various heritage collections by linking metadata standards. Europeana will be the 'proof of the pudding' after decades of projects.

# Metadata Standards Crosswalk

The crosswalk below includes only a partial list of the elements for each standard, focusing on the areas of overlap. This crosswalk is for planning purposes only; refer to the original standards if you are creating a technical mapping. For the full list of elements for any one of the standards below, click on the name of the standard at the top of the column.  
 (To print this crosswalk from your Web browser, use the tabloid 11 x 17-inch paper size setting, landscape print format, .25-inch margins. Alternatively, print the PDF from the [Printer Friendly PDFs](#) link; see left-hand navigation.)

| CDWA                                   | CCO [1]    | CDWA Lite [2]              | VRA 4.0 XML                                             | MARC/AACR                                            | MODS                | Dublin Core                     | DAC                         |
|----------------------------------------|------------|----------------------------|---------------------------------------------------------|------------------------------------------------------|---------------------|---------------------------------|-----------------------------|
| <b>1. OBJECT/ WORK (core)</b>          |            |                            |                                                         |                                                      |                     |                                 |                             |
| <b>1.1. Catalog Level (core)</b>       |            | <cdwalite: recordType>     | <vra: work> or <vra: collection>                        | 655 Genre/Form<br>300a Physical Description - Extent | <genre><br><extent> |                                 | 1 Levels of Des             |
| <b>1.2. Object/Work Type (core)</b>    | Work Type  | <cdwalite: objectWorkType> | <vra: worktype> in <vra: work> or <vra: collection>     | 655 Genre - Form                                     | <genre>             | Type                            | 3.1 Scope and               |
| <b>1.4. Components/Parts</b>           |            |                            |                                                         | 300a Physical Description - Extent                   | <extent>            | Format.Extent                   | 2.5 Extent<br>3.1 Scope and |
| <b>1.5. Remarks</b>                    |            |                            |                                                         |                                                      |                     |                                 | 5.4 Accruals                |
| <b>2. CLASSIFICATION (core)</b>        |            |                            |                                                         |                                                      |                     |                                 |                             |
| <b>2.1. Classification Term (core)</b> | Class      | <cdwalite: classification> |                                                         | 050<br>084 "Other classification number"             | <classification>    | Subject (classification schema) |                             |
| <b>3. TITLES OR NAMES (core)</b>       |            |                            |                                                         |                                                      |                     |                                 |                             |
| <b>3.1. Title Text (core)</b>          | Title      | <cdwalite:title>           | <vra: title> in <vra: work> or <vra: collection>        | 24Xa Title and Title - Related Information           | <title>             | Title                           | 2.3 Title                   |
| <b>3.2. Title Type</b>                 | Title Type | <cdwalite:title> type      | <vra: title type= > in <vra: work> or <vra: collection> |                                                      |                     |                                 |                             |

# Challenges with heritage metadata



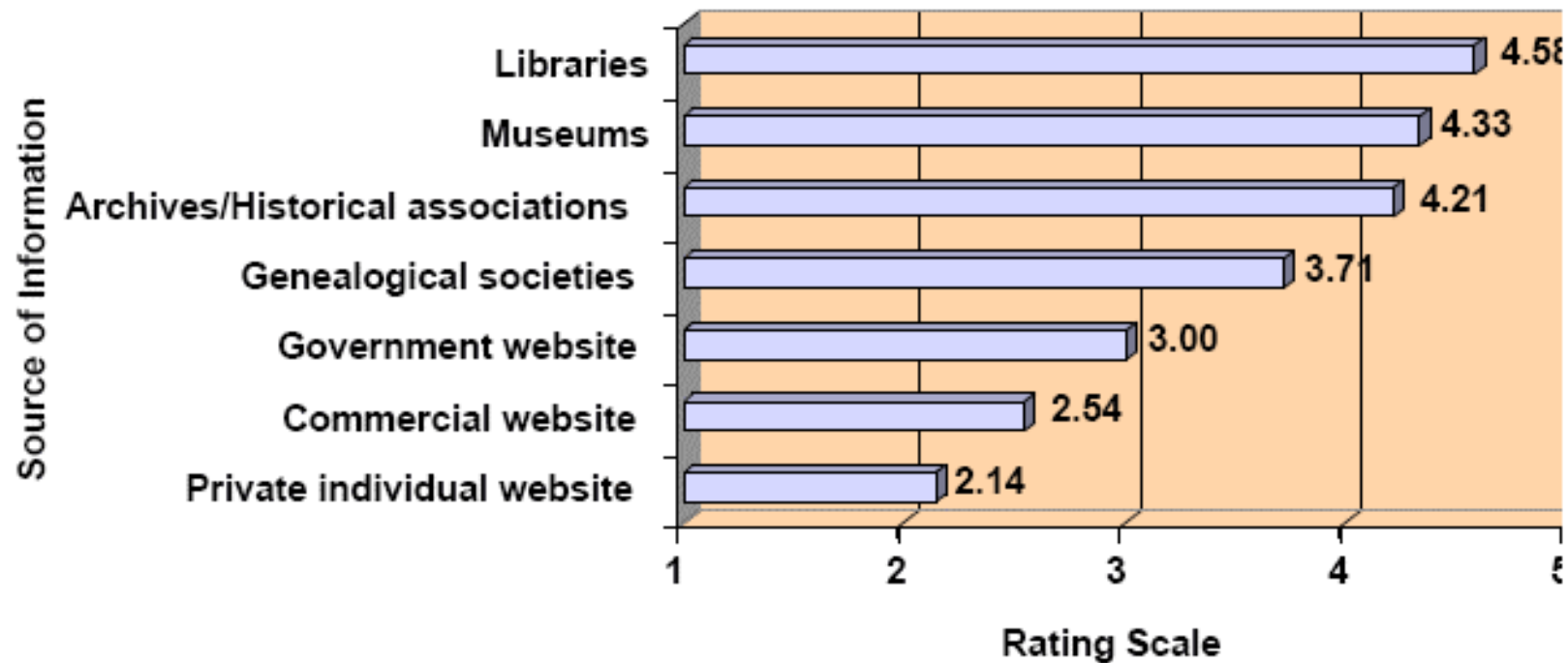
**Harmonisation:** Enabling cross searching between various heritage collections by linking metadata standards. Europeana will be the 'proof of the pudding' after decades of projects.

**Granularity:** Before the availability of full text searching, metadata records were the best option to locate objects. Are metadata records still useful if you can search full text? Is it useful to find metadata records in Google?

**Validation:** Provide authority to heritage information beyond a specific service/context. Can metadata give specific information sources trustworthiness in the 'soup of data' that is the web?



## Average Ratings of Trustworthiness of Sources of Information



*Source: ILMS, InterConnections, 2008*

# Challenges with heritage metadata



**Harmonisation:** Enabling cross searching between various heritage collections by linking metadata standards. Europeana will be the 'proof of the pudding' after decades of projects.

**Granularity:** Before the availability of full text searching, metadata records were the only option to locate objects. Are metadata records still useful if you can search full text? Is it useful to find metadata records in Google?

**Validation:** Provide authority to heritage information beyond a specific service/context. Can metadata give specific information sources trustworthiness in the 'soup of data' that is the web?

**User input:** Allowing outsiders to enrich and comment on heritage information is becoming more and more popular. However, how does this information relate to the information generated by the institution?



## Welcome!

The key goals of The Commons on Flickr are to firstly show you hidden treasures in the world's public photography archives, and secondly to show how your input and knowledge can help make these collections even richer.

**You're invited to help describe the photographs you discover in The Commons on Flickr, either by adding tags or leaving comments.\***

### A random sprinkling of our participating institutions...



[FAQ](#) | [Participating Institutions](#) | [Rights Statement](#)

## A Commons Sampler [Try a search](#) | [View by tag](#)





## 4. Future developments

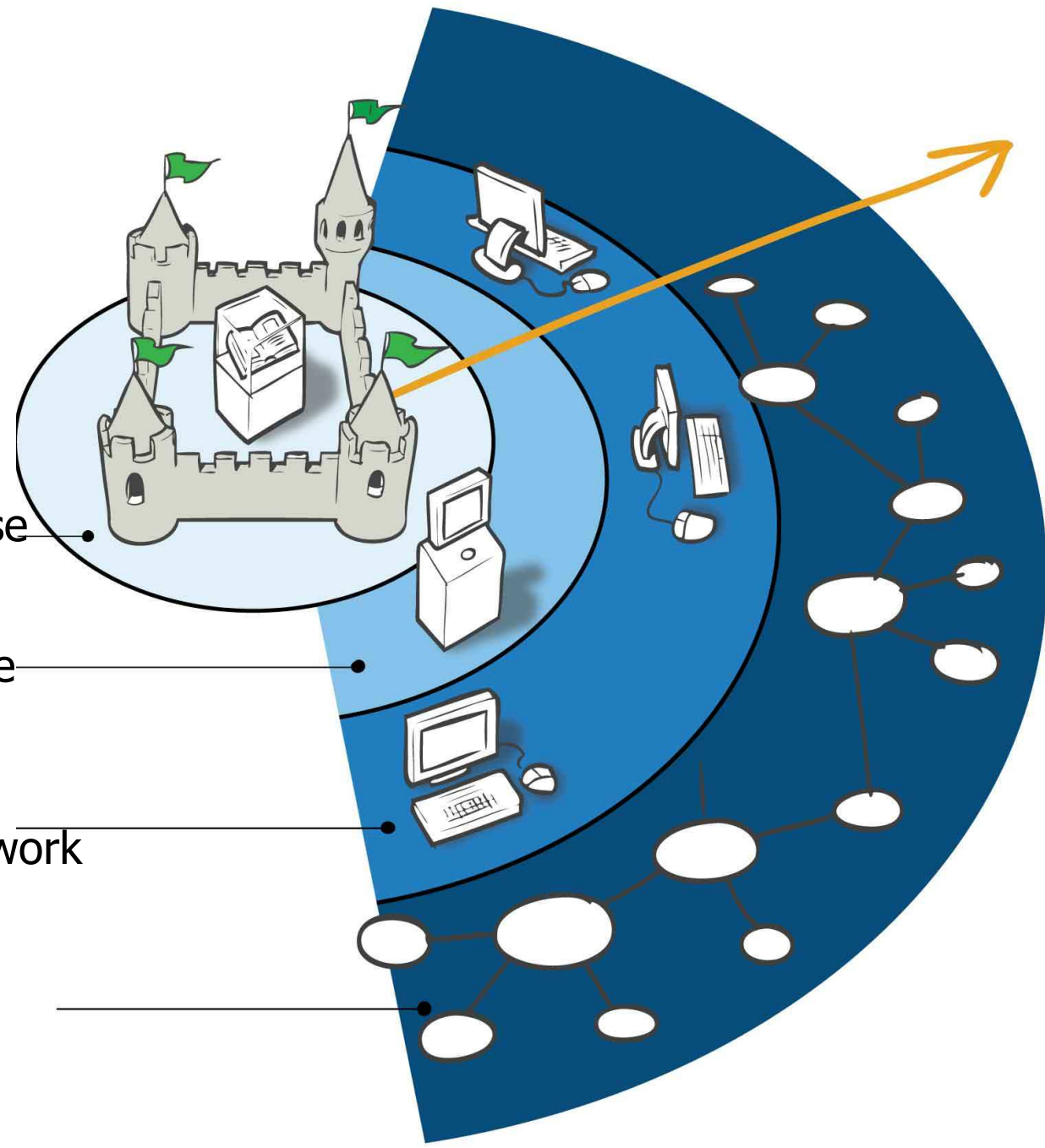


analog in-house

digital in-house

digital in a  
controlled network

'out there'  
on the web



# Metadata in the web



The Social Web (Web 2.0): the creation of metadata and subject descriptions is shifting from professionals to the users

The Semantic Web (Web 3.0): the creation of metadata and subject descriptions is shifting from professionals to computers

# Metadata in the social web



Access points vary.

(Visitors and professionals use different terms to describe collections.)

| Visitors    | Professionals |
|-------------|---------------|
| Colors      | Creators      |
| Emotions    | Technique     |
| Iconography | Provenance    |
| Materials   | Materials     |
| Themes      | Dates         |

# Jonge tijgers in Artis

ADD TO FRIES ADD TO NOTE BLOG THIS ALL SIZES ADD TO GALLERY



Nationaal Archief

**Beschrijving:** Jonge tijgers in Artis

**Datum:** 17 augustus 1964

**Bestandsdeelnummer** 916-7779

**Vervaardiger:** Anefo / Nijis, Jac. de

**URL:** [beeldbank.nationaalarchief.nl/na:col1:dat1:50783](http://beeldbank.nationaalarchief.nl/na:col1:dat1:50783)

Share This

Uploaded on January 29, 2009  
by [Nationaal Archief](#)

**Nationaal Archief's  
photostream**

**1,016** uploads

This photo also belongs to:

**Artis (Set)**

**25** items

- 2 galleries contain this photo
- 32 people call this photo a favorite

People in this photo

[Add a person](#)

Tags

- [Nationaal Archief](#)
- [dieren](#)
- [artis](#)
- [dierentuin](#)
- [zoo](#)
- [animal](#)
- [animals](#)
- [tigers](#)
- [baby animals](#)
- [cubs](#)
- [roar](#)
- [cat](#)

# Explore / Tags / roar

Slideshow 

Sort by:  
Most recent • **Most interesting**

## Roar clusters

Explore and refine this roar list with our wonderful clusterly goodness!

Related tags:

[cat](#), [lion](#), [yawn](#), [teeth](#), [zoo](#), [animal](#), [kitty](#), [tongue](#), [tiger](#), [wildlife](#)

 Find similar things on [Yahoo! Image search](#)



From [sopranosflight](#)



From [naileen](#)



From [Richard Burley](#)



From [mrowl](#)



From [grunbig](#)



From [lanchei](#)



From [wee-minx](#)



From [ALL DOGS PAINT...](#)



From [Pocketrocket1](#)



From [Pocketrocket1](#)



From [Pocketrocket1](#)



From [ColdTrackDays.com](#)



From [ColdTrackDays.com](#)



From [ColdTrackDays.com](#)

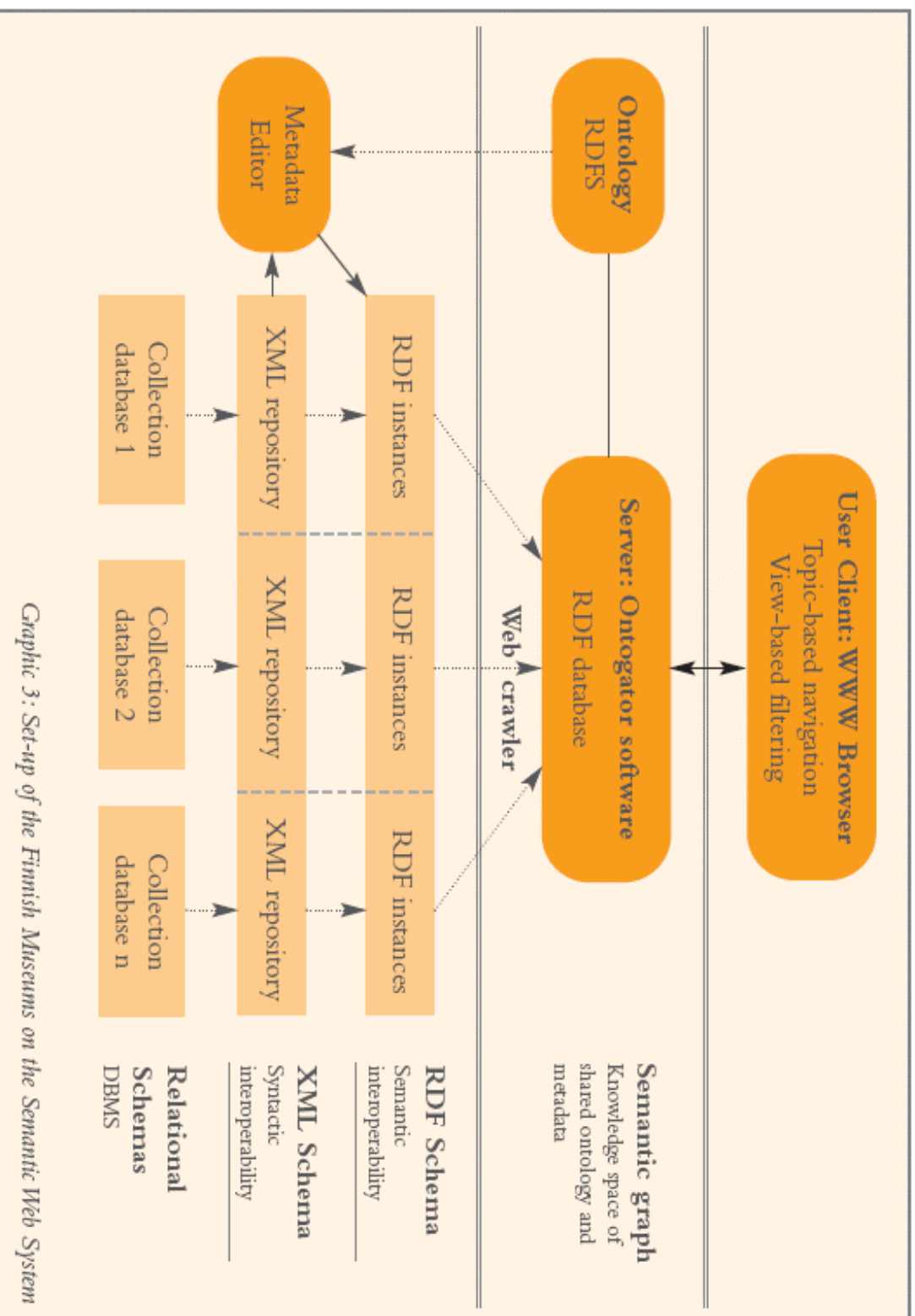


From [ColdTrackDays.com](#)



From [ColdTrackDays.com](#)

# Metadata in the semantic web



Graphic 3: Set-up of the Finnish Museums on the Semantic Web System

Source: DigiCult

This cultural search engine will give you access to artworks from several museum collections.  
Type a keyword, for example: Derain, calligraphy, or 1867.

Q louvain **SEARCH**

**artefact**

**Situation de la Ville de Louvain...**  
kaart Pauli, Andries

**location**

**Louvain**  
city

**Louvain-la-Neuve**  
town

**person**

**Université Catholique de Louvain**

**Jean Joseph Verhagen de Louvain**  
Flemish artist 1726 1795

**Verhagen de Louvain**  
Flemish painter 1728 1811



Artchive.com (>3,000 objects)



Rijksmuseum (>16,000 objects)



(>10,000 objects)



(>78,000 objects)



Bibliopolis.nl (>1,600 objects)

### Vocabularies and thesauri



Getty AAT (>31.000)



Getty ULAN (>130.000)



Getty TGN (>890.000)



SVCN (Dutch ethnology, >11.000)



Princeton Wordnet (>115.000)

# Future heritage services?



Man made portals

*or*

API-clusters



europeana  
beleef cultuur



*"Powered by Europeana"*

# Between traditions, users and technology...



(Possible) future roles of heritage institutions:

As heritage is often unique, institutions have a responsibility to society to have it available, preferably in a digital way.

selection strategies for digitisation are crucial for useful interaction with heritage

Create basic descriptions and take on a role as knowledge intermediary between users and users / user and professionals to enrich the descriptions

support social tagging, creating contexts, storytelling

Invest in (maintenance of) knowledge organisation systems

use (parts of) standardized thesauri, vocabularies etc.

Ensure a legal framework to let heritage live digitally

clear copyright, determine level of control over data

Decide on a strategy to ensure permanent access to data

make sure your data is findable automatically, now and in the future



Thank you!

[marco.deniet@den.nl](mailto:marco.deniet@den.nl)