



e-Infrastructures Austria

**Metadaten im Bereich Repositorien und
Forschungsdaten**

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Fortbildungsseminar für Forschungsdaten und e-Infrastrukturen
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e-infrastructures
austria

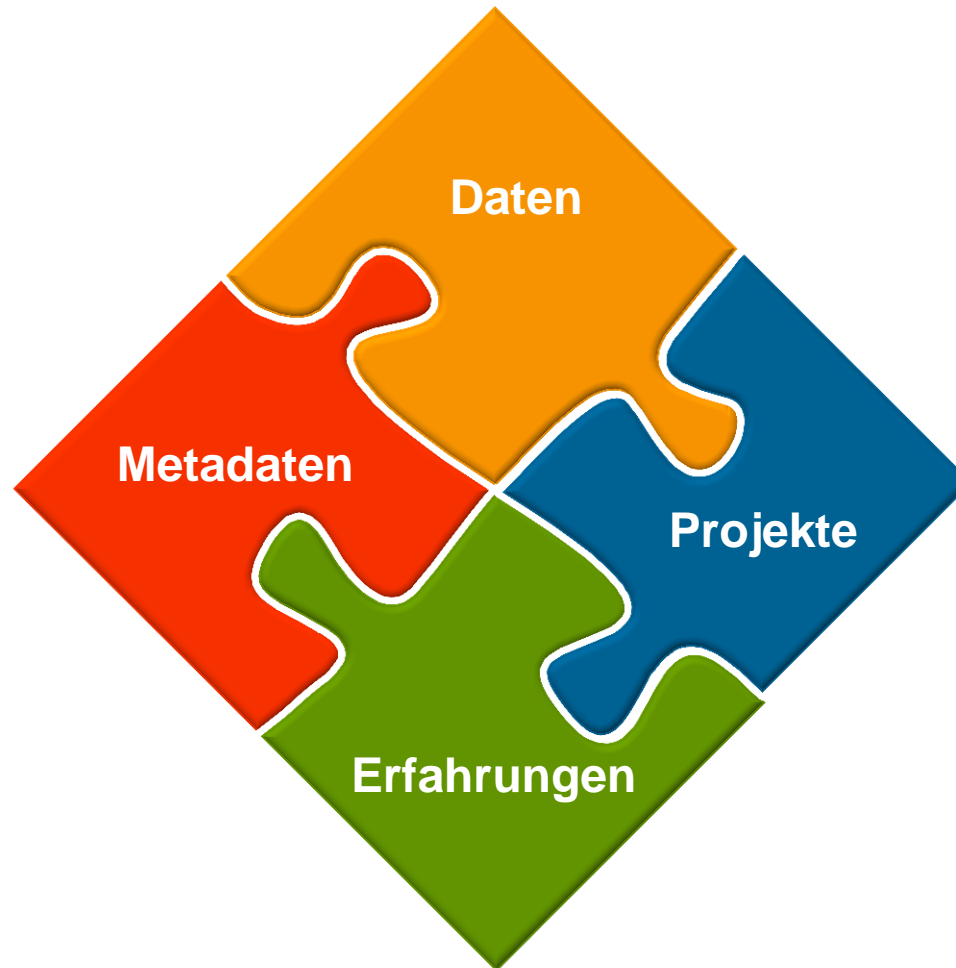
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Seminar-Website: <http://e-seminar.univie.ac.at/>
Projekt-Website: <http://e-infrastructures.at/>

Agenda



Data

D

„*re-interpretable* representation of *information* in a *formalized* manner suitable for communication, interpretation, or processing“

(International Standards Organization –
ISO/IEC 2382-1:1993)

Information

D

“knowledge concerning objects, such as facts, events, things, processes, or ideas, including concepts, that within a certain context has a particular meaning”

(International Standards Organization –
ISO/IEC 2382-1:1993)

Information

D

“meaningful data“

(International Standards Organization –
ISO 9000:2005)

Research Data

D

"factual *records* (numerical scores, textual records, images and sounds) used as *primary sources* for scientific research, and *commonly accepted* in the *scientific community* as necessary to *validate research findings*. "

(OECD Principles and Guidelines, 2007)

Research Data Set

D

"constitutes a *systematic, partial representation* of the *subject* being investigated "

(OECD Principles and Guidelines, 2007)

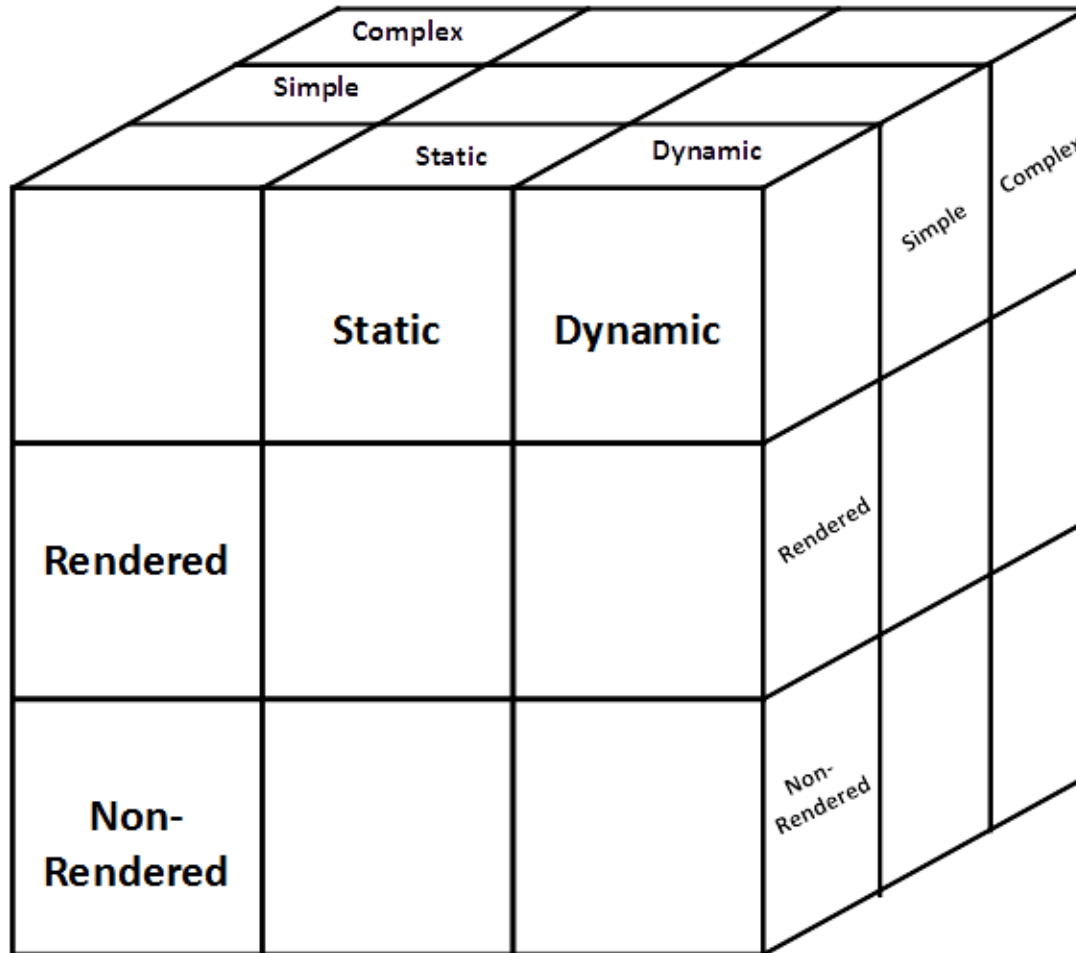
Data Object

D

"Either a *Physical Object* or a *Digital Object*"

(OAIS, 2002/2012)

Data



Data

Fig. 4.5 GOME data – binary

```
00101001001000101000010101001010101
01001110010010010101010101010010101
00100100111010101010101010100101010
010101010101001010101010100101010
010101010101010101010100101010100
010101010010101010010101001010101
010101001010100101010100101010101
```

Fig. 4.6 GOME data – as numbers/characters

latitude	longitude	Ozone	Time
132	50	34.9	12/03/1999
178	50	45	12/03/1999
190	50	78	12/03/1999

Data

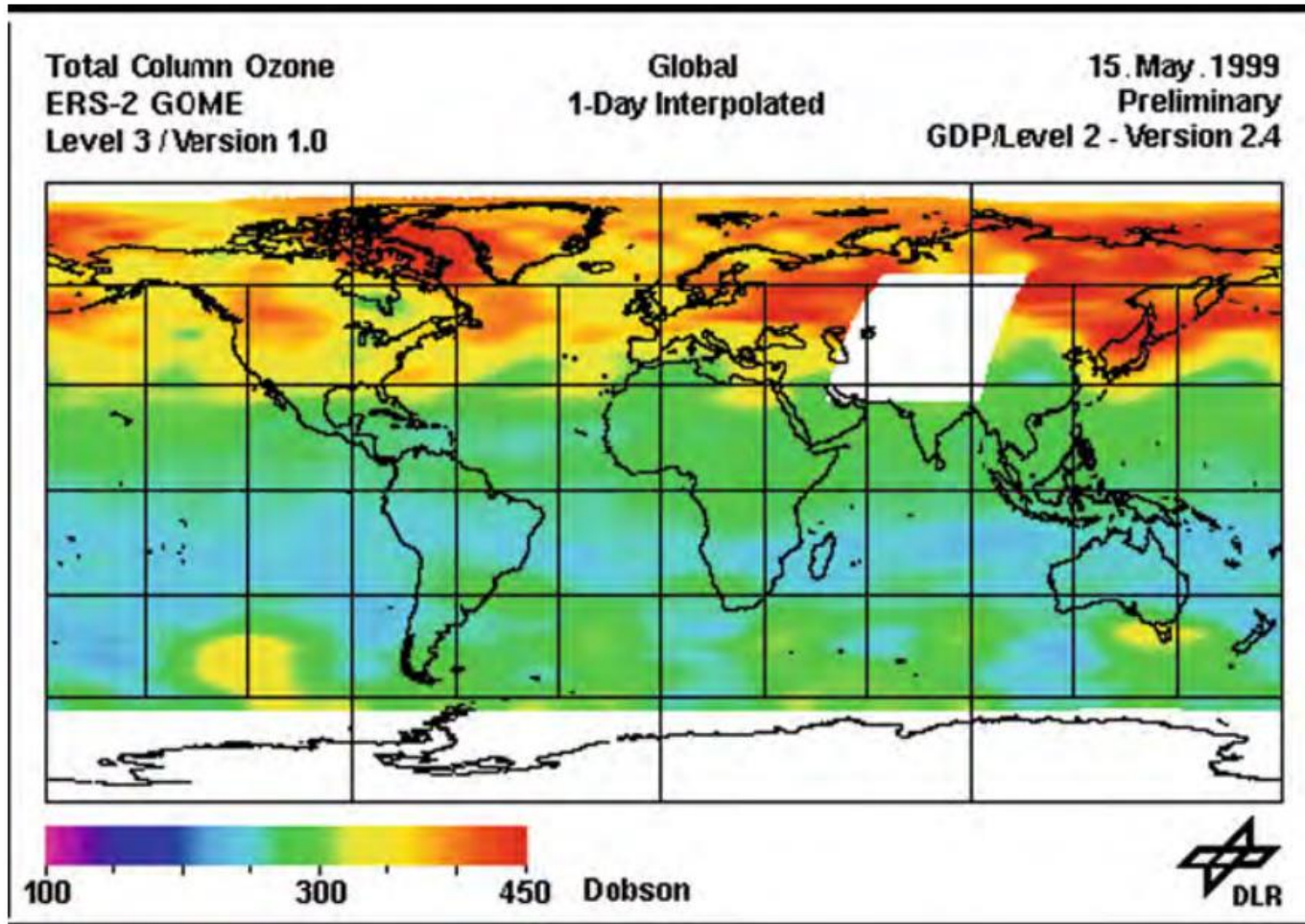


Fig. 4.7 GOME data – processed to show ozone data with particular projection

Data

“Data are the individual facts that are out of context, have no meaning, and are difficult to understand.”

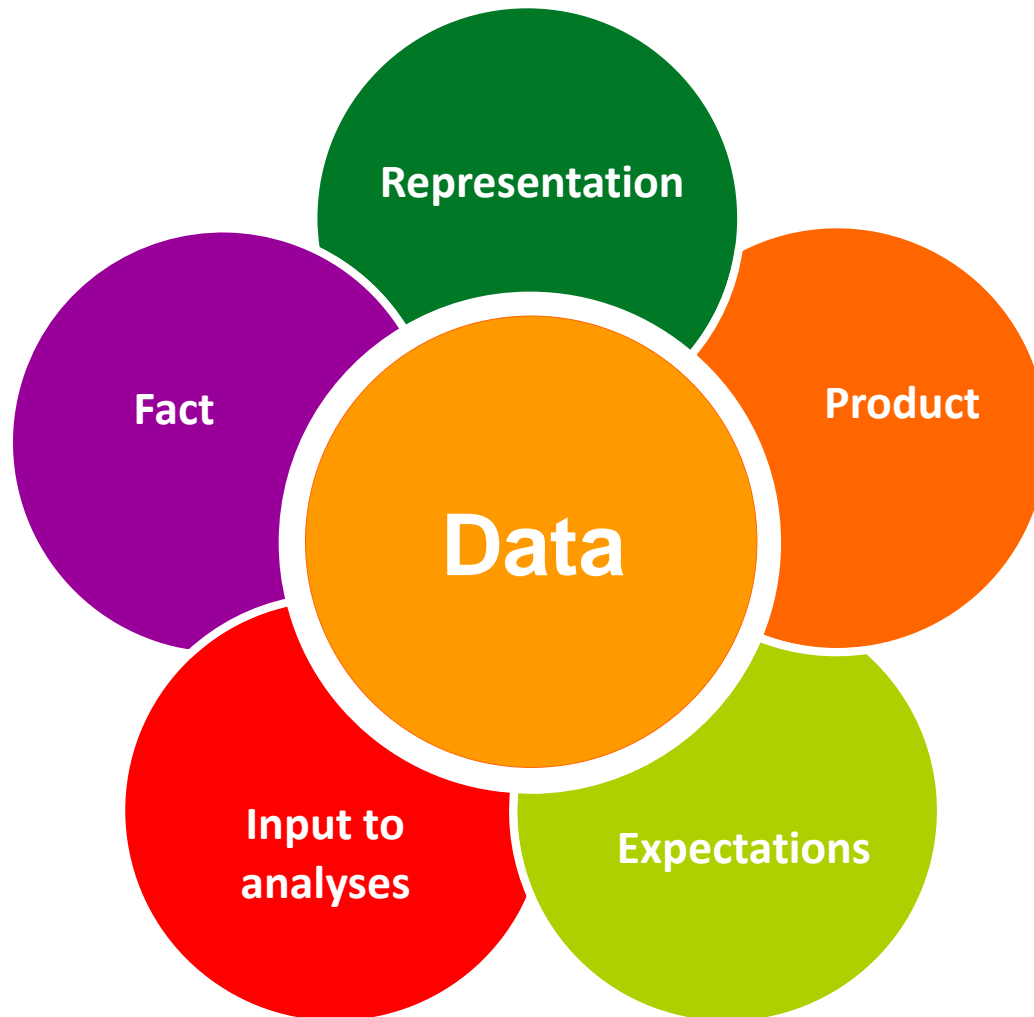
Designated Community

D

"An identified group of potential Consumers who should be able to understand a particular set of information. The Designated Community may be composed of multiple user communities. A Designated Community is defined by the Archive and this definition may change over time."

(OAIS, 2002/2012)

5 Dimensions of Data



Data - Key Takeaways

01

Definitions of data related terms

- No single definition but body definitions exist

02

Types of data (complexity)

- rendered objects vs. non-rendered objects
- static vs. non-static (dynamic)
- simple vs. non-simple (composite)
- active objects vs. non-active objects

03

Dimensions of data

- Data as Representation
- Data as Facts
- Data as a Product
- Data as Input to analyses
- Data and expectations

04

Meaning / interpretation

- Designated Community / Target Group

Metadata

D

"data about data"

omnipresent definition

Metadata

D

"data about data"

omnipresent definition



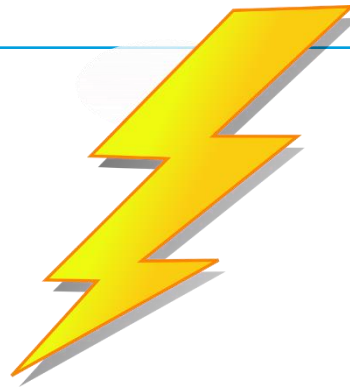
tautology !!!

Metadata

D

"data about data"

omnipresent definition



unclear !!!

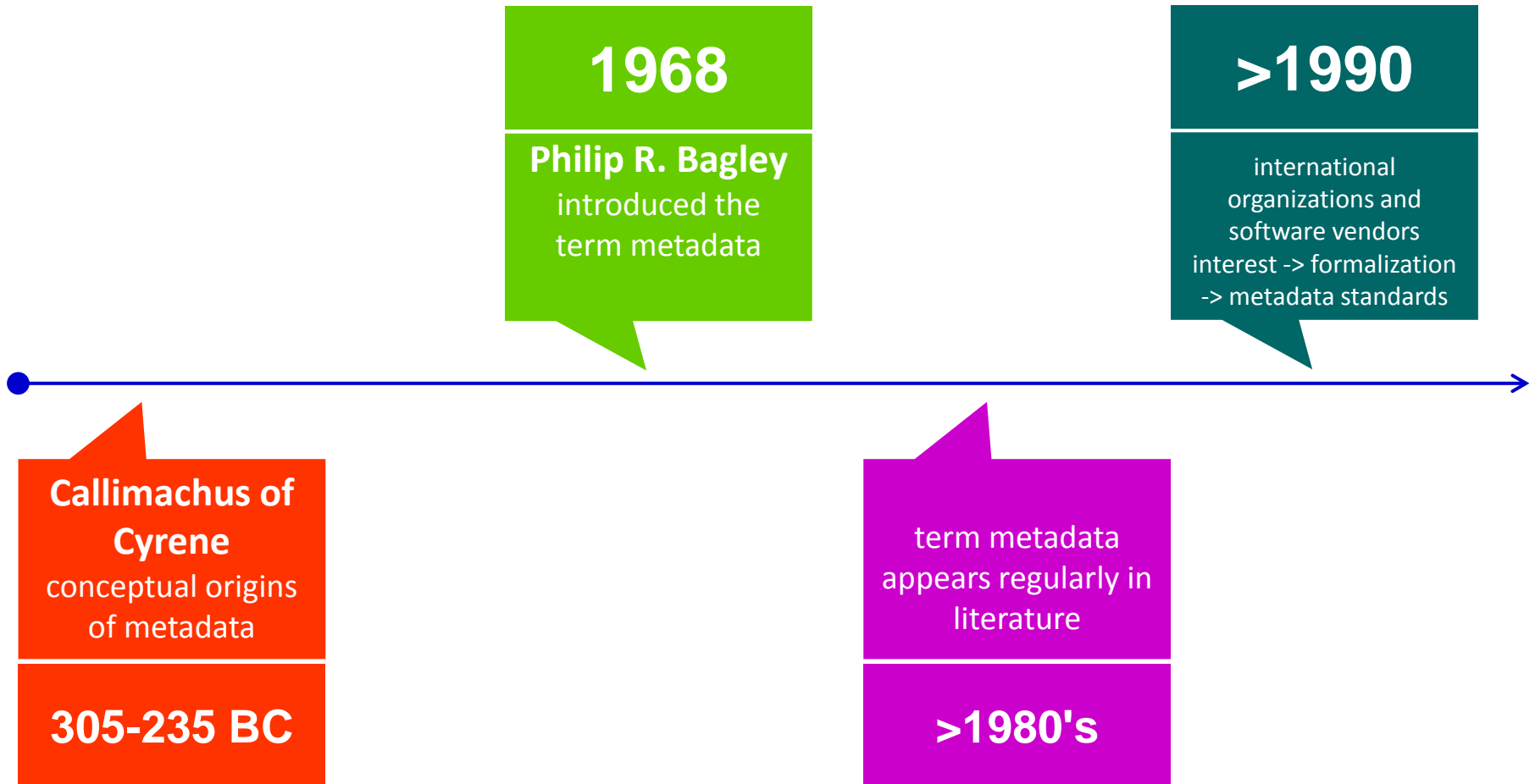
Metadata

D

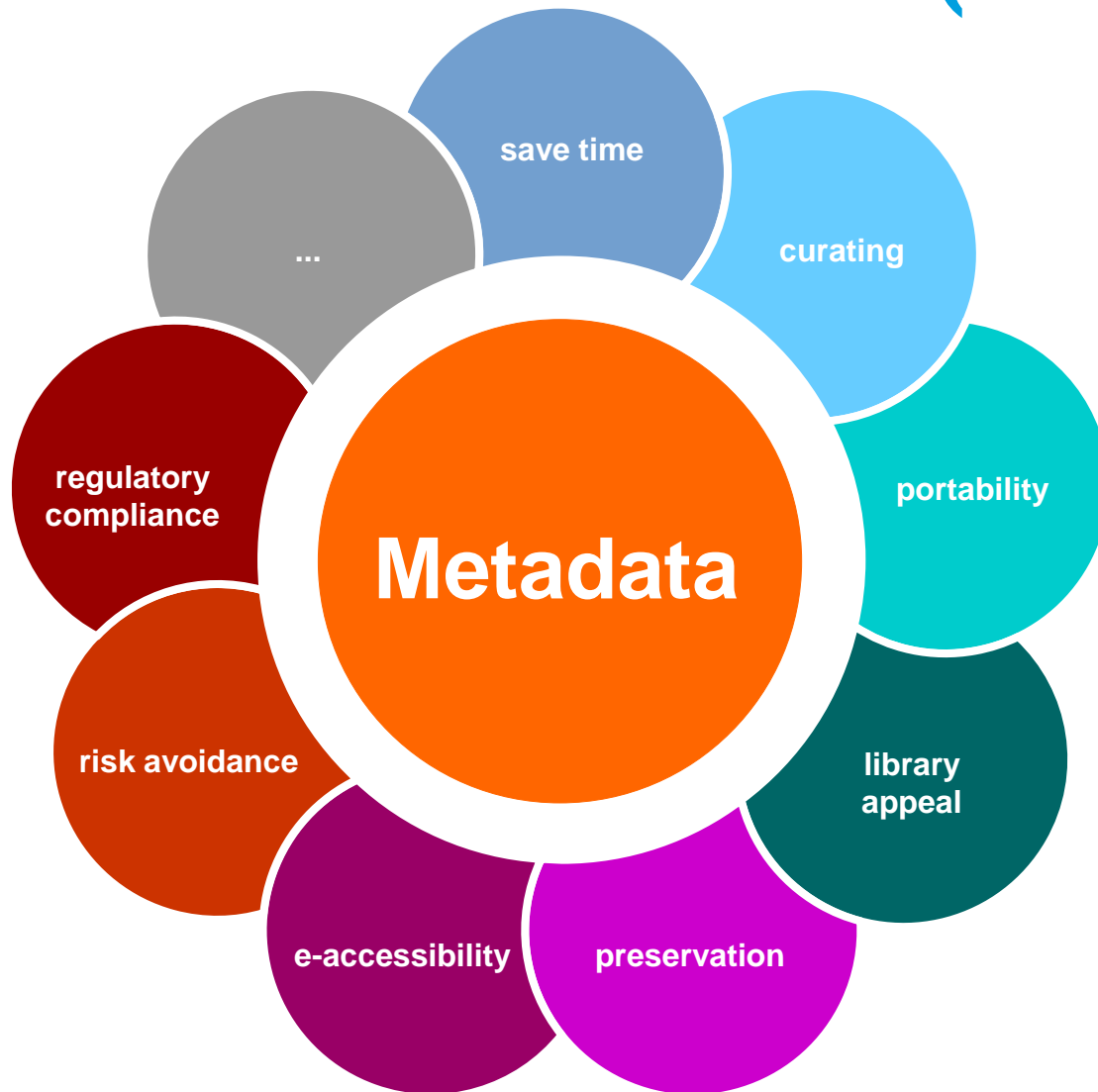
"Metadata is structured information that *describes, explains, locates*, or otherwise makes it easier to *retrieve, use or manage* an information resource"

(NISO)

Metadata Evolution



Metadata Functions (WHY)



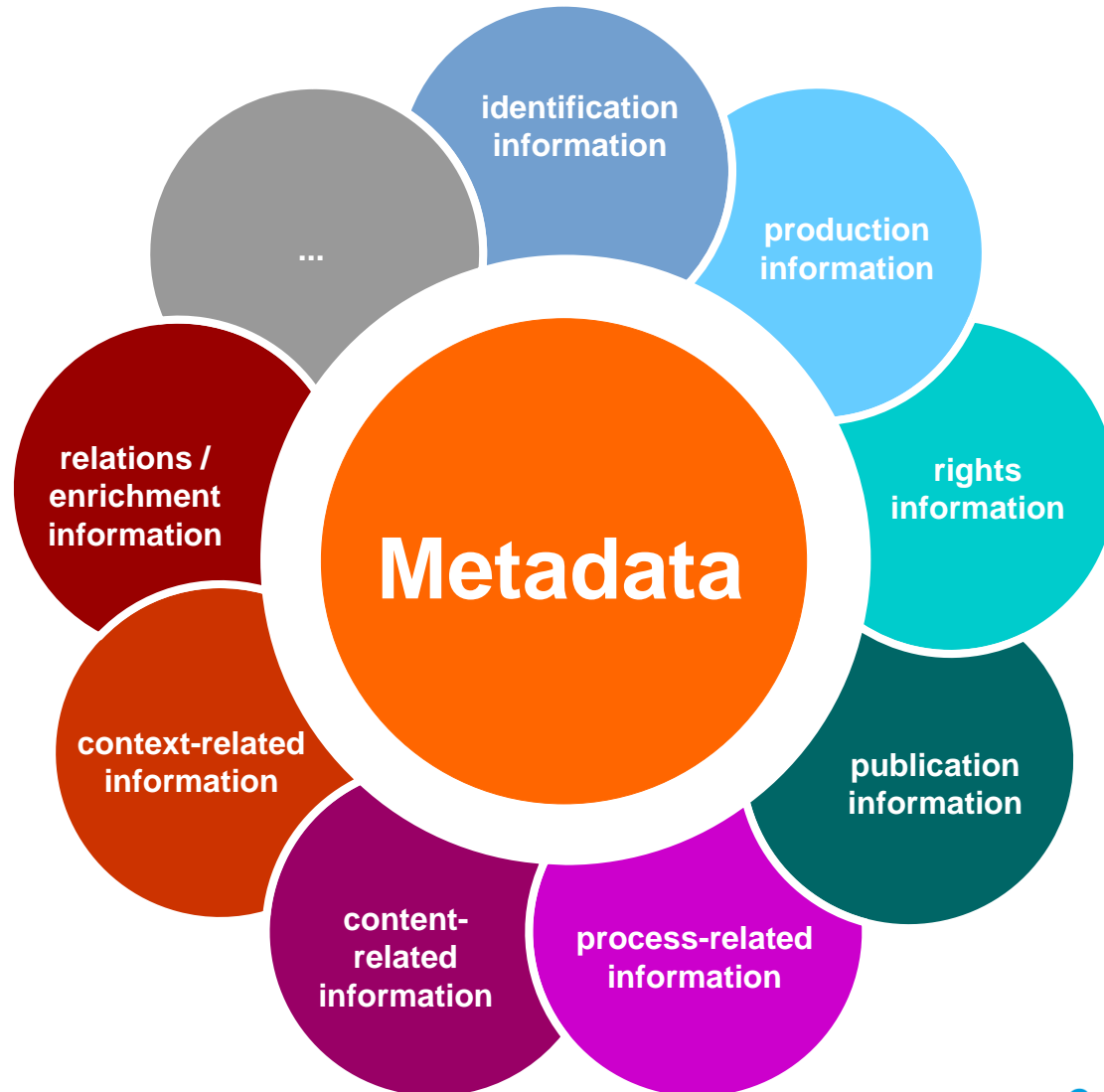
Metadata (WHY)

Use Case
(WHY)

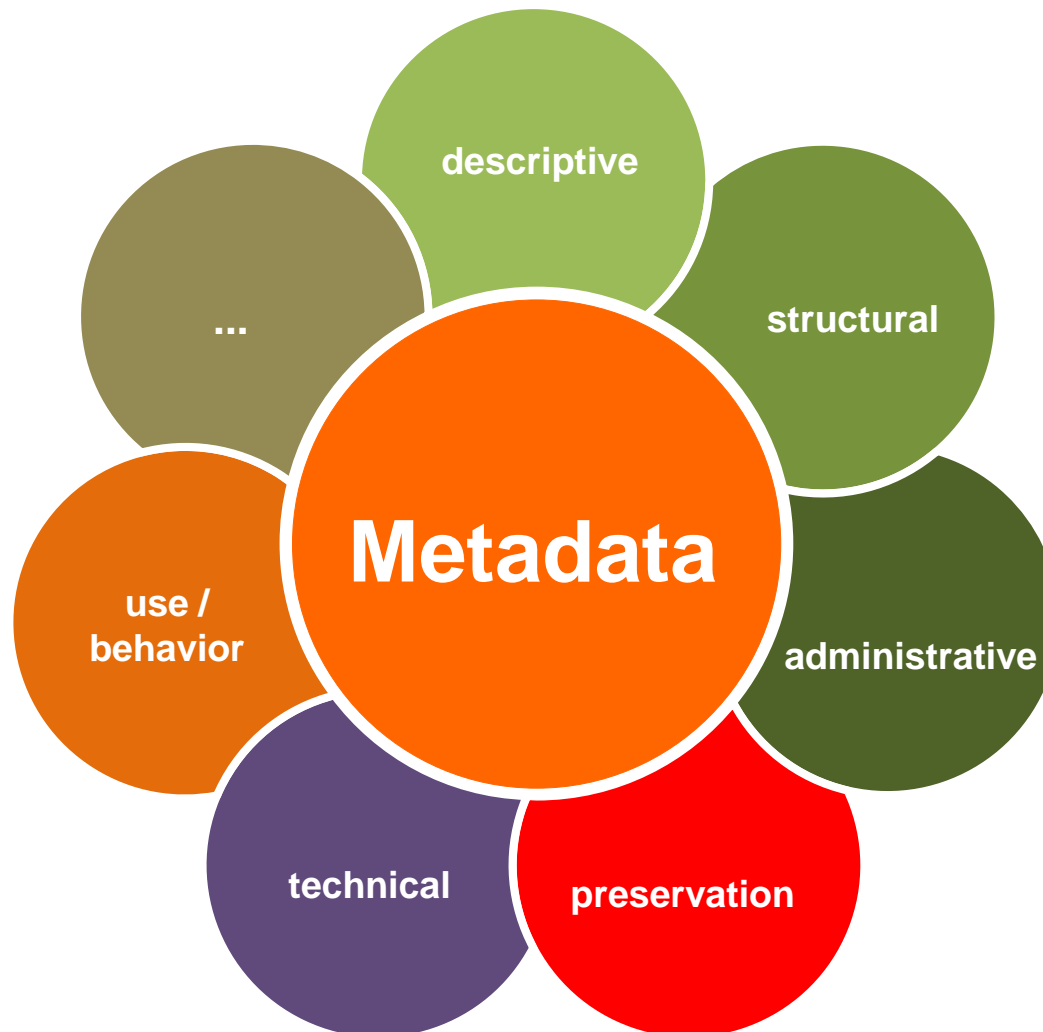
Target Group /
Designated
Community
(FOR WHOM)

Business Case (WHY)

Metadata Types (WHAT)



Metadata Types



Data / Metadata

One man's ceiling is another man's floor

Paul Simon

Data / Metadata

One man's ceiling is another man's floor

Paul Simon

One man's metadata is another man's data

Data Resource Data

D

“any data necessary for thoroughly *understanding*, formally *managing*, and fully *utilizing* the data resource to support the *current and future business information demand*”

(Brackett 2014, p. 5; similar citation without 'current and future' in: Brackett 2011, p. 336)

Representation Information

D

“the information that *maps* a Data Object into more meaningful *concepts*.”

(OAIS 2002/2012)

Metadata Schema

D

“is a minimum set of metadata that is well understood and used by everyone [... and] should be unambiguous.“

(Wooton 2009, p.12)

Metadata Schema

semantics
define the
meaning of
data

syntax
specify the data
binding
structure

vocabulary
control the
language

interoperability & exchange

Namespace

D

“uniquely identifies a set of names so that there is no ambiguity when objects having different origins but the same names are mixed together.”

(Rouse / TechTarget)

Metadata Standard

D

“metadata schemas or ratified by professional, national or international bodies“

Metadata

“sometimes seen as the magic bullet that will save us all and provide some order to the chaos”

Metadata

“[m]etadata needs planning and investment.”

collecting and maintaining metadata can be
ressource-consuming tasks !!!

„Metadata drives business“

Metadata - Key Takeaways

01

Definitions of metadata

- No single definition -> challenged term
- Mutual understanding -> choose a suitable definition and we understand each other

02

Not a new concept

- Evolution over 2500 years
- Though we just label it „metadata“ for about 50 years

03

Why do we create and maintain metadata?

- Use case vs. target group focus
- (Business) goals
- Planning required!!!

04

What metadata do we actually need to track?

- Metadata types
- Metadadadata schemas & standards

Digital Asset Management



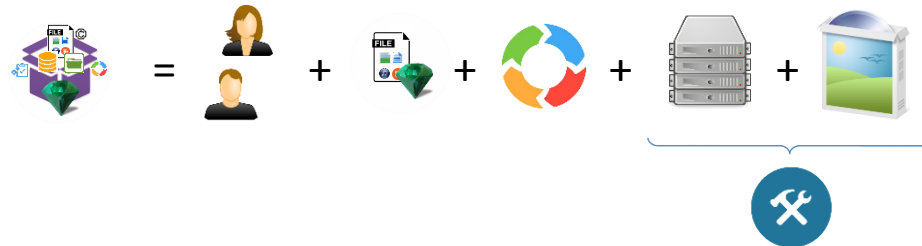
An '**Asset**' is a resource with (economic) **value** for an owner. Its production may have been costly, its loss would cause issues (e.g. financial, legal, or reputation) or the owner expects that it will provide future benefit.



A '**Digital Asset**' is anything that is stored in a **binary** format, has **value for its owner** and comes with the **right to use** it. This means it is about files, **metadata**, e.g. describing the file and its contents in order to make re-useable and permissions. In order to leverage Digital Assets they are managed in a Digital Asset Management system.

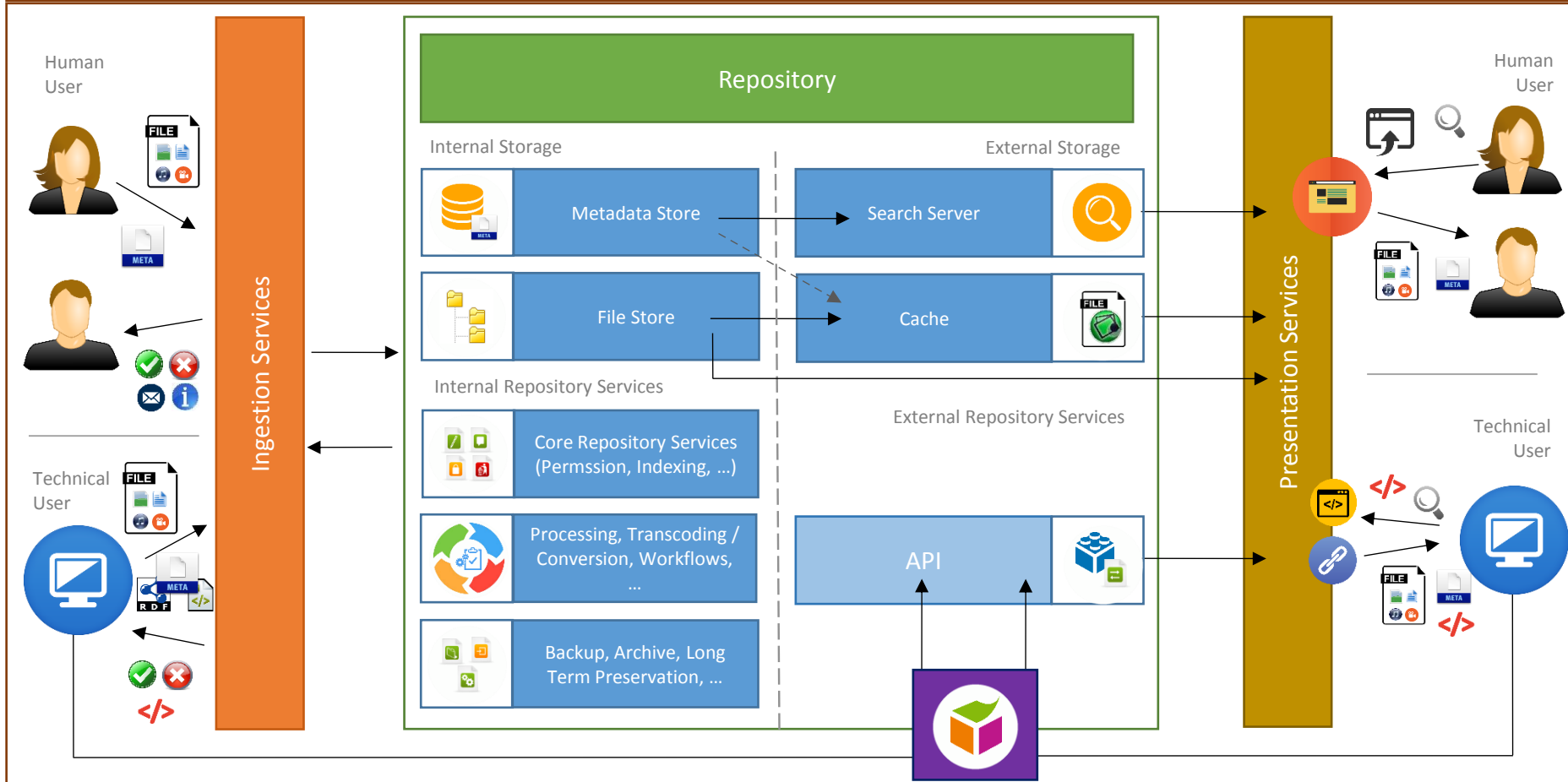


A '**Digital Asset Management System**' is a combination of **software**, **hardware** and **professional services** that enable storing, managing and accessing 'Digital Assets'. It's the "box of tricks" that enables collaboration, processing of files and metadata and helps to ensure the proper re-use as well as avoid the misuse of assets. Generic assets may be referenced.



Digital Asset Management

Digital Asset Management System



DiÖ - Besonderheiten

tw. sensible Daten

Archivierung

ForscherInnen-
gruppe groß

Historische Daten

Interoperabilität

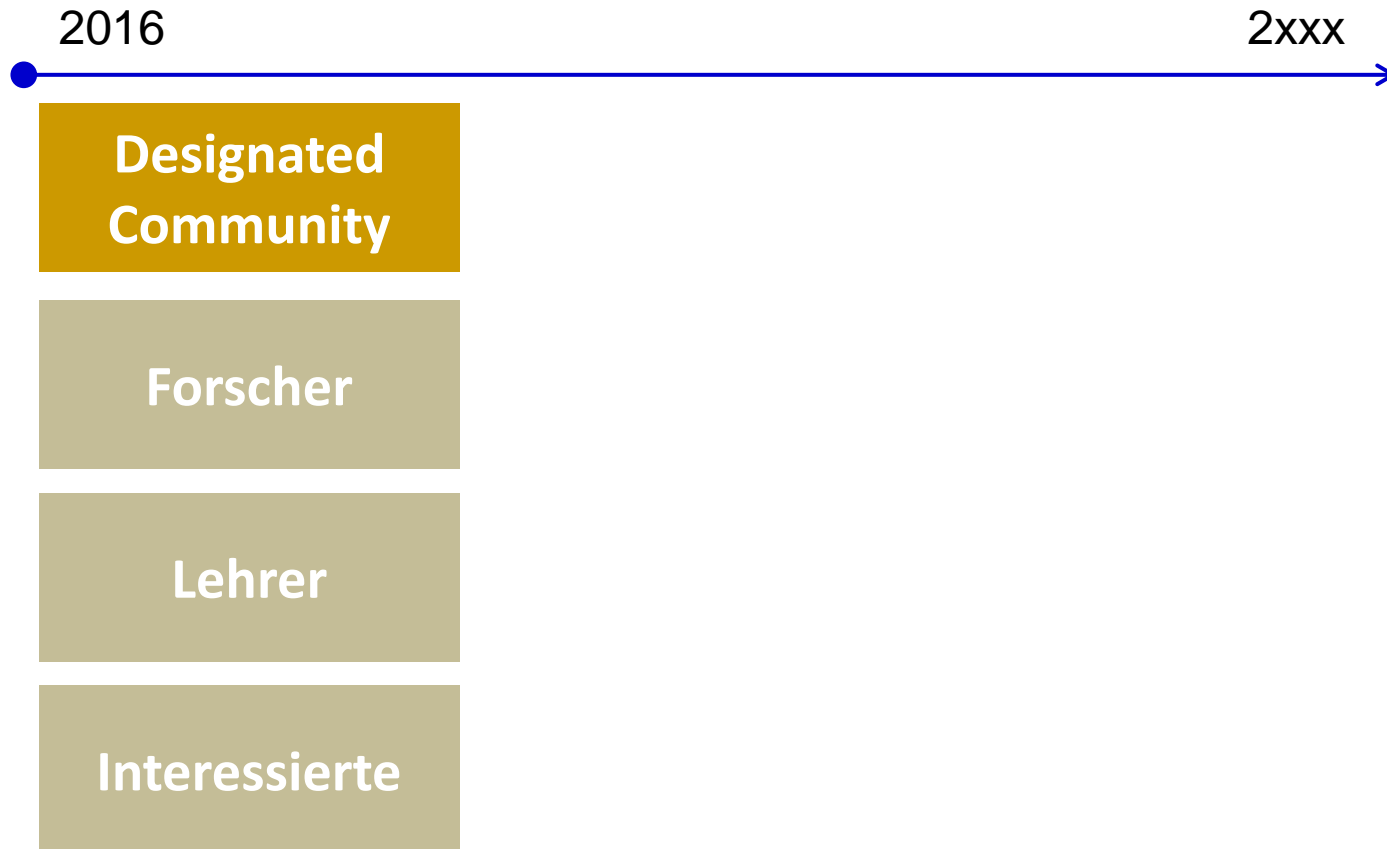
Unterschiedliche
Zielgruppen

Unterschiedliche Formate

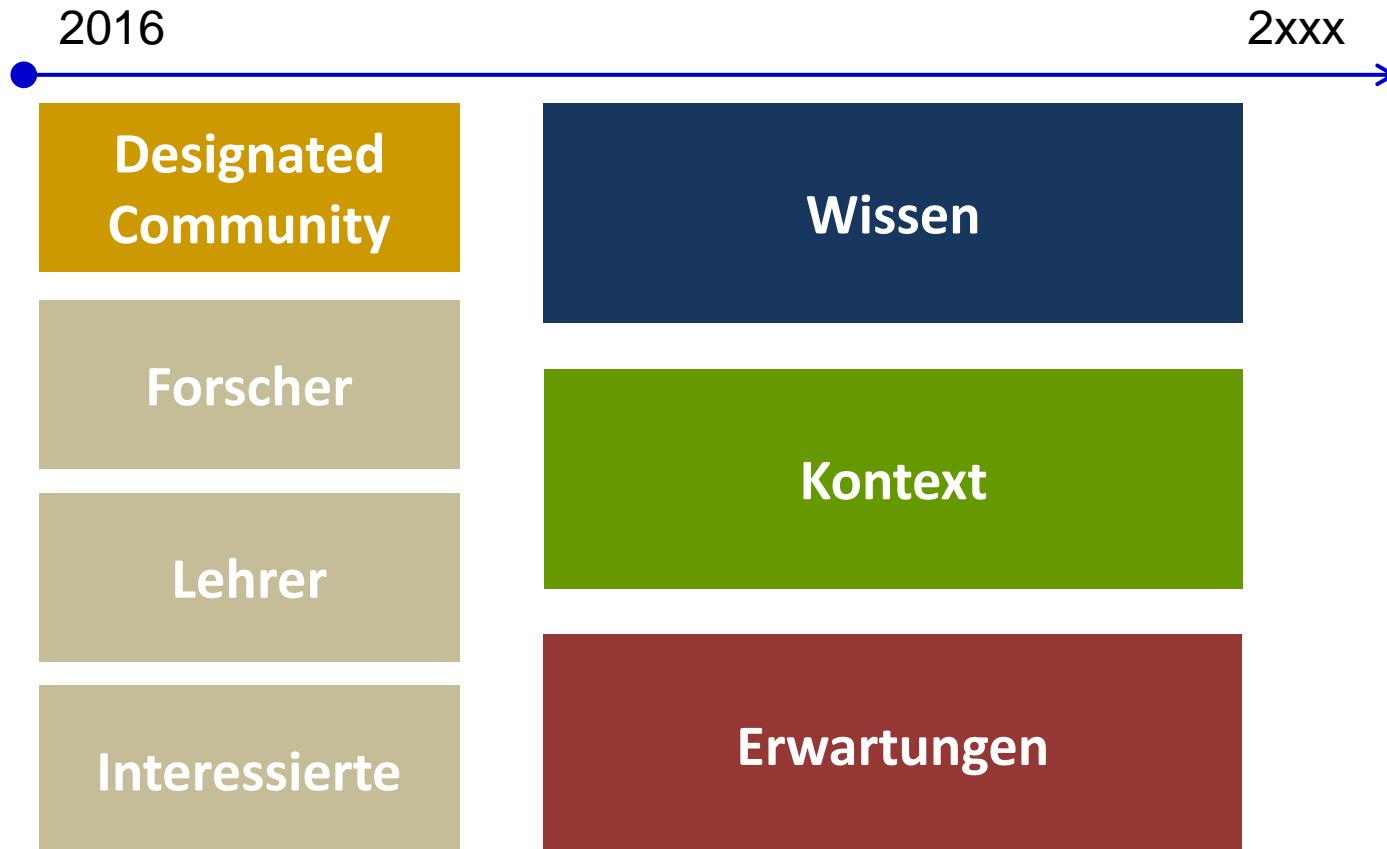
Citizen Science

Mehrsprachig

DiÖ - Metadaten



DiÖ - Metadaten



DiÖ - Audiomaterial



rendered

static

simple

non-active

DiÖ - Audiomaterial



descriptive

technical

preservation

DiÖ - Audiomaterial



Unterschiedliche beschreibende Standards



Dublin Core Metadata Element Set, Version 1.1
DCMI Metadata Terms

Dublin Core



Dublin Core Metadata Element Set, Version 1.1

**Title
Identifier
Type**

**Date
Format
Language**

**Creator
Contributor
Publisher**

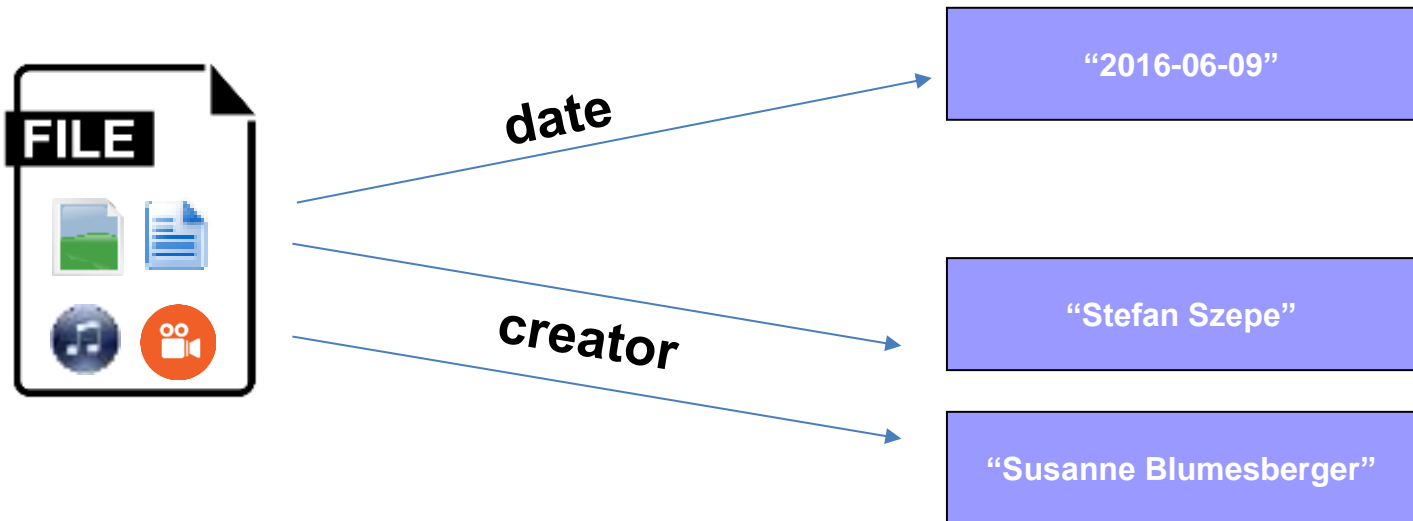
**Subject
Description
Coverage**

**Rights
Source
Relation**

Dublin Core



Resource Description Framework



Dublin Core



RDF/XML

```
<?xml version="1.0" encoding="UTF-8"?>
<rdf:RDF
  xmlns:dc="http://purl.org/dc/elements/1.0/"
  xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#">
  <rdf:Description
rdf:nodeID="Ncf4198934cca4d059c8fea82122ba074">
    <dc:subject> Data; Metadata; e-infrastructures
  </dc:subject>
    <dc:language> de </dc:language>
    <dc:format> application/vnd.ms-powerpoint </dc:format>
    <dc:title> Metadaten im Bereich Repositorien und
                Forschungsdaten </dc:title>
    <dc:creator> Susanne Blumesberger </dc:creator>
    <dc:creator> Stefan Szepe </dc:creator>
    <dc:date> 2016-08-09 </dc:date>
  </rdf:Description>
</rdf:RDF>
```

Dublin Core



JSON-LD

```
{
  "@context": {
    "dc": "http://purl.org/dc/elements/1.0/",
    "rdf": "http://www.w3.org/1999/02/22-rdf-syntax-ns#",
    "rdfs": "http://www.w3.org/2000/01/rdf-schema#",
    "xsd": "http://www.w3.org/2001/XMLSchema#"
  },
  "@id": "_:Ncee178185ef645c7a3132153bad6f053",
  "dc:creator": [
    " Stefan Szepe ",
    " Susanne Blumesberger "
  ],
  "dc:date": " 2016-08-09 ",
  "dc:format": " application/vnd.ms-powerpoint ",
  "dc:language": " de ",
  "dc:subject": " Data; Metadata; e-infrastructures ",
  "dc:title": " Metadaten im Bereich Repositorien und
\n          Forschungsdaten "
}
```


Dublin Core



Syntaxunterschiede innerhalb eines Formats

JSON-LD Expanded

```
[
  {
    "@id": "_:Ncee178185ef645c7a3132153bad6f053",
    "http://purl.org/dc/elements/1.0/creator": [
      {
        "@value": " Stefan Szepe "
      },
      {
        "@value": " Susanne Blumesberger "
      }
    ],
    "http://purl.org/dc/elements/1.0/date": [
      {
        "@value": " 2016-08-09 "
      }
    ],
    "http://purl.org/dc/elements/1.0/format": [
      {
        "@value": " application/vnd.ms-powerpoint "
      }
    ],
    "http://purl.org/dc/elements/1.0/language": [
      {
        "@value": " de "
      }
    ]
  }
]
```

JSON-LD Compacted

```
{
  "@id": "_:Ncee178185ef645c7a3132153bad6f053",
  "http://purl.org/dc/elements/1.0/creator": [
    " Stefan Szepe ",
    " Susanne Blumesberger "
  ],
  "http://purl.org/dc/elements/1.0/date": " 2016-08-09 ",
  "http://purl.org/dc/elements/1.0/format": " applicatio",
  "http://purl.org/dc/elements/1.0/language": " de ",
  "http://purl.org/dc/elements/1.0/subject": " Data; Met",
  "http://purl.org/dc/elements/1.0/title": " Metadaten i",
  "http://purl.org/dc/elements/1.0/type": " Forschungsd",
  "http://purl.org/dc/elements/1.0/type": " Daten "
}
```

Dublin Core



N3

```
@prefix dc: <http://purl.org/dc/elements/1.0/> .
@prefix rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix xml: <http://www.w3.org/XML/1998/namespace> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .

[] dc:creator " Stefan Szepe ",
    " Susanne Blumesberger " ;
    dc:date " 2016-08-09 " ;
    dc:format " application/vnd.ms-powerpoint " ;
    dc:language " de " ;
    dc:subject " Data; Metadata; e-infrastructures " ;
    dc:title "" Metadaten im Bereich Repositorien und
                Forschungsdaten "" .
```

N-Triples

```
_:N0411493d699942aba3dc7432f4c009ba <http://purl.org/dc/elements/1.0/creator> " Stefan Szepe
" .
_:N0411493d699942aba3dc7432f4c009ba <http://purl.org/dc/elements/1.0/format> "
application/vnd.ms-powerpoint " .
_:N0411493d699942aba3dc7432f4c009ba <http://purl.org/dc/elements/1.0/subject> " Data;
Metadata; e-infrastructures " .
_:N0411493d699942aba3dc7432f4c009ba <http://purl.org/dc/elements/1.0/title> " Metadaten im
Bereich Repositorien und \n
Forschungsdaten " .
_:N0411493d699942aba3dc7432f4c009ba <http://purl.org/dc/elements/1.0/language> " de " .
_:N0411493d699942aba3dc7432f4c009ba <http://purl.org/dc/elements/1.0/date> " 2016-08-09 " .
_:N0411493d699942aba3dc7432f4c009ba <http://purl.org/dc/elements/1.0/creator> " Susanne
Blumesberger " .
```

Dublin Core



DCMI Metadata Terms

Properties in the <i>/terms/</i> namespace	abstract , accessRights , accrualMethod , accrualPeriodicity , accrualPolicy , alternative , audience , available , bibliographicCitation , conformsTo , contributor , coverage , created , creator , date , dateAccepted , dateCopyrighted , dateSubmitted , description , educationLevel , extent , format , hasFormat , hasPart , hasVersion , identifier , instructionalMethod , isFormatOf , isPartOf , isReferencedBy , isReplacedBy , isRequiredBy , issued , isVersionOf , language , license , mediator , medium , modified , provenance , publisher , references , relation , replaces , requires , rights , rightsHolder , source , spatial , subject , tableOfContents , temporal , title , type , valid
Properties in the <i>/elements/1.1/</i> namespace	contributor , coverage , creator , date , description , format , identifier , language , publisher , relation , rights , source , subject , title , type
Vocabulary Encoding Schemes	DCMIType , DDC , IMT , LCC , LCSH , MESH , NLM , TGN , UDC
Syntax Encoding Schemes	Box , ISO3166 , ISO639-2 , ISO639-3 , Period , Point , RFC1766 , RFC3066 , RFC4646 , RFC5646 , URI , W3CDTF
Classes	Agent , AgentClass , BibliographicResource , FileFormat , Frequency , Jurisdiction , LicenseDocument , LinguisticSystem , Location , LocationPeriodOrJurisdiction , MediaType , MediaTypeOrExtent , MethodOfAccrual , MethodOfInstruction , PeriodOfTime , PhysicalMedium , PhysicalResource , Policy , ProvenanceStatement , RightsStatement , SizeOrDuration , Standard
DCMI Type Vocabulary	Collection , Dataset , Event , Image , InteractiveResource , MovingImage , PhysicalObject , Service , Software , Sound , StillImage , Text
Terms related to the DCMI Abstract Model	memberOf , VocabularyEncodingScheme

+ weitere Metadatenelemente

Beschreibende Audio MD



„Erweiterungen zu Dublin Core“

**Audio Engineering
Society**

AES60-2011

AES Standard for
Audio Metadata -

Core Audio Metadata

XML Schema

European

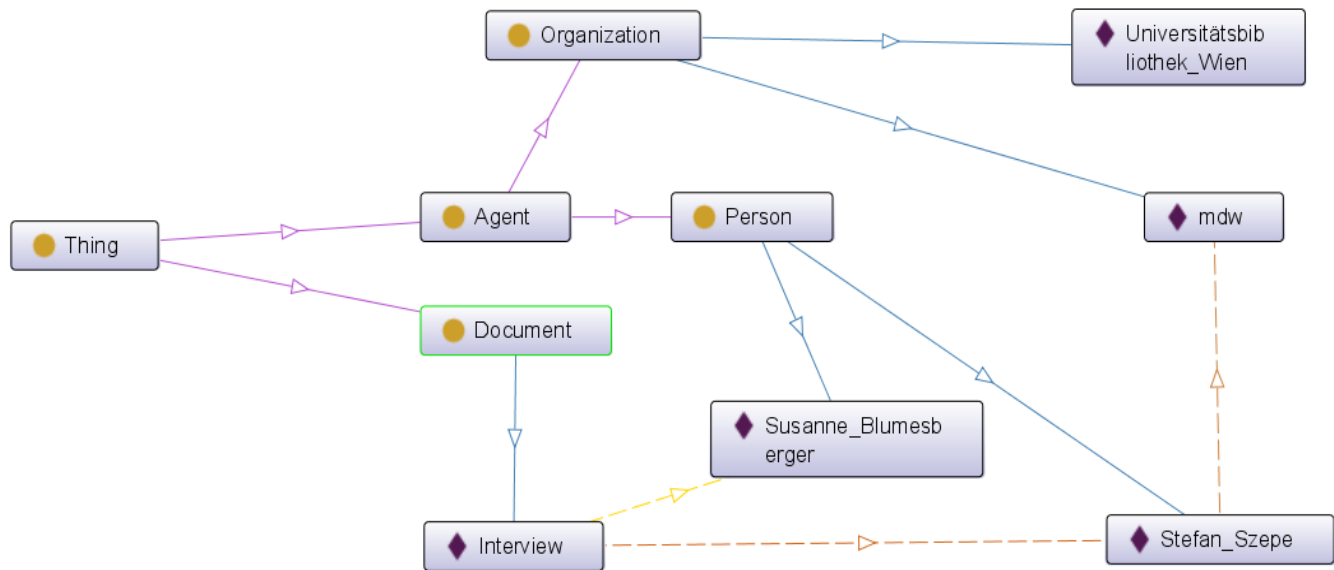
Broadcasting Union
Tech 3293 - EBUCore

+ weitere Metadatenelemente

Semantische Audio MD



Ontologien (Nutzung bestehender & eigene)



- employedAt
- has individual
- has subclass
- interviewee
- interviewer

Kriterium: zeitbasierte (Meta)Daten



EXMARaLDA data

et parce que c'est important aussi,

	2 [00:01.2]	3 [00:01.6]	4 [00:02.0]	5 [00:04.2]
SR [v]	Oui.			
SR [en]	Yes.			
NS [f]				
NS [en]				
PP [v]	out juste vingt- trois heures. Est-ce qu'on peut passer à un autre sujet quel ((inc.)) de l'Europe et parce que c'est import			
PP [en]	city eleven PM. Can we come to another topic which ((inc.)) of Europe and since that is important, to			
AC [f]				
AC [en]				

```
1 <?xml version="1.0" encoding="UTF-8"?>
2 <TEI xmlns="http://www.tei-c.org/ns/1.0" xmlns:tesla="http://www.exmaralda.org"
3   xmlns:tei="http://www.tei-c.org/ns/1.0">
4   <teiHeader>
5     <fileDesc>
6       <titleStmt>
7         <title/>
8       </titleStmt>
9       <publicationStmt>
10        <p/>
11      </publicationStmt>
12      <sourceDesc>
13        <recordingStmt>
14          <p/>
15        </recordingStmt>
16      </sourceDesc>
17    </fileDesc>
18    <profileDesc>
19      <revisionDesc>
20        <change when="2013-10-10T14:50:24.011+02:00">Created by XSL transformation from an
21          EXMARaLDA segmented transcription</change>
22        </revisionDesc>
23      </profileDesc>
24    <revisionDesc>
25      <change when="2013-10-10T14:50:24.011+02:00">Created by XSL transformation from an
26        EXMARaLDA segmented transcription</change>
27      </revisionDesc>
28    </teiHeader>
29    <text>
30      <timeline unit="s" origin="#T0">
31        <body>
32          <incident start="T0" end="T1">
33            <desc>((Transkriptionsbeginn nach 0,9s)) </desc>
34          </incident>
35          <div>
36            <div>
37              <div>
38                <cu who="#SPK1"><anchor synch="#T37"/><seg function="utterance" type="interrogative"
39                  ><pause type="long"/><anchor synch="T38"/><w xml:id="w143">Do</w><w
40                  xml:id="w144">you</w><w xml:id="w145">wanna</w><w xml:id="w146">continue</w><w
41                  xml:id="w147">this</w><w xml:id="w148">for</w><w xml:id="w149">the</w><w
42                  xml:id="w150">rest</w><w xml:id="w151">of</w><w xml:id="w152">your</w><w
43                  xml:id="w153">life</w></c></c><anchor synch="T39"/><w xml:id="w154">let's</w><w
44                  xml:id="w155">say</w></c></c><w xml:id="w156">ac</w><w xml:id="w157"
45                  >musical</w><w xml:id="w158">career</w></seg><anchor synch="#T40"/></u>
46              </div>
47              <spanGrp type="de">
48                <span from="#T37" to="#T38">•••</span>
49                <span from="#T38" to="#T39">Willst du für den Rest deines Lebens so weitermachen, </span>
50                <span from="#T39" to="#T40">mit dieser musikalischen Karriere? </span>
51              </spanGrp>
52            </div>
53          </div>
54          <div>
55            <cu who="#SPK0"><anchor synch="#T40"/><seg function="utterance" type="modeless"
56              ><pause/><anchor synch="T41"/><unclear>w xml:id="w159">Me</w><unclear>w
57              xml:id="w160">I</w><w xml:id="w161">don't</w><w xml:id="w162">know</w><w
58              xml:id="w163">I</w></c></c>
59            </div>
60          </div>
61        </body>
62      </timeline>
63    </text>
64  </div>
65 </TEI>
```

- + structured XML data
- application specific

Kriterium: zeitbasierte (Meta)Daten



maxqda data

The screenshot shows the MAXQDA 10 software interface. The main window displays a document titled "Case Summaries/Akayesu Summary". A video player window is overlaid on the document, showing a scene with several people in a rural setting. The document text is visible in the background, including sections 12 and 18. The interface includes a menu bar, a toolbar, and a document system tree on the left side.

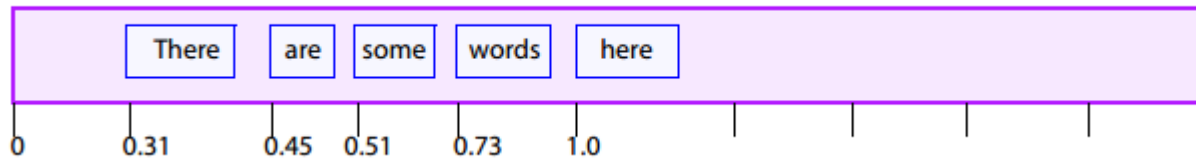
+ structured XML data via export

- application specific

zeitbasierte (Meta)Daten



xmpdm – XMP Dynamic Media



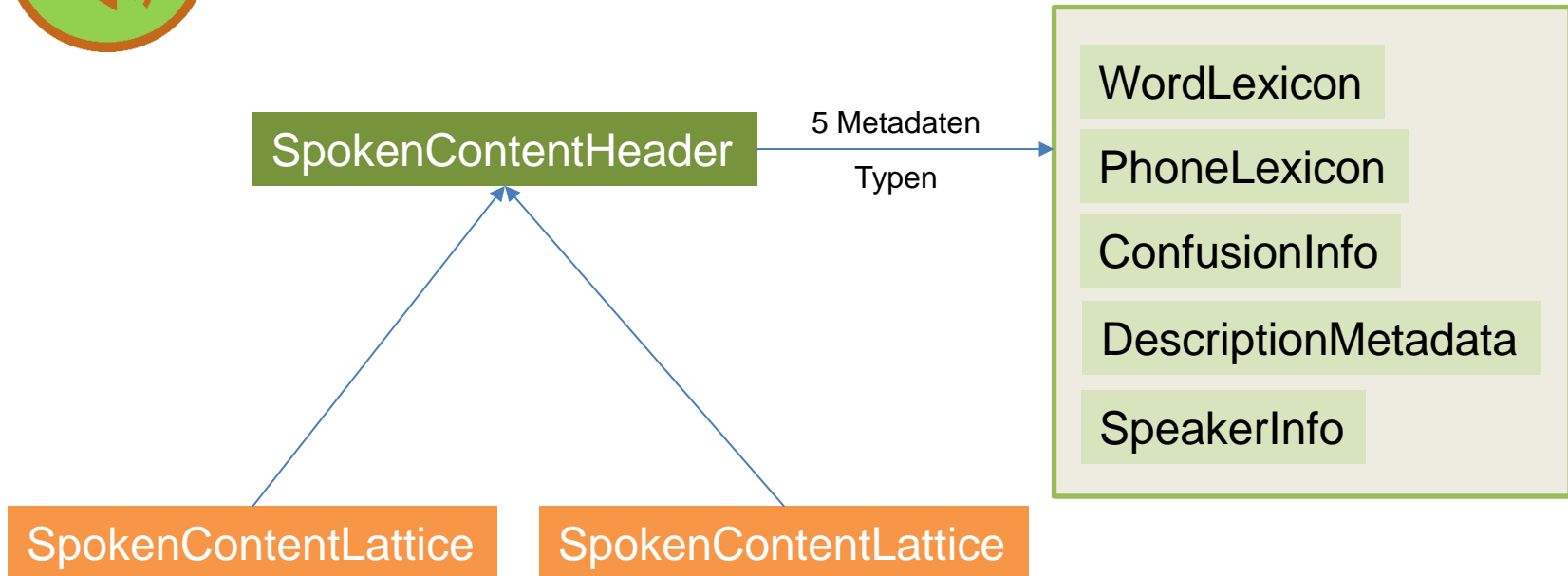
```
<xmpDM:Tracks>
  <rdf:Bag>
    <rdf:li>
      <rdf:Description
        xmpDM:trackName="Text transcription aggregated by Premiere Pro CS4"
        xmpDM:trackType="Speech"
        xmpDM:frameRate="f1000">
        <xmpDM:markers>
          <rdf:Seq>
            <rdf:li
              xmpDM:startTime="310"
              xmpDM:duration="140"
              xmpDM:name="there"
              xmpDM:speaker="Speaker0"
              xmpDM:probability="30"/>
            <rdf:li
              xmpDM:startTime="450"
              xmpDM:duration="60"
              xmpDM:name="are"
              xmpDM:speaker="Speaker0"
              xmpDM:probability="80"/>
            <rdf:li
              xmpDM:startTime="510"
              xmpDM:duration="220"
              xmpDM:name="some"
              xmpDM:speaker="Speaker0"
              xmpDM:probability="41"/>
          </rdf:Seq>
        </xmpDM:markers>
      </rdf:Description>
    </rdf:li>
  </rdf:Bag>
</xmpDM:Tracks>
```

+ structured XML data
+ non-application specific

zeitbasierte (Meta)Daten



MPEG-7 SpokenContent Description



- + structured XML data
- + non-application specific

Kriterium: Audioformat

Lossless



Embedded metadata

uncompressed

compressed

**Broadcast Wave
Format**

**ALAC M4A
FLAC
SHN**

Technische MD Audio



Viele unterschiedliche Parameter

Container

**Number Of
Channels**

Sampling Rate

Codec

Bitrate

Compression

Technische MD Audio



Viele Standards

Library of Congress

audioMD

Audio Engineering Society

**AES57-2011, AES Standard for
Audio Metadata - Audio Object
XML Schema**

**AES60-2011, AES Standard for
Audio Metadata - Core Audio
Metadata XML Schema**

European Broadcasting Union

Tech 3293 - EBUCore

**Tech 3349 - Acquisition
Metadata**

**audio metadata - based on EBU
Tech 3301**

**device metadata - based on EBU
Tech 3301**

microphone metadata

Preservation - OAIS



Preservation



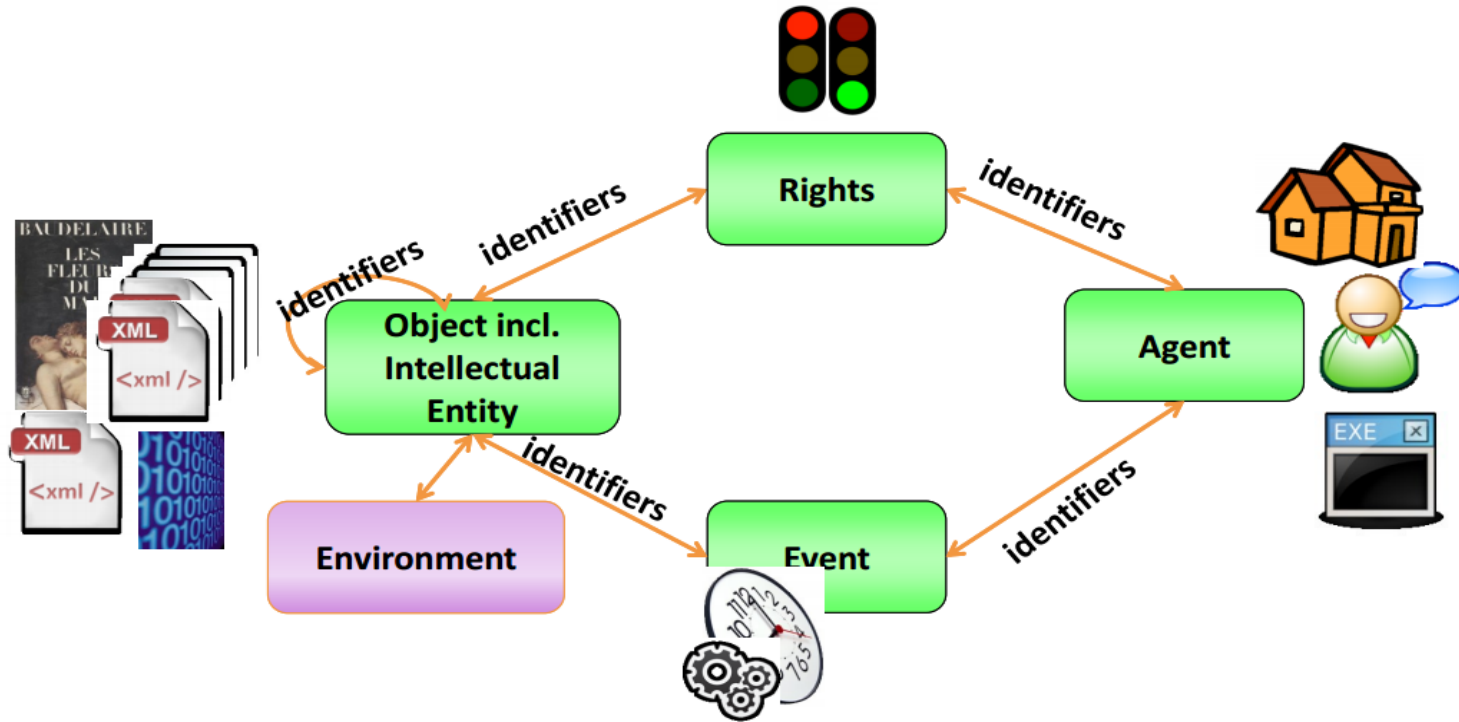
Alle Elemente beeinflussen Metadaten



Preservation - PREMIS



Zentraler Standard – Environment & Rechte !!!



PREMIS

Preservation - TIMBUS



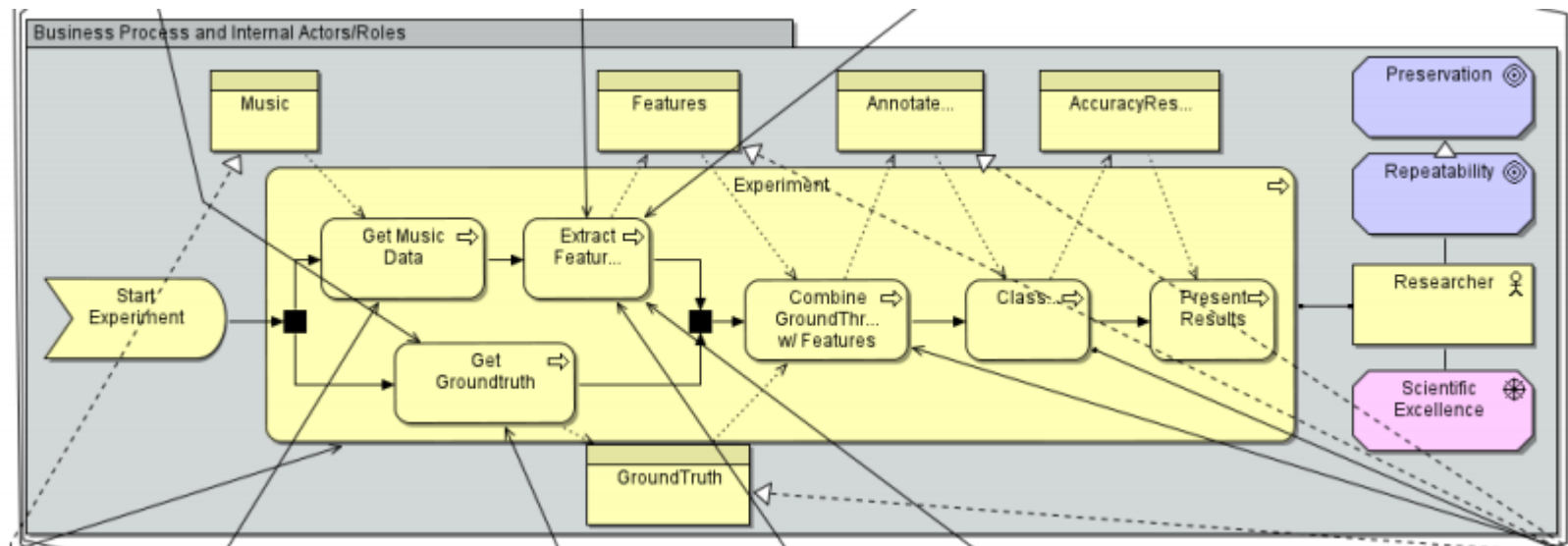
Prozesse -> Wiederholbarkeit



Preservation - TIMBUS



Prozessanalyse und -dokumentation



TIMBUS



TIMELESS BUSINESS

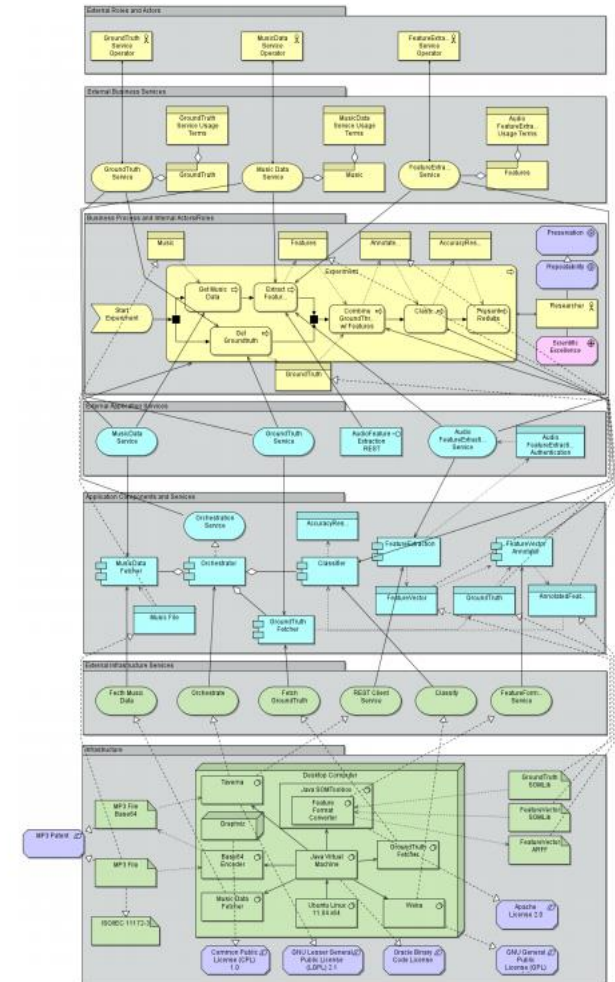
e-infrastructures
austria

Preservation - TIMBUS



Prozess kann auch nicht isoliert betrachtet werden

- + Infrastruktur
- + Akteure
- + Kontext



Klimadaten - Besonderheiten

filterbar

maschinenlesbar

**ForscherInnen-
gruppe**

Historische Daten

Archivierung

Interoperabilität

**Spezielle MD
Felder**

NetDCF (Network Common Data Format)

Klimadaten (NetCDF)

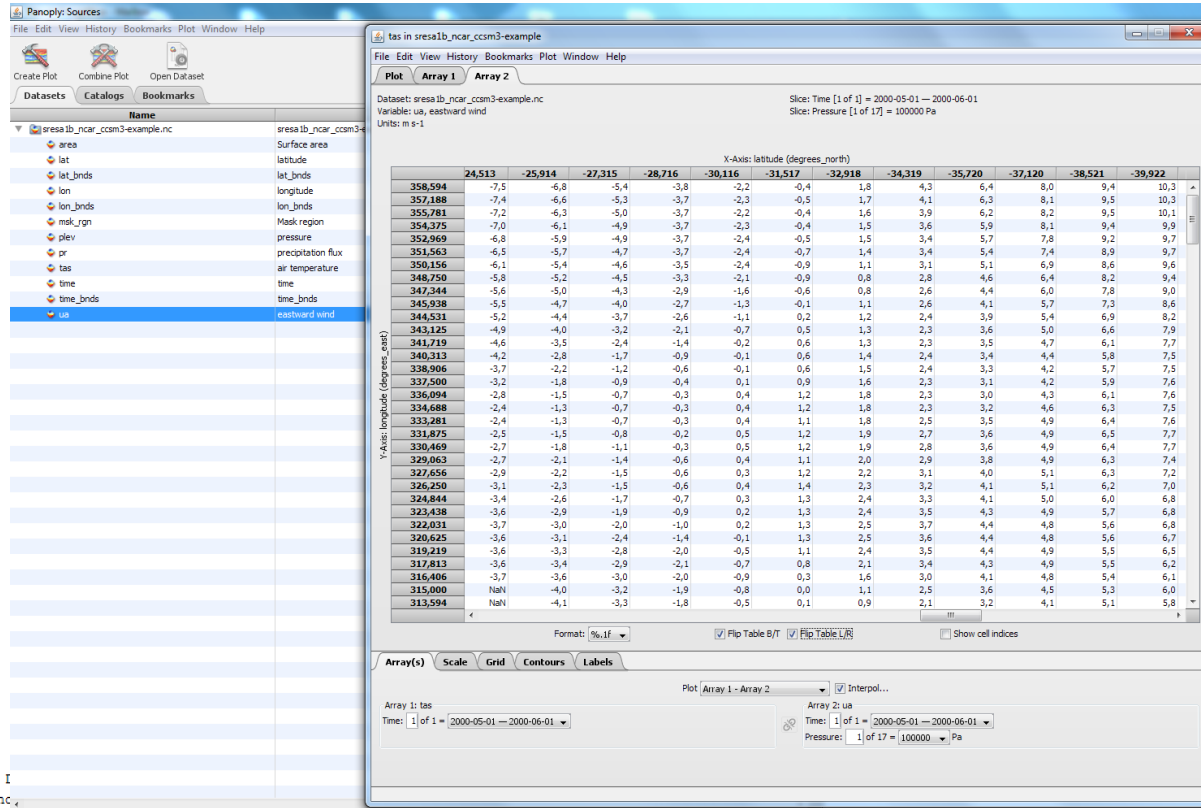


non-rendered

static /
dynamic

non-active

Data & Metadata



```
// global attributes:
:CVS_Id = "$Id$";
:creation_date = "";
:prg_ID = "Source file unknown Version unknown I";
:cmd_ln = "bds -x 256 -y 128 -m 23 -o /data/zenc...";
:history = "Tue Oct 25 15:08:51 2005: ncks -O ->";
:table_id = "Table A1";
:title = "model output prepared for IPCC AR4";
:institution = "NCAR (National Center for Atmospheric \nResearch, Boulder, CO, USA)";
:source = "CCSM3.0, version beta19 (2004): \natmosphere: CAM3.0, T85L26;\nocean : POP1.4.3 (modified), gx1v3\nsea ice : CSIMS.0, T85;\nland : CLM3.0, gx1v3";
:contact = "ccsm@ucar.edu";
:project_id = "IPCC Fourth Assessment";
:conventions = "CF-1.0";
:references = "Collins, W.D., et al., 2005:\n The Community Climate System Model, Version 3\n Journal of Climate\n \n Main website: http://www.ccsm.ucar.edu";
:acknowledgment = " Any use of CCSM data should acknowledge the contribution\n of the CCSM project and CCSM sponsor agencies with the \n following citation:\n \ This research uses data provided by the Communi";
:realization = 1; // int
:experiment_id = "720 ppm stabilization experiment (SRESA1B)";
:comment = "This simulation was initiated from year 2000 of \n CCSM3 model run b30.030a and executed on \n hardware cheetah.ccs.ornl.gov. The input external forcings are\nozone forcing : A1B.ozone.128x64 L";
```

Metadata



```
83 // global attributes:
84 .CVS_Id = "$Id$";
85 .creation_date = "";
86 .prg_Id = "Source file unknown Version unknown Date unknown";
87 .cmd_In = "bds -x 256 -y 128 -m 23 -o /data/zender/data/dst_T85.nc";
88 .history = "Tue Oct 25 15:08:51 2005: ncks -O -x -v va -m sresa1b_ncar_ccsm3_0_run1_200001.nc sresa1b_ncar_ccsm3_0_run1_200001.nc\n",
89 "Tue Oct 25 15:07:21 2005: ncks -d time,0 sresa1b_ncar_ccsm3_0_run1_200001_201912.nc sresa1b_ncar_ccsm3_0_run1_200001.nc\n",
90 "Tue Oct 25 13:29:43 2005: ncks -d time,0.239 sresa1b_ncar_ccsm3_0_run1_200001_209912.nc /var/www/html/tmp/sresa1b_ncar_ccsm3_0_run1_200001_201912.nc\n",
91 "Thu Oct 20 10:47:50 2005: ncks -A -v va /data/brownmc/sresa1b/atm/mo/va/ncar_ccsm3_0/run1/sresa1b_ncar_ccsm3_0_run1_va_200001_209912.nc /data/brownmc/sresa1b/atm/mo/tas/ncar_ccsm3_0/run1/sresa1b_
92 "Wed Oct 19 14:55:04 2005: ncks -F -d time,01,1200 /data/brownmc/sresa1b/atm/mo/va/ncar_ccsm3_0/run1/sresa1b_ncar_ccsm3_0_run1_va_200001_209912.nc /data/brownmc/sresa1b/atm/mo/va/ncar_ccsm3_0/ru
93 "Wed Oct 19 14:53:28 2005: ncrat /data/brownmc/sresa1b/atm/mo/va/ncar_ccsm3_0/run1/foo_05_1200.nc /data/brownmc/sresa1b/atm/mo/va/ncar_ccsm3_0/run1/foo_1192_1196.nc /data/brownmc/sresa1b/atm/mo/
94 "Wed Oct 19 14:50:38 2005: ncks -F -d time,05,1200 /data/brownmc/sresa1b/atm/mo/va/ncar_ccsm3_0/run1/va_A1.SRESA1B_1.CCSM.atmm.2000-01_cat_2099-12.nc /data/brownmc/sresa1b/atm/mo/va/ncar_ccsm
95 "Wed Oct 19 14:49:45 2005: ncrat /data/brownmc/sresa1b/atm/mo/va/ncar_ccsm3_0/run1/va_A1.SRESA1B_1.CCSM.atmm.2000-01_cat_2079-12.nc /data/brownmc/sresa1b/atm/mo/va/ncar_ccsm3_0/run1/va_A1.S
96 "Created from CCSM3 case b30.040\n",
97 " by wgstrand@ucar.edu\n",
98 " on Wed Nov 17 14:12:57 EST 2004\n",
99 " \n",
100 " For all data, added IPCC requested metadata";
101 .table_id = "Table A1";
102 .title = "model output prepared for IPCC AR4";
103 .institution = "NCAR (National Center for Atmospheric \n",
104 "Research, Boulder, CO, USA)";
105 .source = "CCSM3.0, version beta19 (2004): \n",
106 "atmosphere: CAM3.0, T85L26;\n",
107 "ocean : POP1.4.3 (modified), gx1v3\n",
108 "sea ice : CSIM5.0, T85;\n",
109 "land : CLM3.0, gx1v3";
110 .contact = "ccsm@ucar.edu";
111 .project_id = "IPCC Fourth Assessment";
112 .Conventions = "CF-1.0";
113 .references = "Collins, W.D., et al., 2005:\n",
114 " The Community Climate System Model, Version 3\n",
115 " Journal of Climate\n",
116 " \n",
117 " Main website: http://www.cesm.ucar.edu";
118 .acknowledgment = " Any use of CCSM data should acknowledge the contribution\n",
119 " of the CCSM project and CCSM sponsor agencies with the\n",
120 " following citation:\n",
121 " \This research uses data provided by the Community Climate\n",
122 " System Model project (www.cesm.ucar.edu), supported by the\n",
123 " Directorate for Geosciences of the National Science Foundation\n",
124 " and the Office of Biological and Environmental Research of\n",
125 " the U.S. Department of Energy.\n",
126 "In addition, the words \Community Climate System Model\ and\n",
127 " \CCSM\ should be included as metadata for webpages referencing\n",
128 " work using CCSM data or as keywords provided to journal or book\n",
129 " publishers of your manuscripts.\n",
130 "Users of CCSM data accept the responsibility of emailing\n",
131 " citations of publications of research using CCSM data to\n",
132 " ccsm@ucar.edu.\n",
133 "Any redistribution of CCSM data must include this data\."
```

Text Grid Schema WSDL XBRL Authentic Browser

sresa1b_ncar_ccsm3-example.cdl

Tech

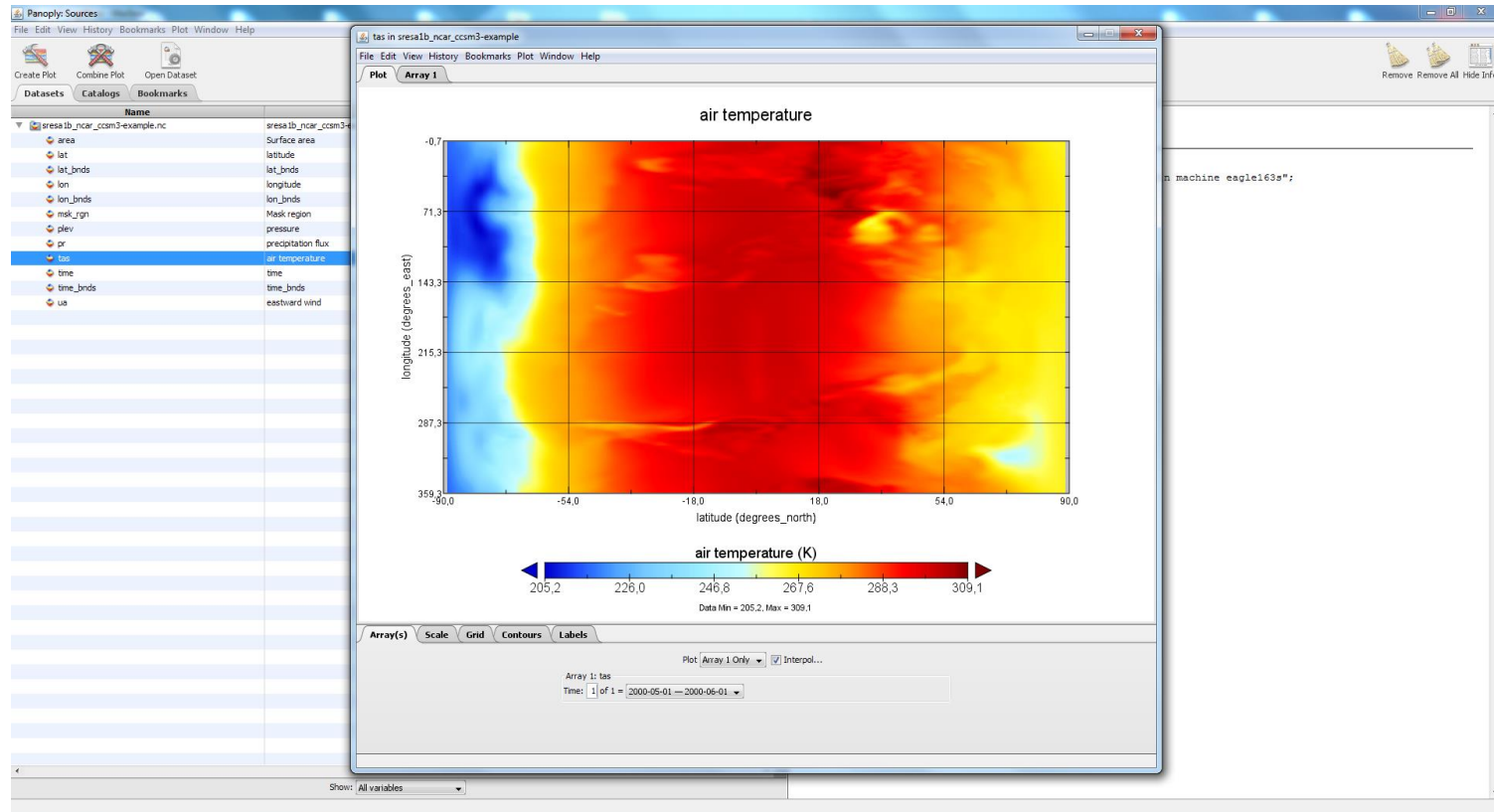


Bild selbst

rendered

static

Bildmetadaten

Metadata - Key Takeaways

01 Asset-Idea

- understand data as assets
- manage the assets!!!
- metadata is key element in the management process

02 Metadata Management

- there isn't just one way of doing it (on many levels: metadata standards, schemas, formats)
- think about target groups / designated communities / agents
- plan metadata thoroughly from the very beginning

03 Preservation

- is part of the lifecycle - consider it from the very beginning (define preservation goals in planning stage and adapt them when needed)
- preservation is not always object only

Klimadaten- Metadaten

Besonderheiten:

- Filterbare Metadaten erforderlich
- Maschinenlesbare Metadaten
- Spezielle Metadatenfelder für Temperatur und Niederschlag und Sonnenscheindauer
- Network Common Data Format wird benötigt
- Daten sollen auf lange Zeit archiviert werden
- Interoperabilität mit anderen Systemen muss gegeben sein

Workshop, 22. Juni 2016

Metadata Management - the way to Open Science

Universität Wien, Aula am Campus, 9:00-17:00

Anmeldungen bitte bis 15.6.2016 unter
susanne.blumesberger@univie.ac.at

Programm unter <http://phaidraservice.univie.ac.at/>

Kontakt



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Diskussion

