



# Terminology as part of the Semantic Web : recommendations for design and management

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## European Network and projects



<http://www.minervaeurope.org/>



<http://www.michael-culture.org/>

# Coordinating digitization in Europe and deploying new services

# Minerva



- Cross-domain approach (LAM)
- Best practice network
- High liaison with national digitisation programs
- Monitoring process
- Promotion of digitisation standards

now supported by the Michael Culture association



<http://www.minervaeurope.org/>

# MICHAEL



- The MICHAEL European portal
- <http://www.michael-culture.org>
- Multilingual Inventory for Cultural Heritage in Europe
- One European portal, many national instances
- 2 phases of project :
  - **MICHAEL** : 2004-2007 (3 countries)
  - **MICHAEL+** : 2006-2008 (+ 15 countries)
- Cross-domain and multilingual access to digital collections



## MICHAEL Culture Association



**Michael Culture Association (MCA)** is a not-for-profit organisation, founded in April 2007 under Belgian law.

It gathers professionals working in the field of digital cultural heritage, has members from all over Europe, including public agencies, cultural institutions and private organisations.

Michael Culture is a founding member of the Europeana Foundation

# MICHAEL Culture Association



The work of Michael Culture association is organized in **4 thematic working groups:**

- Multilingualism
  - Innovative services for the public
  - Interoperability - reuse and linked data
  - New services for the research field
- 
- One horizontal working group : Michael Portal

# ATHENA



- eContent Plus project : best practice network
- Coordinated by the Mibac (2008-2011)
- Partners : 20 EU member states, Israel, Russia and Azerbaijan.
- Mainly museums



**ATHENA**  
Access to cultural heritage  
networks across Europe

# ATHENA



- Key topics:
  - Standards
  - Ingestion software
  - Terminologies
  - IPR
  - Dissemination and communication (Athena journal, booklets, guides,...)
  
- One workpackage on Terminology and multilingualism



**ATHENA**  
Access to cultural heritage  
networks across Europe



# Linked Heritage



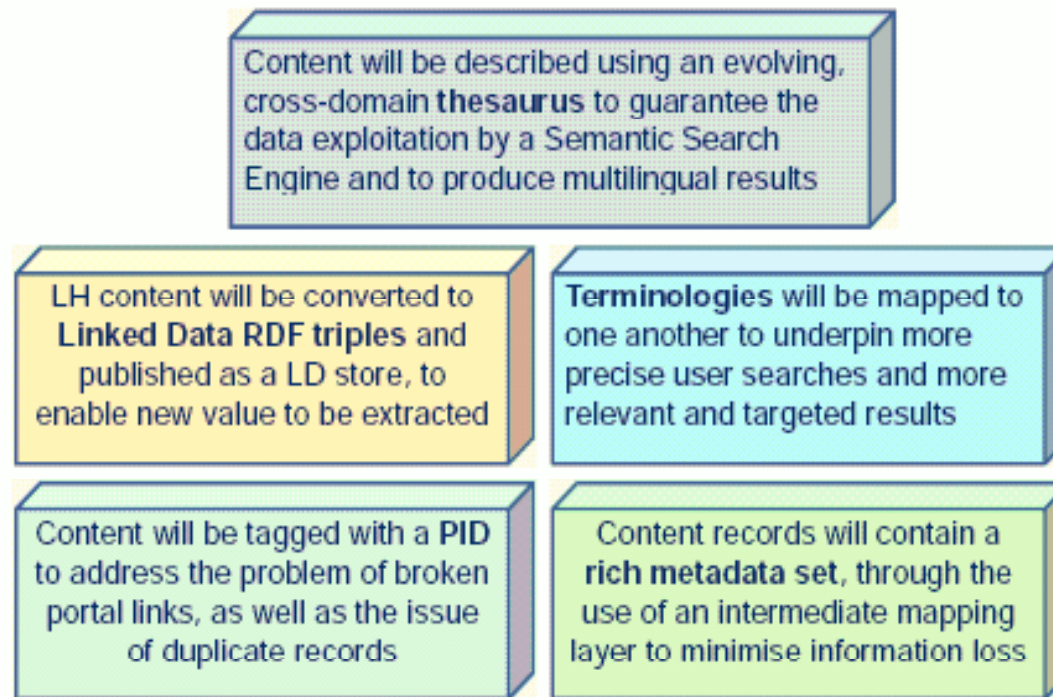
- Best Practice Network started on 1<sup>st</sup> of April 2011
- Objectives:
  - To contribute large quantities of new content to Europeana – cross domain
  - To prepare for the enhancement of the quality of both new and existing Europeana content
  - To demonstrate improved search, retrieval and use of Europeana content
  - For the first time, the public sector participate together with the private sector to provide content to Europeana

# Linked Heritage



- 38 partners from 24 countries and 4 external contributors
- Contribution of content Europeana: 3 millions objects
- 5 key areas of development and innovation:
  - Linked Data
  - Persistent identifiers
  - Metadata and standards
  - Cooperation with the private sector
  - Multilingual and cross-domain combination of terminologies

# Linked Heritage : Enhanced content



# Linked Heritage



- WP1: Project management and Coordination - Italy (ICCU)
- WP2: Linking Cultural Heritage Information - UK (CT)
- **WP3: Terminology - Belgium (KMKG) & France (MCC)**
- WP4: Public Private Partnership - UK (EDITEUR)
- WP5: Technical Integration - Greece (NTUA)
- WP6: Coordination of Content - Cyprus (CREF CYI)
- WP7: Dissemination & Training - Italy (UNIPD)

# Terminology: Linked Heritage, the Athena legacy



- Athena WP4:
  - Integration of existing data structure into Europeana
- WP dedicated to terminology and multilingualism
- Main objectives
  - Guidelines addressed to European museums
  - About terminology management through Athena
  - For enabling a successful harvesting of collection by Europeana
- Three-steps structure
  - Terminology resources identification (D4.1)
  - Guidelines for SKOSification (D4.2)
  - Final recommendations (D4.3)

# Athena WP4 : lessons learned



- How to connect and build bridges in-between multilingual vocabularies?
- Functional needs identified by Athena WP4: The Athena WP4 Benchmark
  - Registration of a terminology in a repository
  - SKOSification of a terminology
  - Search and navigation into a network of vocabularies
  - Mapping of the terminology with a thesaurus
  - Enrichment of a thesaurus
  - Collaborative moderation of an update of the thesaurus



# ATHENA Final Recommendations



- A : Create or adapt an existing terminology
- B : Technical implementation of the created or adapted terminology (in the perspective of the Semantic Web)
- C : Linking of the SKOSified terminology with other resources (in the perspective of Linked Open Data)

# Linked Heritage - Booklet



YOUR TERMINOLOGY  
AS A PART OF THE SEMANTIC WEB  
RECOMMENDATIONS  
FOR DESIGN AND MANAGEMENT





# Athena WP4 : lessons learned



## ■ Conclusions

- Many European museums use an in-house non-standard terminology to describe their collections and objects
- → Reason: cost implied by a reference terminology (e.g.AAT) or specific needs (language, domain...)
- Often these vocabularies are only exportable in CSV, not in XML and not in SKOS format

## Athena WP4 : lessons learned



### ■ Conclusions:

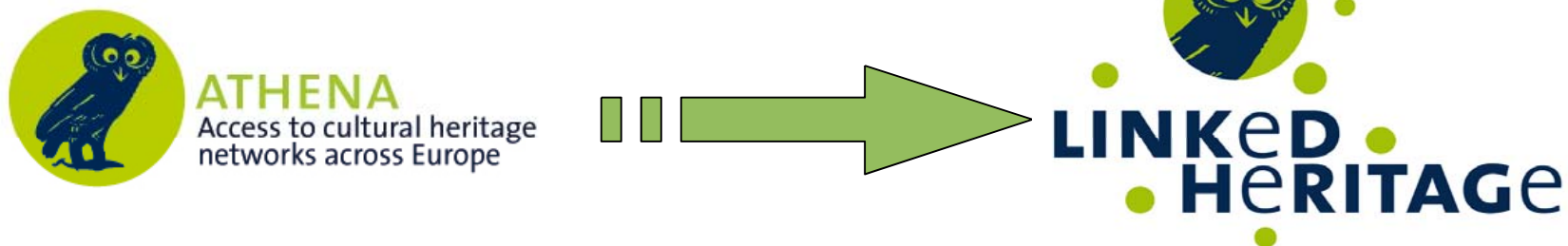
- This means that many museums have a strong effort to make for expressing their descriptions with a reference terminology fitting within Europeana requirements
- → Required skills: Knowledge Management and/or Information Engineering are necessary
- Analysis of existing tools showed that there is no tool that can cover every step of the benchmark, although some are promising

## Athena WP4 : lessons learned



- Athena focussed mainly on museums
- Linked Heritage is a legacy of the Athena project regarding all the major topics (standards, technology, IPR, ingestion process, ...)
- Linked Heritage WP3 will build upon the experiences of Athena, but will widen its scope by including the private sector terminologies and put theories and experiments into practice

## From Athena to Linked Heritage



### Linked Heritage WP3

- Terminology resources identification
- Repository of resources
- Technical platform for terminology management

### Reuse of the main achievements of Athena WP4:

- Survey and inventory of resources
- Athena Thesaurus
- Guidelines for SKOS
- Final recommendations
- Benchmark

# Linked Heritage WP3



## ■ General Objective

- To improve the SemanticWeb-based access and retrieval of cultural objects within Europeana

## ■ Operational objective

- To develop a Multilingual Linked Heritage Thesaurus and a cross-domain combination of terminologies

## ■ Main outcomes

- A terminology registry
- A technical platform for Terminology Management

## ■ Expected result

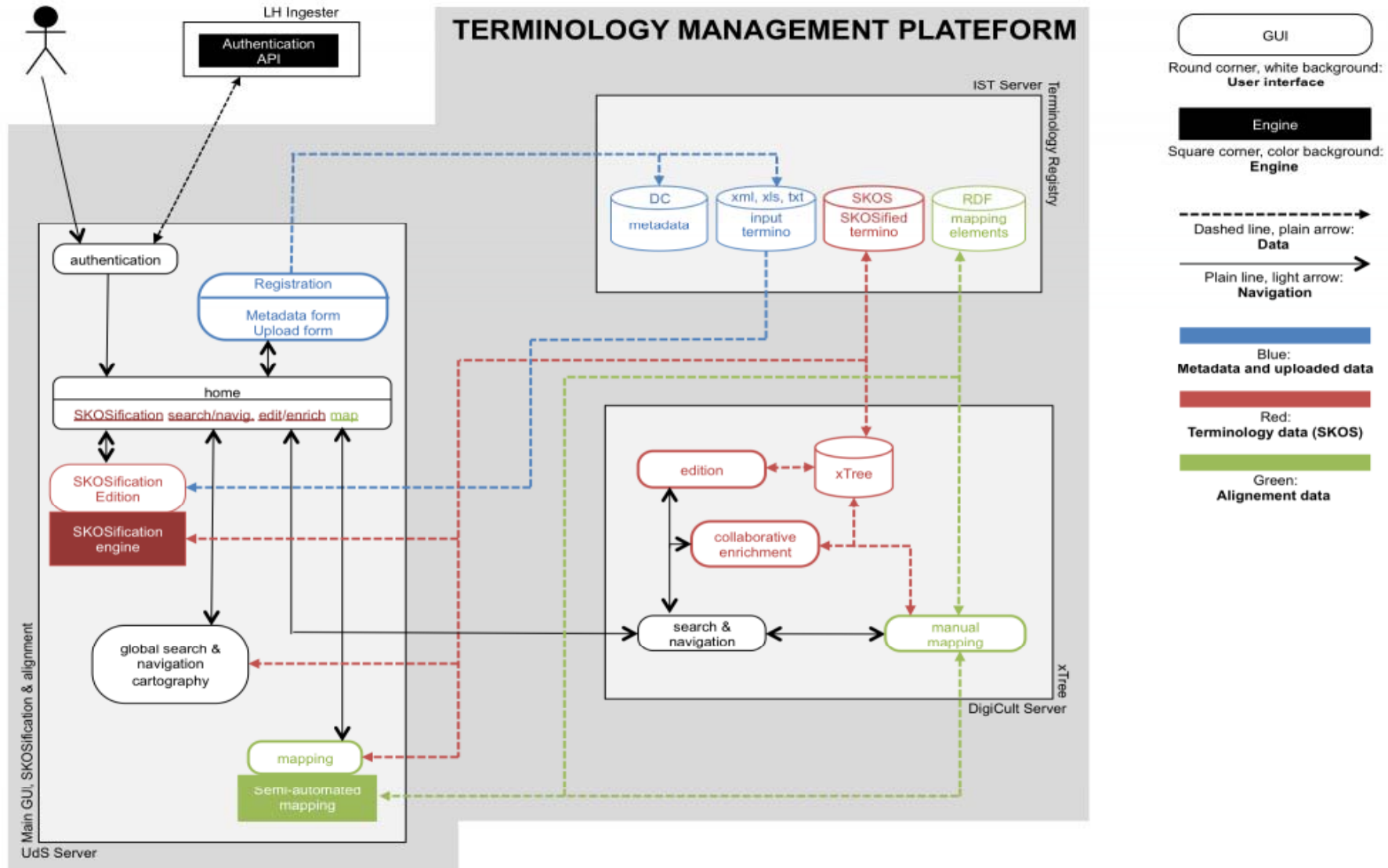
- A multilingual Linked Heritage Thesaurus (LHT) focussing on People, Locations and Concepts

## Linked Heritage WP3



- Get a **broader overview** of terminologies : cross-domain, public and private institutions
- Elaborate a **terminology registry** where each institution can describe and import its terminology and check other terminologies on a specific domain
- Provide a **set of tools** for converting into SKOS, editing and mapping terminologies
- Give a complete **software for managing a terminology**

# TMP (Terminology Management Platform)



# TMP (Terminology Management Platform)



Welcome on the Culture Terminology Website, an ongoing effort under the linkedHeritage project.

This website aims to provide a service that allow any cultural institution to import and store his thesaurus.

This service will also allow Institution to map this thesaurus to others thesaurus already imported in the service.

Thesaurus contained in the Culture Terminology will be publicly exposed.

This website is actually an alpha release for testing purpose.

Until this service is under alpha version, be aware that datas you put now can be deleted at anytime.

Stay tuned this situation will change soon !



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# Conclusion



- Expected contribution of all partners in order to :
  - have a comprehensive view on terminologies
  - increase the quality of vocabularies
  
- Strengthen the cross domain approach of terminologies
  - better search on content and metadata
  - building on the work of previous projects
  
- Foster the usage and visibility on Europeana
  
- Foster the dissemination with the development of training sessions, workshops, best practice handbooks and guidelines.



**Thank you for your attention!**

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