

Enrichments and Evaluation - Draft Charter for EuropeanaTech Task Force

1. Context and motivation

Automatic enrichments can be very beneficial for enabling retrieval across languages and adding context to resources accessible via Europeana. If automatically added enrichments are incorrect or ambiguous, the benefits can be reversed, propagating the errors to several languages and impacting the retrieval performance.

The previous EuropeanaTech task force on Multilingual and Semantic Enrichment Strategy¹ identified three sources of enrichment issues: (i) the original metadata, (ii) the vocabulary used for enrichment, or (iii) the enrichment workflow itself. D7.8 of Europeana v2.0 further laid the ground for evaluating and enhancing enrichments. Most notably, it categorized different steps in the enrichment process (analysis, linking, augmenting), which more clearly defines what is done and what can be evaluated². Within Europeana v2.0, several studies were conducted which manually evaluated enrichments (Olensky et al., 2012), gave recommendations for improving enrichments (Stiller et al., 2014a) and created a framework for evaluating enrichments (Stiller et al, 2014b).

Automatic and manual enrichment are now getting more attention in Europeana projects³. We believe it is useful to further explore the recommendations of these previous efforts.

Some recommendations are precisely scoped and ongoing efforts will clearly benefit if a community task force works on them. This includes tackling multilingual ambiguity during linking, considering other vocabularies than the ones currently used in Europeana, and better evaluating enrichment impact. Previous work focused on the enrichments added to the metadata and the impact of errors upon retrieval performance (Stiller et al, 2014b). The new task force will not only look at incorrect and ambiguous enrichments but will also find measurements for missed enrichments and a rating system for the enrichment workflow as such. For that, it will also include new efforts on involving human users for evaluating and correcting enrichments, as pursued in Europeana Sounds⁴. Within this project a crowdsourcing infrastructure will be constructed that will involve human users in - among other things - improvements of existing enrichments (correction and refinement).⁵

1

<http://pro.europeana.eu/web/network/europeana-tech/-/wiki/Main/Task+force+multilingual+semantic+enrichment>

² A link between an object and a concept can be evaluated directly. One can also examine the way this link and the data in the contextual vocabulary have been used to augment Europeana's search index and what are the consequences for attested user queries.

³ Europeana Sounds, EuropeanaCreative, LoCloud and EuropeanaSpace have started the implementation of their own automatic or manual enrichment services. EuropeanaInside has also experimented with "re-ingesting" enrichment in the providers' content management systems, which confirmed interest from data providers to be more involved in the enrichment processes.

⁴ <http://pro.europeana.eu/web/europeana-sounds>

⁵ <http://pro.europeana.eu/documents/2011409/d1fa3069-8568-44dc-9c0c-1870017b4057>

Other recommendations have already been pursued , e.g. on integrating vocabularies used by Europeana's providers, or providing better documentation on the enrichment process⁶ . However, a new task force can help gather more relevant input. Both EuropeanaTech task force on enrichment and the Europeana Network task force on data quality⁷ have concluded that a holistic approach to quality improvement is crucially needed. Once the impact of enrichments can be more precisely measured, recommendations for the quality of the metadata can be expressed and contribute to efforts that target data providers.

Finally, interoperability requirements need urgent addressing. Since early methodology work in EuropeanaConnect⁸, Europeana believes that enrichment will benefit from the development of flexible workflows, in which enrichment services can be activated and tuned by providers and aggregators according to the observed performance of these services on their datasets. This requires a level of interoperability that has not been achieved yet. For example, enrichment service APIs are not homogeneous across projects. We hope that gathering representative stakeholders will help better identify issues and best practices.

2. Scope

- collect enrichment processes, workflows and efforts in the Europeana network including correcting of enrichments through crowdsourcing, assess what they have in common and how they differ
- enhance the interoperability of enrichment services/modules, for example by identifying problems which hinder interoperability
- determine a set of methods (incl. metrics) to evaluate the impact of enrichments
- help participating projects enhance the enrichment services they are creating, by collecting appropriate vocabularies for enrichment and enrichment rules, and pinpoint the most promising ways to include human feedback in the workflow.

3. Deliverables

The taskforce will deliver a report, which should consist of the following elements, listed in order of priority (to be agreed by the task force)

- a. a list of projects, which executed enrichments, and a documentation of their workflows and services
- b. methods (and metrics) for evaluating enrichments, of various types and origins
- c. rules for automatically executing high qualitative enrichments, together with the implementation of these in participating projects, if applicable
- d. best practices (API, data models) for enhancing the interoperability of enrichment services

⁶ <https://docs.google.com/document/d/1JvjrWMTpMIH7WnuieNqcT0zpJAXUPo6x4uMBj1pEx0Y/edit>

⁷ <http://pro.europeana.eu/network/task-forces/overview#Metadata>

⁸ <http://www.europeanaconnect.eu/>

4. Out of Scope

There are several tasks which will be out of scope for this task force:

- Develop and run enrichment services - this happens in the projects themselves

5. Dependencies in the Europeana Network

Projects and groups which explore linking objects to (multilingual) contextual datasets:

- LoCloud
- Europeana v3.0
- Europeana Sounds
- The European Library (incl MACS)
- OCLC
- Europeana Cloud
- Europeana Creative

Projects and groups having carried relevant work:

- Europeana Connect
- Europeana v2.0
- Europeana Inside
- PATHS
- EFG
- PartagePlus

6. Participation

Representatives from projects within the cultural heritage domain pursuing similar efforts will be invited to the task force.

Invitation-only, which might be followed by an open call.

Participants of this taskforce must be willing to actively contribute.

7. Communication

The group will use a mailing-list (wp7-enrichment-strategy@lists.hu-berlin.de) to be created and bi-weekly calls to start with.

There might be a F2F meeting around the EuropeanaTech conference (Feb 11-13). Note that the TF has no budget for travel!

Working documents will be stored in EuropeanaPro and/or a dedicated Assembla wiki

Public documents and announcements will be shared on the EuropeanaTech wiki:
<http://pro.europeana.eu/web/network/europeana-tech> and the EuropeanaTech mailing-list:
 EUROPEANA-TECH@MAILTALK.AC.UK

Start Date	XX January 2015
End date	31 April 2015
Initial Chair	Juliane Stiller (HU), Antoine Isaac (EF)
Initiating Members	Valentine Charles, Hugo Manguinhas (EF R&D) Vivien Petras (HU) Maarten Brinkerink (NISV) Cesare Concordia (ISTI) Cécile Devarenne, Marie-Claire Dangerfield (EF Aggr. team) Yorgos Mamakis (EF Dev team) Nuno Freire (TEL) David Haskiya (EF Product Dev team) Rainer Simon (AIT) Roxanne Wyns (LIBIS) Dimitris Gavrilis (ATHENA research center) Daniel Vila Suero (UPM) Shenghui Wang (OCLC) Rodolphe Bailly (Cité de la Musique) Eetu Mäkelä (Aalto) Aitor Soroa (Univ. Basque Country) Vladimir Alexiev (Ontotext)
Communication	Email lists, Skype Calls (bi-weekly), wiki. Possible F2F meeting next to the EuropeanaTech conf (Feb 11-13)

References

Olenky, M, Stiller, J, and Dröge, E. (2012): Poisonous India or the Importance of a Semantic and Multilingual Enrichment Strategy. In: Metadata and Semantics Research, ed. by Doderó, J., Palomo-Duarte, M., Karampiperis, P., Springer, Berlin.

Stiller, Juliane, Vivien Petras, Maria Gäde, Antoine Isaac (2014a): Automatic Enrichments with Controlled Vocabularies in Europeana: Challenges and Consequences. Digital Heritage. Progress in Cultural Heritage: Documentation, Preservation, and Protection. Springer International Publishing, 238-247.

Stiller, Juliane, Marlies Olensky, and Vivien Petras (2014b): A Framework for the Evaluation of Automatic Metadata Enrichments." *Metadata and Semantics Research*. Springer International Publishing, 238-249.