



Report on EDM Governance Task Force

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Task force participants

1. Antoine Isaac, Europeana Foundation (co-chair)
2. Gregory Markus, Netherlands Institute for Sound and Vision (co-chair)
3. Adina Ciocoiu, Europeana Foundation (co-chair)
4. Carlo Meghini, Istituto di Scienza e Tecnologie dell Informazione
5. Leif Andresen, The Royal Danish Library
6. Stefanie Ruehle, SUB Göttingen
7. Anila Angjeli, National Library of France
8. Michael Fingerhut, Bibliomus
9. Jef Malliet, Department for Culture, Youth and Media of the Flemish government
10. Wim van Dongen, National Archives of the Netherlands
11. Marco Streefkerk, Digital Heritage Netherlands (DEN Foundation)
12. Regine Stein, Deutsches Dokumentationszentrum für Kunstgeschichte - Bildarchiv Foto Marburg
13. Kate Fernie, 2Culture Associates
14. Valentine Charles, Europeana Foundation
15. Alina Saenko, PACKED vzw



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1. Introduction

As mentioned in its 2019 Business Plan, Europeana aims to play a key role to "Influence and organise global interoperability efforts to benefit CHIs"¹. The continuous development of the Europeana Data Model (EDM) enables data exchange of cultural heritage metadata and guarantees its interoperability. The model has been designed in a collaborative way, with significant input from the [EuropeanaTech community](#), through projects, working groups and task forces. There has also been a decentralized aspect, as EDM "profiles" have been developed without having to update the "core" model used by Europeana and its providers. A number of mappings and extensions to EDM were inventoried in a EuropeanaTech task force² in 2014.

This model has enabled the engagement of a whole community. But it now raises new questions, which have been discussed in a workshop³ at the 2015 Europeana AGM and in a whitepaper⁴ that was released the same year. As an example, a more controlled management process might be required, involving review processes, documentation and update procedures as it happens for other standards in the community. The modular approach taken for developing EDM (building on top of existing ontologies), while arguably the most appropriate, makes it more difficult to keep the balance between a generic and manageable core model and its more complex extensions of it.

Following these discussions, the EuropeanaTech community chartered a task force⁵ with the following objectives:

- identify the current issues of the EDM development process;
- propose roles and responsibilities for the different actors involved in the development and maintenance of EDM (mainly Europeana and its data partners);
- define best practices for the definitions and maintenance of EDM Core;

¹ Europeana Foundation Business Plan 2019: Our common culture. (2019)

<https://pro.europeana.eu/post/europeana-foundation-business-plan-2019-our-common-culture>

² Report on EDM mappings, refinements and extensions (2014) <http://pro.europeana.eu/blogpost/report-on-edm-mappings-refinements-and-extensions>

³ EDM Workshop "EDM turns five, so now what?" (2015) <http://pro.europeana.eu/event/edm-workshop-edm-turns-five-so-now-what> <http://pro.europeana.eu/page/edm-turns-five-so-now-what-workshop>

⁴ White Paper Enhancing the Europeana Data Model (2015)

<http://pro.europeana.eu/publication/enhancing-the-europeana-data-model-edm>

<http://pro.europeana.eu/blogpost/the-europeana-data-model-a-living-model-5-years-on>

⁵ EuropeanaTech Task Force on Creation and Governance of EDM mappings, profiles and extensions <https://pro.europeana.eu/project/creation-and-governance-of-edm-mappings-profiles-and-extensions-task-force>



- define best practices for the definitions and maintenance of EDM mappings, profiles and extensions;
- define a set of processes on top of which a future governance model for EDM could be built.

This report presents the outcome of the work of this task force. We first present an account of the work done since the EDM workshop and white paper. We then report on the results of a community survey that the task force has organized in its first months. We expand on the outcome of this survey by summing up our interpretation of the challenges that have to be faced. We conclude the report by a discussion and recommendations for the EuropeanaTech community and the Europeana Foundation to begin addressing these challenges.

2. Work on EDM since 2015: an update

The work on EDM between 2015 (EDM Workshop, publication of the EDM whitepaper) and 2017 was reported in an EDM development report⁶.

We have compiled in Appendix 1 a representation of work on and around EDM (including communication) since 2017, from the perspective of the priorities set in the whitepaper and workshop discussions.

3. Survey analysis

From June 15th until July 5th 2018 we surveyed the EuropeanaTech community and Europeana Network Association regarding the governance of EDM. The survey resulted in 53 responses. After cleaning up redundant, incomplete or negligent entries the survey only resulted in 30 substantial responses, which we present in Appendix 2. A majority of these responses came from Europeana data providers and aggregators, some of whom have developed an extension to EDM while the majority work with (mapping to) the 'core' version.

The results of the survey show that respondents are familiar with the existing documentation and have a clear idea of who they should contact about EDM if they have any questions. However, they note that they are not as well informed about updates and new developments happening around EDM. From the side of Europeana, EDM updates are irregular and for the most part modest.

Of the majority who did comment on the transfer of information from Europeana to the network, a significant portion said that there was not much to change regarding the way things are currently handled. The few respondents that replied but were not directly involved with EDM (e.g., as data providers) did not flag anything regarding a lack of transparency.

⁶ MS6.7 EDM development report, Europeana DSI-2 (2017)
https://pro.europeana.eu/files/Europeana_Professional/Projects/Project_list/Europeana_DSI-2/Milestones/ms6.7-edm-development-report-.pdf



One suggestion from survey respondents was to install a more community driven approach to EDM maintenance. This could include setting-up a steering group that would oversee, suggest and discuss changes to EDM. Other comments regarding EDM community enhancement were organizing meetings for EDM users as well as incorporating (open source) software organizations.

Other valuable suggestions for improving the involvement of the Europeana Network Association were to improve communication through existing EuropeanaTech channels, conferences, or by setting up an EDM Slack. This would mean having a platform where changes to EDM can be tracked and presenting a designated point of contact to advise on EDM related issues. A suggestion also advised "making the EDM Data Quality Task Force a permanent working group as the improvement of data on Europeana is an ongoing task"⁷. Lastly, a couple of respondents suggested to check existing (open) standardization processes as a possible source of inspiration, such as [W3C](#), [Forum Standaardisatie](#), or [Edustandaard](#).

4. Organizational challenges and longer-term risks

Throughout the running of this task force, both chairs and task force members have had a low level of participation and involvement in discussions. This can be partly attributed to Europeana's organizational changes such as the reshaping of the EuropeanaTech Community and the supposed perception that EDM needs little change in high-level governance, as opposed to lower-level management⁸. Europeana Foundation and the DSI consortium are still committed to maintaining various frameworks including the Europeana Data Model in collaboration with relevant working groups. However, the topic of EDM governance and related efforts does not seem to have enough support from the Europeana DSI and related projects, which provide little funding for significant R&D and networking around the topic.

Meanwhile, there has been continuous demand from the EF staff involved with data modeling related to the development and updates of the Europeana services. Updates to the EDM Schema – often minor and concentrated on Europeana's "internal" use (see later remark on "core" EDM) – were made but were not presented to the Network for validation, as Europeana's development cycles have accelerated.

On the other hand, some extensions correspond to features or services that have a long maturation time (for technical and business reasons). They remain "work in progress" for years, which makes it difficult to organize a review process: for a long time a decision needs to be taken to park or conclude the work, and at some point the work has to be concluded very quickly.

⁷ This has in fact been the case since 2016, when the Data Quality Committee was established as EuropeanaTech working group: <https://pro.europeana.eu/project/data-quality-committee>

⁸ As mentioned above, community members have expressed that they would welcome how to suggest, comment and follow developments in EDM, and to be involved when needed.



Another aspect to these problems is the selection of experts and community members who should be involved in the specification process, beyond the key stakeholders (users of the EDM features being specified). The Europeana staff responsible for the development of EDM have been increasingly involved in related interoperability initiatives. Thus, a form of co-development happens where data patterns are being developed and validated, which later feeds into EDM. One example is the case of the RightsStatements.org initiative, which hosted some of the discussions for supporting slightly more complex rights statements in EDM. Another example is the work being done on the International Interoperability Framework (IIIF), which provided major grounding for the EDM extension for linking to IIIF content and handling full-text. We consider this specific case as a good example of the paradigm shift and the issues we encounter in general. There was no reaction to an early [post](#) about the topic on the EuropeanaTech list, while ample feedback has been received on the maturing extensions over the course of two years.

In a few cases, updates have been enacted on the basis of ad-hoc collaborations with selected experts, such as work on [collections](#) or [technical metadata](#).

Community input continues to play a key role in the development of EDM but at this moment this is neither systematic nor unified. As said above, there are cases where discussion happens on data modeling patterns that are not directly focused on EDM but are useful when it comes to meeting specific community needs. This is certainly good for the visibility of EDM and our community's work in general. But, it raises the question of keeping visibility (and interest) for the development of EDM within the very community that created it while still representing its main user base.

However, the door is still open to more 'traditional' input from the Europeana Network in the development of EDM. The EuropeanaTech community remains relatively engaged on data modeling subjects, as can be inferred from the general interest that some [threads](#) have raised. EuropeanaTech has recently launched a [task force on Annotations and User Sets](#) to gather feedback on a first draft model based on the W3C Web Annotation standard. Such a project will provide a fresh round of input that will impact EDM. Additionally, the Data Quality Committee managed to provide recommendations for a series of quality control-related updates to EDM. The Committee also revived an effort for implementing events in EDM but it is currently paused due to lack of resources. Unfortunately, these cases do not cover all the recent EDM development areas, and one can say that the eagerness of the community to work on modeling is not fully supported.

Lastly, one more challenge is the following of data modeling developments related to EDM mappings and extensions developed in the Europeana Network or elsewhere. These have always been hard to follow and proactively reflect in a centralized space, since the work on that issue (in the context of a [task force](#)) has ended. In the past years there have not been many contributions to our call for contribution on the [page for these mappings and extensions](#). While we could showcase some case of re-use of EDM like [Nomisma.org](#), others that we are aware of



could be also showcased (for example on [3D](#) or [gender studies](#)), if proper resources were allocated to it.

Finally, the idea of a "core" EDM with profiles developed independently is being tested. In the past years, most "profiles" ([technical metadata](#), [IIIF](#), full-text) have been developed at the initiative of EF for its own needs, and have been integrated in the "internal" or "external" versions of EDM⁹ as the corresponding features for data ingestion, enrichment or dissemination were implemented. "Profiles" remain optional parts of EDM from the perspective of Europeana's partners. They are however, technically harder to distinguish from the "core" from the perspective of EF. They are merely "modules" used for specific functions in our software and services.

5. Discussion and recommendations

What can we do with the resources we have to handle? What expectations are raised?

This task force was set up as a response to the discussions in the 2015 EDM workshop, which recommended (as presented in the introduction) to identify EDM's development issues, to clarify roles of the various stakeholders in the governance and development for EDM, and make recommendations for Europeana to maintain a "core" EDM and provide guidance in the creation of mappings and new extensions of the model.

This report has presented the result of a survey we carried out in 2017, and analyzed what we think are the main challenges to keep EDM a standard that is both living and community-backed. We have however not investigated and have not made recommendations to all the tasks foreseen in our charter. A first reason is logistical: the task force members did not have enough bandwidth and/or motivation to dive into all these areas and produce many detailed recommendations. A second reason is that this problem is likely to extend to the wider community that would be in charge of implementing these recommendations. The third one is that revamping all processes in place simply does not seem so urgent presently, looking at the results of our survey.

Still there are actions that seem both desirable (and doable to some extent) which could (1) enhance transparency on developments and (2) establish a more representative governance structure that would foster community engagements and could devise more sophisticated processes if required.

Regarding transparency, the best that Europeana can do is to bolster more low-cost solutions to enhance the visibility of EDM *documentation* and the EDM *roadmap*, *sharing updates* and

⁹ EDM "external" is used by providers to submit data for Europeana, while EDM "internal" is used by EF as the data model that all its internal data processing is based on. The latter contains more metadata elements than the former.



providing a clear channel for *feedback* that will raise the profile of EDM as a community tool and product with the hopes of raising engagement and awareness. Management of these channels will be the biggest challenge. While an ideal world would guarantee a community driven forum, this would require input and guidance by Europeana staff.

One issue is that many recent changes do not concern the Europeana Network in the short or medium term, as they only impact Europeana Foundation (EF). In these cases, it is not easy to involve the Network since EF's development cycles sometimes require agile and fast action taking. Yet, in the long term, the Network can ultimately be impacted by these changes¹⁰. Also, in practical documentation terms, this situation also implies that many recent updates are only available via EF's specification support of choice (living Google Docs) and only older snapshots are available on Europeana Pro, which is not ideal for external stakeholders.

Still related to documentation, better reflecting updates and ensuring stability of references through them is a key aspect. It would be useful to maintain a log of changes between newer EDM versions and older ones besides the one existing in the individual EDM documents; then one can verify at a glance if they need to update their mapping to EDM, for example. That needs to be very lightweight as the resources for working on such reports are limited. Finally, better synchronization between the evolutions of EDM and their visibility on the portal, as well as would bring a great motivation for engaging with such evolutions.

Regarding governance, we have questions about keeping EDM as a community data model – a standard – in such a context. Should Europeana's development cycle be changing the metadata specification in a rapid way without any external review? Does having a data standard and user community mean that systems development cannot be rapid or agile? Good governance should provide high-level answers to these questions and/or an appropriate setting to work on them.

A survey responder suggested that we seek inspiration from the report *Methodology and tools for metadata governance and management for EU Institutions*¹¹. This report indeed gives recommendations that could benefit the management issues mentioned above. EF currently meets many of the typical stakeholder needs identified in the report, but some are not met (such as *lifecycle support, documentation of management processes*) and we could improve on some others, especially in terms of transparency (for example *unambiguous guidelines, continuous*

¹⁰ For example, EF is the only one (with its data re-users) currently needing an EDM profile for full-text newspapers. But as soon as the ingestion of new newspapers would resume, then the model would have an impact on data partners. There has been some consultation, but we have not followed up with all data partners.

¹¹ Methodology and tools for metadata governance and management for EU Institutions (2015) https://joinup.ec.europa.eu/sites/default/files/methodology_and_tools_for_metadata_governance_and_management_for_eu_institutions.pdf

The report makes recommendations with regard to tooling, but we do not emphasize them in this report, as this is less critical for us at this stage. We already have Europeana Pro for releasing documentation, Github for machine-readable specifications and Confluence/Jira for issue tracking. We cannot really afford to change this infrastructure, though we could perhaps rationalize our process, e.g., by using the Confluence/Jira ticket system in a systematic, consistent way, or entirely migrating to Github for making the whole process more visible.



improvement, alignment with external bodies). The same is true for the specifications of processes, where we feel the following aspects could be enhanced: *manage change, harmonize data standards, design* (for updates), and *release*.

In several of these processes, there is a role for a governance committee. The report presents stakeholder requests and needs in terms of governance: *organisation, decision mechanism, enforcement policy, process for improvement*. Some of its recommendations no longer apply to EDM (*determine the scope, establish enforcement approach, establish a licensing framework*) or are less a priority (*set up quality control*). But others can be relevant, especially with regards to setting up a proper governance structure.

The report sketches what a sound governance structure should look like: a *steering committee, a governance committee, an operational team*. A steering committee may not be needed in the case of EDM; the current steering tasks – which are minimal – could be done by a governance group. On this, the Europeana Management Board could play a role, regarding specific "steering" requests. The role of the operational team is played by EF¹², who are sometimes assisted by external experts. This setting is probably appropriate for now, considering EF's overall responsibility as the main provider of the Europeana Digital Service Infrastructure and the fact that EF is in practice the requester and beneficiary of most of the recent EDM updates.

The role of the Governance Committee is also de facto currently played by EF, often consulting with experts, sometimes with the help of entire task forces or working groups. This is inconvenient, as it means relying on one actor with already limited resources, and creates imbalance in the community and (not unrelated to the two previous issues) generates a lack of transparency that some survey responders have highlighted.

EF or the EuropeanaTech community, which has served as a port of call for major EDM discussions since its beginning, could make a proposal for establishing such a governance committee. The recently created EuropeanaTech steering group¹³ could in fact seek to relate to this kind of governance task. The question is whether the Europeana Network Association – especially the EuropeanaTech community – can sustain such effort. The difficulty encountered in motivating and stimulating this current task force does not inspire confidence for setting up an entirely new governance structure that will be active and engaged, even though we expect that the work of the governance committee would be only be to oversee the operational team and provide guidance on specific points upon request.

Furthermore, when setting up a governance group, one should keep in mind that EDM, while a large-scale and widely employed data model, is in a peculiar position when compared to other large-scale data modeling initiatives like MARC. EDM is not a model that institutions use

¹² The ownership of EDM updates lies within the EF R&D Team, and most of the work is done by the participants of an 'Operations' cross-team, which coordinates data work within EF. The participants in this cross-team are the R&D and Data Partners Service teams, the Metis Product Owner and the API Product Owner.

¹³ <https://pro.europeana.eu/post/europeanatech-2019-activity-plan>



"natively" to curate data in their in-house data structures. Its role is to facilitate cross-domain exchange of rich metadata on cultural objects, with its main application being data aggregation for Europeana, other services that exist around Europeana's API, and other institutions that have employed EDM for modeling their data. The buy-in from institutions (data providers) whose data management do not crucially depend on aggregation scenarios is lower than it would be if EDM were their core model. Thus EDM cannot and should not expect a large swell of community activity. Finally, the context where different EDM-based services and process have to interface is a very fluid one, therefore a governance body would have to reassess quite often the answers to give to questions like "what is the goal of this data model?" and "who is it for?".

Our last recommendation is to address the community at large, including potential funders interested in the long-term maintenance of the semantic specifications on which the health of the data ecosystem as a whole depends. Many of the challenges in staff resourcing and community engagement are shared by organizations like [W3C](#) and [DCMI](#) and by standards-maintaining departments at government agencies and libraries everywhere. We need to take a systemic look at longer-term strategies for maintaining semantic infrastructure – one that improves cooperation among maintainers and plans for unforeseeable but inevitable disruptions in institutional continuity (restructuring and political priorities) and human resources (retirements and budget cuts). This report could form the basis of a shorter, more explanatory status quo report¹⁴ for a general audience (i.e., not for insiders in the EuropeanaTech community) about EDM, its mappings, profiles, and extensions, and the minimal requirements for their maintenance. This would be a useful basis for looking beyond current funding and institutional arrangements towards future solutions.

Appendix 1: Progress update around EDM

The work on EDM between 2015 (EDM Workshop, publication of the EDM whitepaper) and 2017 has been reported in an EDM development report¹⁵. This section represents the status quo since 2017, from the perspective of the priorities laid in the whitepaper and workshop discussions.

A. Ongoing developments on EDM itself

1. Europeana's Entity Collection

Since 2017, Europeana has worked on developing even more features based on richer metadata, especially on the building and exploitation (for search and browsing on [Europeana Collections](#) and thematic channels) of the Entity Collection, Europeana's own knowledge graph. The knowledge graph's contribution is two-fold; one part contributes to the envisioned 'semantic

¹⁴ Task Force member Tom Baker (Dublin Core Metadata Initiative) is interested in helping with such a future paper.

¹⁵ MS6.7 EDM development report, Europeana DSI-2, 2017
https://pro.europeana.eu/files/Europeana_Professional/Projects/Project_list/Europeana_DSI-2/Milestones/ms6.7-edm-development-report-.pdf



'layer' while the other part consists of the contextual entities (vocabularies) contributed by Europeana partners.

Work on creating and exploiting annotation tools also continues, especially in the context of the 'Generic Services' projects that seek to enhance the participatory element of Europeana. The main points of developments for EDM in the last two years have sought to support the above mentioned work.

EDM work related to the development of the Entity Collection includes:

- Representing organisations, which has continued, aligning to the requirements of the new aggregation landscape and following up with internal suggestions from Data Partners Service and Collections teams. In this context the organisation representation is viewed as important along the other contextual entities (place, time, person and concept);
- [Representation of groupings](#) for browsing across concepts in thematic collections a.k.a vocabularies or concept schemes, for the Entity Collection;
- Schema.org mappings where the mappings, useful for Search Engine Optimisation (SEO) had been created 3 years ago have been subject to some minor updates and work has been extended by creating mappings that are applicable to making visible our Entity Collection to search engines (via the Entity pages).

2. Annotations

As mentioned in the MS 6.7 report, more data modeling research was required on the Annotation API¹⁶ and for the annotation clients that will be plugged onto it. A task force is currently looking at fostering interoperability across the applications and projects in the Europeana context that produce, publish and/or consume annotations and user sets, by maturing the specifications¹⁷ that are required. As the name indicates, this task force will also seek to address the issue of sharing data on user generated sets, and re-use previous work on the [EDM collections profile](#).

3. Implementation of Full-text with EDM

The existing proposal to refer to full-text content from EDM records has been thoroughly revised and implemented as part of the release of Europeana newspapers. It needs to be finalized and published.

4. Other areas

Other completed work on EDM includes:

- Work that had started in 2017 on finer representation of rights (expiration dates, links to "other" legal restrictions) have been tested and implemented in the context of rightsstatements.org adoption.
- Minor update for technical metadata (used internally at Europeana).

¹⁶ <https://pro.europeana.eu/resources/apis/annotations>

¹⁷ EuropeanaTech Task Force on Interoperability of annotations and user sets
<https://pro.europeana.eu/project/interoperability-of-annotations-and-user-sets>



Items started recently:

- Extensions for 3D, depending on recommendations of the recently launched task force on 3D content¹⁸.
- Administration data, related to developments of the Entity Collection and Metis developments
- Quality data: the Data Quality Committee's work on improving data quality, resulted in the update on the Europeana Publishing Framework version 2. The work started summer 2018, recommendations were defined and completed early 2019. Computation of metadata quality measures (tiers) will have to be shared via our API.

Lastly, a long-running, not completed action is the implementation of events in EDM. The Data Quality Committee has made progress identifying what kind of event data could be made available via Europeana, but we are still short of an implementation case – and the resources that would go with it.

B. EDM as used by others

1. Use of EDM as a model by other aggregators to build data systems and processes

Deutsche Digitale Bibliothek and Digital Public Library of America have each built their own data models using EDM as a foundation. They have each added fields and extensions to it to suit their own specific needs. This reflects the value EDM brings to the community. Other similar examples were collected in the report of the aforementioned 2014 task force on EDM mappings, refinements and extensions.

2. Use of EDM for data exchange - mappings

Five years ago, the EuropeanaTech task force report on EDM mappings, refinements and extensions inventoried mappings to EDM, as well as refinements and extensions done by institutions and projects in the Europeana community¹⁹. It is useful for governance, engagement and support for metadata experts²⁰ that extensions/refinements be shared with appropriate documentation and that examples of implementation and data patterns be provided (to see how they adjust EDM to their needs/constraints).

The task force tried to answer the need for a central reference that would bring such resources in a single overview, and offered concrete guidelines in terms of documentation and best

¹⁸ EuropeanaTech Task Force on 3D Content in Europeana <https://pro.europeana.eu/project/3d-content-in-europeana>

¹⁹ https://pro.europeana.eu/files/Europeana_Professional/EuropeanaTech/EuropeanaTech_taskforces/Mapping_Refinement_Extension/EDM%20%20Mapping%20refinement%20extension%20Report.pdf

²⁰ It was reflected in the 2015 workshop that "mappings should be handled by metadata experts, with a focus on the quality and value of the services provided on top of the data being exchanged."



practices. Since then Europeana partners have continued to build new mappings to EDM or refine existing ones. But there has been no resource to continue the effort of this task force. At the moment, we do not have an good overview on how this happens on the provider side, as this can range from very experienced to un-experienced, which does not contribute to the quality of the provided EDM.

In the longer run, the task force also suggested that Europeana could also support extensions defined by data providers, allowing general metadata (required by Europeana) and specialised metadata (managed by partners) to coexist within a same system. No further reflection has happened around this idea.

3. Use of EDM by consumers of Europeana data

In recent years Europeana has continued to provide EDM data via its API to third parties, to build apps or in hackathons. This effort is recognized by the community and one example is the Award that Europeana received for the BEST API at the API World 2017 conference²¹. As part of this, it is worth mentioning the comprehensive documentation of the Europeana API²².

C. EDM dissemination and communication

It is still very important to Europeana to keep the community up-to-date with the development of EDM.

Europeana maintains the EDM schema in a transparent way: it is accessible at any time in its most recent version on Github²³ and any updates to the model, once validated, are systematically documented and made public on the Europeana Professional website.

On a less technical level, the need for refreshing the concepts of EDM has been raised by several providers and Europeana is currently focusing on providing a better understanding of the concepts in training meetings at events such as the Aggregator Forum and National Workshops²⁴.

We also participate in academic and practitioners' conferences, often having an active role, presenting and/or participating in their organisation or review committees: [LODLAM](#), [TPDL](#), [DC](#), [SWIB](#), [ESWC](#), etc. This ensures that we can feed our community's work with the freshest R&D results. It also provides a great opportunity to disseminate innovations and share the

²¹ <https://pro.europeana.eu/post/europeana-rest-api-wins-a-2017-api-award>

²² <https://pro.europeana.eu/resources/apis/intro>

²³ The latest schema files are available on <https://github.com/europeana/corelib/tree/master/corelib-edm-definitions/src/main/resources/eu>, which is referred from the main EDM documentation page: <http://pro.europeana.eu/edm-documentation>

²⁴ The Aggregator Forum event is organised twice a year by Europeana in collaboration with other aggregators, while National Workshops are organised on demand, and run by a National Aggregator in a specific country where EF also contributes according to the need in that country.



requirements from the Europeana Network within the wider community of researchers and practitioners. We also engage in collaborative, international prospective workshops, like those organized by the [Mellon foundation](#), the [LD4L project](#), or [NISO](#). As noted in the "challenges" section, however, this creates a tension when it becomes hard to trickle down 'external' discussions on data modeling into the more 'internal' circles of the Europeana Network.

Finally, targeting a wider audience, we have continued to support the use of EDM in learning contexts²⁵ by providing our own online course on EDM²⁶.

Appendix 2: Survey results

NB: this appendix does not include the results of the first two survey questions, which asked for names and institute of responders.

²⁵ <https://pro.europeana.eu/page/learningcontext-edm>

²⁶ <https://pro.europeana.eu/page/edm-mooc-introduction>

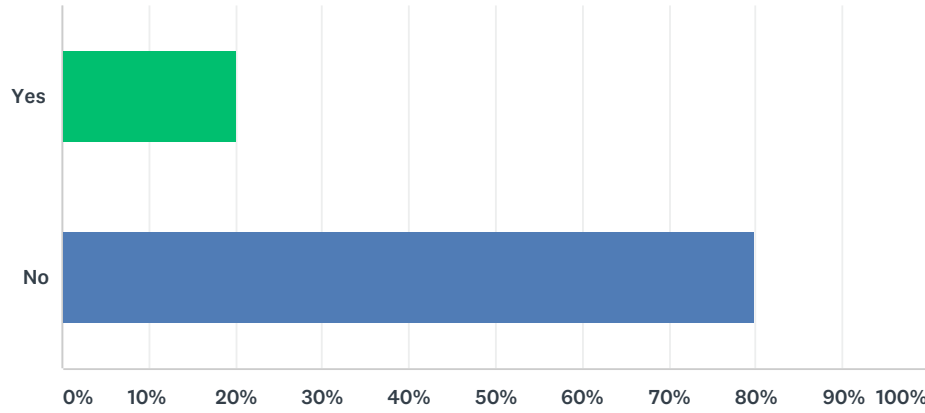
Q3 Role

Answered: 30 Skipped: 1

#	RESPONSES	DATE
1	Collection Metadata Analyst	7/6/2018 5:25 PM
2	Head of Digital Library Services	7/6/2018 2:38 PM
3	Project Manager	7/6/2018 7:28 AM
4	Audio archives manager	7/5/2018 4:11 PM
5	Director for Technology, Development, and Service	7/5/2018 1:40 PM
6	data preservation and european infrastructure specialist	7/5/2018 9:11 AM
7	Professor	7/4/2018 7:22 PM
8	Research Associate	7/4/2018 5:43 PM
9	Lead architect Archaeology/Historical Landscapes	7/4/2018 4:36 PM
10	Teacher	7/4/2018 4:28 PM
11	Research and Teaching Assistant in Information Science	7/3/2018 9:45 AM
12	Research heritage data	6/25/2018 11:42 AM
13	ex Director of Development	6/22/2018 7:39 PM
14	Data Coordinator	6/22/2018 3:44 PM
15	Head of Culture and Digitization	6/22/2018 11:41 AM
16	Head of Unit, Business Owner Swedish Open Cultural Heritage (SOCH)	6/22/2018 9:53 AM
17	Researcher	6/21/2018 7:07 PM
18	director	6/20/2018 12:23 PM
19	ceo	6/19/2018 9:59 PM
20	Laboratory Teaching Staff	6/19/2018 1:23 PM
21	Head of Research project in SSH	6/19/2018 8:50 AM
22	Project	6/17/2018 3:18 PM
23	Teacher	6/15/2018 11:11 PM
24	Chargé de mission	6/15/2018 4:55 PM
25	Researcher	6/15/2018 4:02 PM
26	Digital coordinator	6/15/2018 3:09 PM
27	general director	6/15/2018 3:08 PM
28	Head of the service of rare books	6/15/2018 2:42 PM
29	Aggregator	6/15/2018 2:34 PM
30	Finance and IT manager	6/15/2018 2:18 PM

Q4 Did you consider using EDM but chose not to?

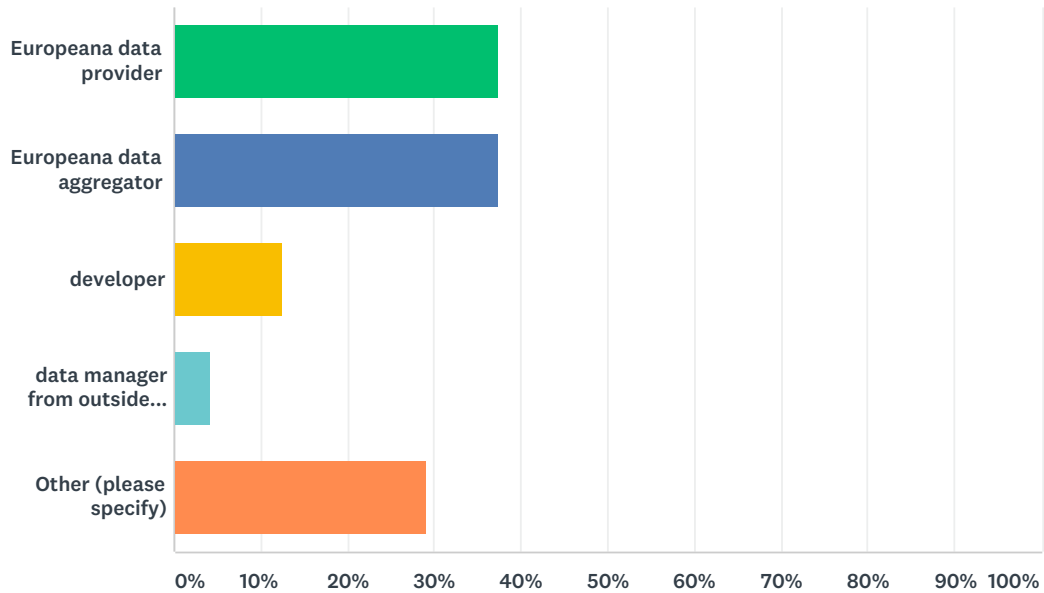
Answered: 30 Skipped: 1



ANSWER CHOICES	RESPONSES	
Yes	20.00%	6
No	80.00%	24
TOTAL		30

Q5 Are you a (select all that apply)

Answered: 24 Skipped: 7

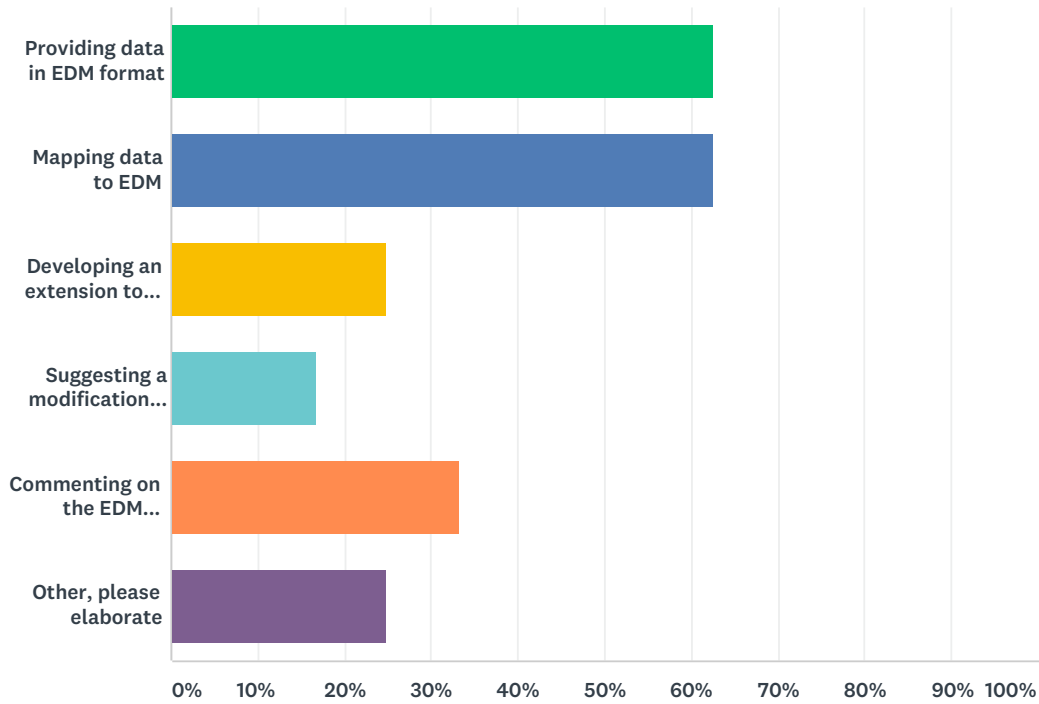


ANSWER CHOICES	RESPONSES	
Europeana data provider	37.50%	9
Europeana data aggregator	37.50%	9
developer	12.50%	3
data manager from outside of the Europeana data partners network?	4.17%	1
Other (please specify)	29.17%	7
Total Respondents: 24		

#	OTHER (PLEASE SPECIFY)	DATE
1	Professor on Conceptual Models	7/4/2018 7:24 PM
2	Teacher	7/4/2018 4:29 PM
3	Information Specialist that gives courses to future librarians	7/3/2018 9:47 AM
4	advisor	6/22/2018 11:48 AM
5	Member	6/15/2018 11:15 PM
6	general director museum	6/15/2018 3:09 PM
7	contributor to a europeana data aggregator	6/15/2018 2:22 PM

Q6 EDM experience (select all that apply)

Answered: 24 Skipped: 7

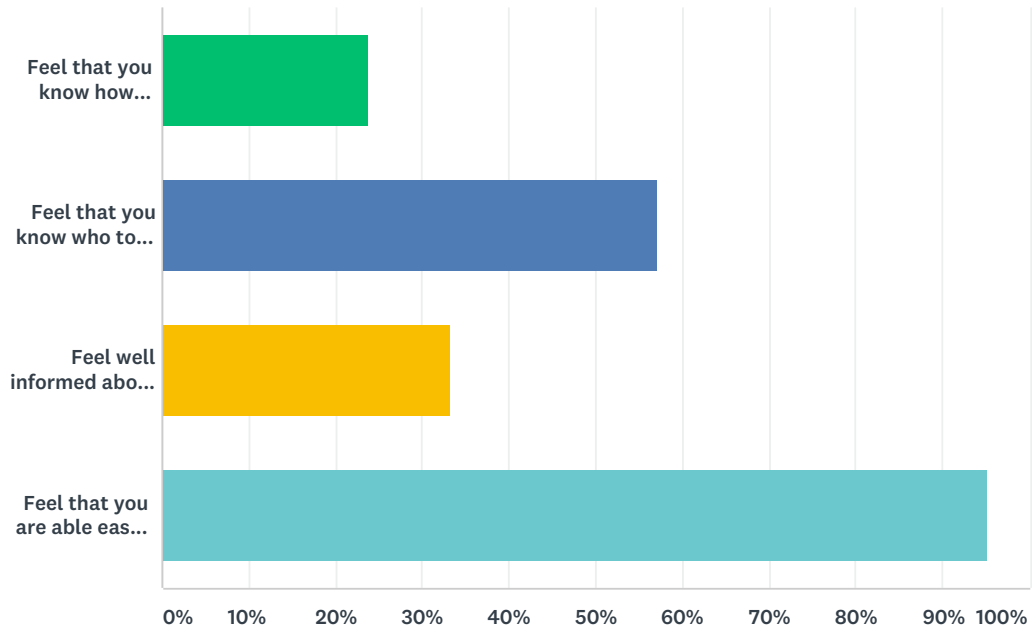


ANSWER CHOICES	RESPONSES
Providing data in EDM format	62.50% 15
Mapping data to EDM	62.50% 15
Developing an extension to EDM	25.00% 6
Suggesting a modification to the core schema (e.g. change in an attribute or property of an element)	16.67% 4
Commenting on the EDM documentation (e.g. the documentation or scope notes for an element)	33.33% 8
Other, please elaborate	25.00% 6
Total Respondents: 24	

#	OTHER, PLEASE ELABORATE	DATE
1	Mapping LIDO to EDM	7/6/2018 7:30 AM
2	Professor on Conceptual Models	7/4/2018 7:24 PM
3	None	7/4/2018 4:29 PM
4	disseminate information about EDM and gather implementations	6/22/2018 11:48 AM
5	Developing an EDM-based application data model for a data aggregation platform (withculture.eu)	6/15/2018 4:31 PM
6	not	6/15/2018 3:09 PM

Q7 In your experience do you...(select all that apply)

Answered: 21 Skipped: 10



ANSWER CHOICES	RESPONSES	
Feel that you know how developments (modifications, updates, extensions) to EDM are managed?	23.81%	5
Feel that you know who to contact to suggest modifications or changes to EDM?	57.14%	12
Feel well informed about developments to EDM?	33.33%	7
Feel that you are able easily to find documentation and related information connected to EDM?	95.24%	20
Total Respondents: 21		

Q8 Is there anything that you would like to change about how EDM is managed?

Answered: 11 Skipped: 20

#	RESPONSES	DATE
1	What about meetings of EDM users, e.g. as a side event of EuropeanaTech?	7/6/2018 2:43 PM
2	Perhaps it would be a good idea to install a steering group / committee (like for other formats as DC, MARC) in which ideas / concepts for changes are developed and discussed and where formal decisions on the EDM development are made. The group should consist of members from EF and other stakeholders like aggregators.	7/5/2018 1:51 PM
3	No	7/4/2018 4:29 PM
4	Not sure	6/22/2018 7:42 PM
5	Management could be more open and transparant in exchange of more responsibility and involvement of the community	6/22/2018 11:48 AM
6	- Try to include representatives from the companies and OSS-communities that develop systems for the GLAM-sector (as a way to make them aware of Europeana and perhaps even support EDM-export/import out of the box)	6/22/2018 10:15 AM
7	no	6/20/2018 12:25 PM
8	- an identified point of contact to make requests for modifications etc - implementation of a tracking system to log requests for changes, responses and action taken - updates on the developments to EDM via Europeana Tech (they have been subsumed in general communications from Europeana covering a range of topics, typically placed at the bottom of long emails).	6/17/2018 3:24 PM
9	No	6/15/2018 11:15 PM
10	A more living (live? lively?) process for its specification (e.g based on https://www.w3.org/2018/Process-20180201/ scaled down to the network's needs)	6/15/2018 4:31 PM
11	No	6/15/2018 2:22 PM

Q9 How can Europeana Foundation better involve the Europeana Network in the development of the Europeana Data Model?

Answered: 14 Skipped: 17

#	RESPONSES	DATE
1	See above.	7/6/2018 2:43 PM
2	... the Network could (apart from institutional members) send one or two members to a steering group to be (see 8).	7/5/2018 1:51 PM
3	No	7/4/2018 4:29 PM
4	Contribute mapping examples, share best-practice and support each other (via forum/mailing list)	6/22/2018 7:42 PM
5	The network is this first step towards what I answered in the previous question. For the question on how to do that EF might look at examples like W3C, Forum Standaardisatie en Edustandaard.	6/22/2018 11:48 AM
6	- Make the Data Quality TF permanent. Important: It needs to be clear that it's data quality for discovery and not degenerate into CIDOC-CRM style completionism and metaphysics. - Consider a EDM Slack channel for simple dialogue and Q&A? Not only between Europeana partner and EF but between members of the Network	6/22/2018 10:15 AM
7	By asking feed back from members/experts.	6/20/2018 12:25 PM
8	The step from the aggregators to Europeana is managed by aggregators, but information for developers is missing. EDM in itself is only a standard, not the core of the problem in my opinion	6/19/2018 8:52 AM
9	- Explain how the change process is managed (to the core model + extensions) - Identify a point of contact for developments to EDM - Track and report on change requests (to the core model) - Track and report on the development of extensions and mappings	6/17/2018 3:24 PM
10	By involving links od data from third parts of publishers.	6/15/2018 11:15 PM
11	See above	6/15/2018 4:31 PM
12	Updated mailing lists. Talk at conferances. Spread the word in social media and forums.	6/15/2018 3:11 PM
13	Would like to know more about the possibilities	6/15/2018 3:09 PM
14	Better documentation	6/15/2018 2:22 PM

Q10 Any other comments.

Answered: 6 Skipped: 25

#	RESPONSES	DATE
1	With reference to question 7, I presume I feel well informed about developments to EDM as I subscribe to EuropeanaTech and assume all development news are posted there. Similarly for whom to contact (either Valentine or Antoine as they are the contact points on the EDM documentation page). I find the EDM documentation excellent. I had not worked with EDM for quite a while but I have recently become "re-acquainted" (as we are working on a mapping from MODS to EDM). But this explains why I cannot really comment much further; my "hands-on experience" feels relatively new.	7/6/2018 5:50 PM
2	Easy short tutorials would be recommended.	7/6/2018 7:30 AM
3	Nothing	7/4/2018 4:29 PM
4	I would like the EDM community to reach out to related data models and potential users outside the Europeana Network.	6/22/2018 11:48 AM
5	Wish that the data be more easy useable.	6/15/2018 11:15 PM
6	No	6/15/2018 2:22 PM

Q11 Why did you choose not to make use of EDM

Answered: 6 Skipped: 25

#	RESPONSES	DATE
1	There was no partner who provided or consumed data directly in EDM. We therefore modelled mostly according to our own needs and goals and kept an eye on being compatible to CIDOC CRM in order to facilitate mappings to LIDO and EDM if needs arises. As an material object oriented organisation (analog there-dimensional objects which more often than not aren't classic media or bibliographic objects), CIDOC CRM was and is best fit (on the modelling question at least).	7/4/2018 5:47 PM
2	Existing models fitted better; especially spatial data	7/4/2018 4:37 PM
3	still evaluating	6/19/2018 10:00 PM
4	Didn't have the chance to do it so far	6/19/2018 1:23 PM
5	Because at the moment our target application is based on XML records harvested from OAI-PMH repositories rather than on linked open data from API or SPARQL queries	6/15/2018 5:02 PM
6	We apply it, but indirectly. Our digital library (babordnum.fr) is harvested by the french national library (gallica) which brings us about 30% of our unique visitors. Therefore, we make sure that we are always comliant with the requirements of gallica. We can say that we respect EDM in the parts that are implemented in the BnF requirements. But, to be very honest, we don't have a direct incentive to use EDM itself as a standalone model.	6/15/2018 2:46 PM