FOSB WG Metadata and Standardisation

*Sense of urgency*

Anno 2020, the Flemish research landscape is quite diverse in terms of the identity and characteristics of research performing organizations (RPO’s), as well as their mode of organization and the maturity of each organization in respect to research data management. This diversity and difference in maturity also applies within and between the different research disciplines in which the Flemish RPO’s are active. Nevertheless, all Flemish RPO’s are requested by means of decrees and agreements to provide metadata information to the FRIS-portal. This is expressed formally within the BOF- and IOF-decree (applying to the Flemish Universities), agreements (DOSP for the higher education colleges, convenants for the strategic research centres, ...).

If the FRIS-portal wants to display the metadata information on research data in an unambiguous manner, it is of uttermost important that all RPO’s convene to a semantically harmonized generic metamodel that is extended with disciplinary metadata fields. This allows for a perfect understanding of the information contained on the portal, and a higher re-use rate of the research data, thus increasing the return on investment of the initial investment when the research data were originally created. At the moment some RPO’s are already having their metamodels up and running, however many RPO’s are currently looking which metamodel and standard should be used. It is therefore the momentum to describe a common metamodel that is semantically described amongst all Flemish stakeholders.

*Strategic Goals*

The FOSB WG Metadata and Standardization hence focuses on the development of a semantically described generic metamodel for research data, that is based on existing metamodels (ex. OpenAire, DataCite, ...) and takes into account the recommendations of the RDA. In addition, the generic metamodel will be assessed against the FAIR data principles ([Force11](https://www.force11.org/group/fairgroup/fairprinciples)). The resulting metamodel will be used by the Flemish research performing and funding organizations to provide metadata information in a semantically harmonized manner to FRIS, the Flemish Research Information Portal (researchportal.be), thus allowing for the unambiguous disclosure of metadata in a standardized manner by all information providers. In order to enhance and support the implementation, the FOSB WG Metadata and standardization will support the creation of semantically described concordance tables when deviations exist in between the generic metamodel and the model of the information providing institutions. In addition, the FOSB WG Metadata and standardization will also perform a similar approach for disciplinary metadata in terms of development of a semantically described metamodel, and the support for the implementation. Here, the challenge is to delineate a semantically described common standard for disciplinary metadata in the wide variety of disciplinary standards that exist today with all stakeholders involved, and in line with EOSC. To this end, FAIRsharing.org will be used as a starting point for the analysis and a methodology similar to what has been described above will be used to convene to disciplinary standards. Finally, as FRIS will ensure the connection with the EOSC portal, the WG will also monitor development on the European and international level in this field, with emphasis on the developments within EOSC.

*Summary*

1. Development and support for implementation of a semantically described generic metamodel for metadata on research data
2. Development and support for implementation of a semantically described disciplinary metadatamodel on research data
3. Monitoring and alignment with European and international trends, in particular EOSC

Roadmap

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| --- | --- | --- | --- | --- | --- | --- | --- |
| Goals – timing (*ongoing* – *done*) | 2020 | | | 2021 | | 2022 | 2023- ... |
|  | Q2 | Q3 | Q4 | Q1/Q2 | Q3/Q4 |  |  |
| 1. Development and support for implementation of a semantically described **generic metamodel** for metadata on research data | | | | | | | |
| * 1. *Development a generic metamodel describing research data* | | | | | | | |
| 1.1.1 First draft of a model based on common standards |  |  |  |  |  |  |  |
| 1.1.2 Review & refinement of metadatafields and semantics |  |  |  |  |  |  |  |
| 1.1.3 Assessment against FAIR principles |  |  |  |  |  |  |  |
| 1.1.4 Validation of the generic metamodel |  |  |  |  |  |  |  |
| * 1. *Supporting the implementation of the generic metamodel describing research data* | | | | | | | |
| 1.2.1 Identification of discrepancies of the generic metamodel and the existing metamodels of information providing institutions |  |  |  |  |  |  |  |
| 1.2.2 Drafting semantically described concordance tables to information providers |  |  |  |  |  |  |  |
| 1.2.3 Supporting the implementation of the generic metamodel in FRIS as well as in all Flemish information providing institutions (in accordance with the pace and maturity of every institution in respect to RDM) |  |  |  |  |  |  |  |
| 1.2.4 Monitoring and follow-up of the generic model |  |  |  |  |  |  |  |
| 1. Development and support for implementation of semantically described **disciplinary metadata** on research data | | | | | | | |
| * 1. *Development disciplinary standards for describing research data* | | | | | | | |
| 2.1.1 Inventorying disciplinary metadata standards (ex. FAIRsharing.org) |  |  |  |  |  |  |  |
| 2.1.2 Per discipline:  - delineating disciplinary standard  - review & refinement  - addition of semantic descriptions  - assessment against FAIR principles  - validation of the disciplinary standards |  |  |  |  |  |  |  |
| 1. **Monitoring and alignment** with European and international trends, in particular **EOSC** | | | | | | | |
| 3.1 Active monitoring of European and international trends, in particular EOSC |  |  |  |  |  |  |  |
| 3.2 Adjustment and refinement of the generic metamodel and disciplinary guidelines when required |  |  |  |  |  |  |  |