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 importance that all RPO’s converge with all stakeholders on conventionalized, monosemic 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 metadatamodels up and running, however many RPO’s are currently looking which metadatamodel and standards should be used. It is therefore the momentum to describe a common metadatamodel 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 metadatamodel for research data, that is based on existing metadatamodels (ex. OpenAire, DataCite, ...) and takes into account the recommendations of the RDA. At the same time, the metadata fields describing the research data will be assessed against the FAIR data principles ([Force11](https://www.force11.org/group/fairgroup/fairprinciples)), in order to ensure that the metadata are findable, accessible, interoperable and re-usable. The resulting metadatamodel 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. As the FRIS-portal uses an Open Data license, the use of a common language on research metadata allows for automated data extraction in a machine-readable manner, thereby maximizing the re-use of research data in between all Flemish stakeholders and boosting the analytic power by enabling the use of data science methods.

In order to enhance the implementation, the FOSB WG Metadata and standardization will support the creation of semantically described concordance tables when deviations exist in between the generic metadatamodel 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 metadatamodel, and the support for the implementation. Here, the challenge is to delineate a semantically described commonly used standard for disciplinary metadata in the wide variety of disciplinary standards that exist today with all (disciplinary) stakeholders involved, and in line with EOSC. To this end, a similar methodology as 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 metadatamodel 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*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 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 metadatamodel** for metadata on research data | | | | | | | |
| * 1. *Development a generic metadatamodel 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 metadatamodel |  |  |  |  |  |  |  |
| * 1. *Supporting the implementation of the generic metadatamodel describing research data* | | | | | | | |
| 1.2.1 Identification of discrepancies of the generic metadatamodel and the existing metadatamodels of information providing institutions |  |  |  |  |  |  |  |
| 1.2.2 Drafting semantically described concordance tables to information providers |  |  |  |  |  |  |  |
| 1.2.3 Supporting the implementation of the generic metadatamodel 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 |  |  |  |  |  |  |  |
| 2.1.2 Per discipline:  - delineating disciplinary standard  - review & refinement  - addition of semantic descriptions  - assessment against FAIR principles  - validation of the disciplinary standards |  |  |  |  |  |  |  |
| *2.2 Supporting the implementation of the disciplinary standards for describing research data* | | | | | | | |
| 2.2.1 Assessing the integration of discipline specific standards in the generic FRIS metadatamodel |  |  |  |  |  |  |  |
| 2.2.2 Identification of discrepancies of the disciplinary standards with institution specific standards, including the drafting of semantically described concordance tables to information providers |  |  |  |  |  |  |  |
| 2.2.3 Supporting the implementation of the disciplinary standards 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) |  |  |  |  |  |  |  |
| 2.2.4 Monitoring and follow-up 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 metadatamodel and disciplinary guidelines when required |  |  |  |  |  |  |  |