

## Minutes

# NNG meeting 22nd of April 2020

Place: Online

Time: 13.00 – 16.30 (Norwegian time)

Minutes taker: Unit (Asbjørn Risan)

The meeting should have taken place in Trondheim, Norway on the 21st – 22nd of April, but was changed to an online meeting due to the Corona/Covid-19 situation.

### Participants:

- Iceland
  - Ragna Steinarsdóttir
  - Sigrún Hauksdóttir
  - Sveinbjörg Sveinsdóttir
- Latvia
  - Ilva Āķe
  - Eduards Skvireckis
- Denmark
  - Leif Andresen
  - Line Jung Lindhard
  - Hanne Hørl Hansen
- Finland
  - Minttu Hurme
  - Nina Hyvönen
  - Juha Hakala
  - Marja-Liisa Seppälä
  - Maria Kadesjö
  - Osma Suominen
  - Matias Frosterus
  - Katerina Sornová
  - Riitta Koikkalainen
- Sweden
  - Miriam Björkhem
- Norway
  - Frode Arntsen
  - Oddrun Ohren
  - Kjersti Rustad
  - Hilde Høgås
  - Jonny Edvardsen
  - Gro-Anita Mortensen
  - Asbjørn Risan



## 01 Startup and welcome

The meeting used Zoom as a platform. It seemed to work well for the most part for most participants.

## 02 Country reports

All participating countries/institutions presented the highlights from the country reports.

The individual country reports are added as attachments.

Appendix 1: Sweden

Appendix 2: Denmark

Appendix 3: Finland

Appendix 4: Iceland

Appendix 5: Latvia

Appendix 6: Norway (National Library of Norway)

Appendix 7: Norway (Unit)

## 03 SHARE-VDE

Finland has joined the SHARE-VDE initiative for 3 years. The National Library of Norway (NLN) is also participating (since summer of 2019). Finland has sent their first batch of data and are waiting for the result. Do not know what kind of enrichments or quality they can expect. They want to enrich the catalog with identifiers as VIAF and ISNI. Also interested in the «BIBFRAME» entities like (abstract work/original work) that are represented in the data.

NLN has tested some of the results of works generated by SHARE-VDE with the curated work database. In the curated database there are 33 works for Jo Nesbø, while the same data resulted in 135 works in SHARE-VDE. Not entirely satisfied with the quality. Some are a result of different cataloging practices (over time and from country to country) like the use of original title vs uniform title.

A majority of the institutions in SHARE-VDE are American research libraries, and they are based on the BIBFRAME model. It is a challenge to get consensus about changes, e.g. for expression vs "abstract" work. Things take time, and sometimes the focus of the development are on other things in the project.



## 03 ISNI

Finland has sent their data for a test load to ISNI. They have also got the result back and are close to sending the actual load of data to ISNI into production.

Norway are in a similar situation as Finland. We are examining the result of the test load. Experience that the communication with OCLC at some points are difficult to keep alive.

The planned satellite meeting about ISNI was cancelled due to the Corona situation. NNG see the need for such a meeting and will encourage that an online meeting is arranged to replace the planned physical ISNI meeting. Unit will relay this to the organizers.-

## 04 Time Machine project

There was a discussion if anyone knew about the Time Machine project. It seems like they have got funding from EU to propose a project. It could turn into a source for financial support to local projects.

The project was unknown for most of the participants.

## 05 NNG mailing list

The current NNG mailing list are based on the BIBSYS domain. As BIBSYS has become Unit, Unit will leave the BIBSYS domain at some point. A new mailing list has been created: [nng@unit.no](mailto:nng@unit.no).

All members of NNG are encouraged to send a list of members to be added to Unit before the 1st of May.

Unit will also look into if it is possible to migrate the archive from the old list to the new.

## 06 New members

At the NNG meeting in 2019 it was discussed that NNG should invite Estonia and Lithuania to join NNG. Latvia has asked Lithuania, but they need a formal invitation from NNG.

It was decided that Finland and Latvia will draft a proposal and send that to NNG for approval. Upon approval Finland invites Estonia, and Latvia invites Lithuania.



## 07 NNG meeting 2021

It was decided that the next NNG meeting will take place in Latvia/Riga in 2021. Latvia sends out a Doodle with possible dates shortly. Open discussion if the meeting should take place in the spring as usual, or be moved to the fall due to the Corona situation.

## **Nordic networking group on bibliographic and infrastructure topics (NNG) 22 April 2020**

### **Report from the National Library of Sweden**

Katarina Synnermark

## **The new Libris**

The development of the new national infrastructure and the Libris platform is continuing. The new Libris is based on BIBFRAME and linked open data and was deployed in June 2018. Mechanisms and interface for extracting works are yet not in place but a lot of work has been done and progress has been made.

## **RDA**

The National Library of Sweden implemented RDA in 2017 and from 2018, when we launched our new cataloguing tool, RDA is used for almost all cataloguing in Libris, the Swedish union catalogue.

However, the National Library recently decided to await work on the new Toolkit. A transition to the updated RDA requires considerable resources for translation as well as for work with Swedish practice, instructions, training etc. and we have come to the conclusion that we don't have these resources, at least not in 2020.

Furthermore, the National Library needs to evaluate the possibilities of applying RDA in the new Libris. The Swedish RDA Editorial Group will continue to follow the work on RDA but the main focus in 2020 will be on developing fully functioning practices in Libris.

## **Training**

The release of a new cataloguing tool and the move to RDA for all libraries in the Libris community have increased the need for training. Moreover, in 2019, many new libraries joined the Libris cooperation.

To meet the training needs the National Library offered a large number of courses last year. This year, we will focus on making more training material available online, mostly with filmed presentations.

## **The Cataloguers' Toolkit**

For many years the National Library has provided instructions for the Swedish cataloguers from a web site called Katalogisatörens verktygslåda ("Cataloguer's Toolkit"). The instructions were based on the MARC format. When RDA was implemented additional instructions were published. The aim was to merge Katalogisatörens verktygslåda with the RDA instructions into a new toolkit but for different reasons this work has been postponed several times. Although, in 2019, a project was launched with the purpose to develop a new toolkit that will replace Katalogisatörens verktygslåda and the RDA instructions.

## **KB-labb**

In May 2019 the KB-labb was established at the National Library. KB-labb is a national infrastructure for researchers who want to perform computer aided text, sound and image analysis on the National Library's digital collections. In the long run this should also apply to collections outside the National Library.

## Country report – NNG



### DK

#### Danish report to NNG April 2020

Nordic Networking Group on bibliographic and infrastructure topics (NNG), Virtual - 22 April 2020

#### A new set-up for the national bibliography and the national infrastructure.

A new legislation passed the Danish Parliament in May 2019 giving the local government in Denmark (KL) the responsibility to carry out the practical work with the National Bibliography and the responsibility for the national union catalogue and the national bibliographic infrastructure in Denmark.

KL has placed the task at DBC - which is now 100% owned by KL. The parts of the national bibliography made by Royal Danish Library (periodicals, maps and sheet music) will remain be made by Royal Danish Library.

KL also owns the company *Kombit* – which on behalf of the local governments organize corporation about IT-solutions and purchasing IT. Kombit will on behalf of KL act as the ordering part on the national bibliography as well as the infrastructure, but in that sense that KL regard DBC as “in-house” and not a commercial supplier.

In the future, the state only will be responsible for defining the national bibliography and the standards used to produce it. The Agency for Culture and Palaces have decided to close down The Danish Bibliographic Council (normally chaired by a member of the council). The Agency plans to replace the council with a committee on the national bibliography chaired by the agency itself.

Regarding RDA – which is not implemented yet but only decided – the state and KL has come to an understanding, where possible implementation scenarios/strategies and costs will be examined in order to reach a final agreement.

The Bibliographic Councils term ended by the end of 2019. Since last year's meeting the Danish format has been revised in order to deal with RDA-records and the new data model, a memorandum on a possible strategy for implementing RDA 3R step by step has been submitted as well as a recommendation to have a legal evaluation of the impact of GDPR on authority data.

### DBC

The changes mentioned above causes some new ways of planning, reporting and documenting DBC's work.

Even though the development towards RDA has been set on hold, we have continued a few analysis such as investigating if it is possible to identify and bring together records representing the same work by using machine-learning techniques. A major challenging and time-consuming part of this project has been to establish a valid baseline of work clusters. We have manually clustered records representing different manifestations but same work, and have come across several examples either where in doubt, because of difficulties in determining whether an adaptation or alteration has been severe enough to actually become a new work, or because metadata has been sparse or even erratic.

As we mentioned last year one of the main focuses in the Metadata department has for a while been the schism between cataloguing for the catalogue and cataloguing for the end user.

At this point, we are revising our notes – making the language less abstruse and the content more appealing to an end user who will seek for inspiration. We will go in a slightly different direction than RDA, which states *Provide a brief objective summary of the content of the expression...* We will accept a more not objective but appealing style in the future – of course without making the catalogue too commercial. We are also discussing whether a note on references really is useful for users – don't you expect non-fiction books to include such?

This is a logical development in continuation of the development of *Læsekompasset* (<https://laesekompas.dk/>), an inspirational site for adult fiction based on new types of metadata i.e. appeal factors and AI in the recommendation system.

We will also this year be working on a site like *Læsekompasset* – but for children in order to support the fight against the declining reading among children.

#### Artificial Intelligence:

We are still exploring different ways of using artificial intelligence in production of metadata. Last year we mentioned a project on developing and training an AI-service, which from a photo of the title page of a book and the impressum could suggest relevant metadata for the book. After making a limited attend, we have concluded that the tools are not sufficient yet and it will be too cost full for DBC to develop this on our own for now.

In order to be more aware of the effect of different metadata and the actual use, we are planning to see if it is possible to develop some tools and methods to give us more evidence as a basis for development in the future. For example: subject headings versus free search versus machine learning techniques.... It is possible that the right solution in one area is not the best in another area etc. We are just in the beginning of defining this so we will report next year on that.

## Royal Danish Library

Many efforts at Royal Danish Library have since last NNG meeting been used on preparations of implementation of Alma and Primo from Ex Libris as new library service platform. Moreover, after cutover November 2019 many efforts on technical problems. Most inconvenient problems with conversion of users, which implied that many users have had problem with to access Primo.

The new library platform serves four universities (Copenhagen, Aarhus, Roskilde and Aalborg) and all the national library function - including serving the public libraries with among other services the National Loan Center and Library Centre for Integration. Royal Danish Library see the new system as foundation for a broader consortium of Danish Research Libraries. From start, Aalborg



University Library have joined the consortium and now CBS Library (Copenhagen Business School) have started the preparations to implement Alma and Primo.

At the same time, Royal Danish Library had changed system from Aleph to Alma, merged four Aleph installations and changed format from danMARC2 to MARC21. That have been complicated. Normally Ex Libris works with one full test load, but the plan for the Royal Danish Library included two test loads. An extra test load only with bibliographic data was needed.

The conversion from danMARC2 to MARC21 has been a hard job. The two formats have not a real 1:1 relation and have different levels of specificity. Therefore, in many cases, we lose specificity and we add some local 900-fields to ensure the data exchange with Danish Bibliographic Centre.

In spring 2020 Royal Danish Library have started to implement Leganto from Ex Libris to create, manage, and share course reading lists that include all material types, enabling libraries to support teaching & learning.

The Royal Danish Library's original plan was to start using RDA as cataloging rules at the same time as starting with Alma. However, the general Danish postponement of RDA implementation have the implication that the Danish Royal Library RDA implementation also is postponed.

# NNG e-meeting 2020

## Country Report 2019 from The National Library of Finland

### Finna

Altogether Finna.fi provides free access to material from 398 Finnish museums, libraries and archives and there were 42,8 million visits to Finna services during the year 2019.

In the beginning of 2019 Finna joined Europeana Common Culture - project (2019-2020) in order to improve the quality of metadata and materials and to develop linked data in the Europeana service.

One of the main action points during 2019 was the integration between Finna and new library systems (Koha and Alma) used in Finnish academic libraries.

### Melinda

Melinda is a data repository currently containing the Finnish national bibliography (Fennica), Finnish National Discography (Viola) and Finnish article database (Arto) as well as metadata about the materials in higher education libraries, several research libraries and several public libraries. Currently, the service and the database related to it work in Aleph library system which is supplemented with several in-house developed additional components.

Major changes in Melinda during 2019 were integrating Viola and Arto into Melinda. On the library system integration side we have been working with cataloguing integrations for Ex Libris Alma for those Finnish academic libraries that moved from Voyager to Alma, and for Koha for public libraries.

### Library systems

17 libraries (including National Library of Finland) have implemented open source library system Koha during 2018-2019. All these libraries use Finna as UI and Melinda as their description environment.

Another part of former Voyager-libraries are implementing a commercial SaaS-system, Ex Libris's Alma. First Alma libraries have been in production since 23.12.2019 and the rest are planning to be in production in July-August 2020.

### Finto

The national thesaurus and ontology service Finto develops linked open vocabularies and ontologies, and tools for using vocabularies in the Finnish public sector. In 2019 the linking of the General Finnish ontology YSO to Wikidata was started. Currently more than 9500 Wikidata items have been linked to YSO or YSO Places. Also a conversion pipeline of YSO concepts to MARC21-based systems was built with the intention of enabling the use of YSO in Finnish MARC-based library systems.

The open source vocabulary publication platform Skosmos (software for Finto.fi) was adapted for use by European Space Agency (ESA) and Consortium of European Social Science Data Archives CESSDA. ESA and CESSDA add to the long list of international Skosmos users that include e.g. UNESCO and FAO and many universities and public administration organizations.

The use of VocBench vocabulary editing software was piloted for Finto vocabularies.

## **Annif**

In 2018 the National Library of Finland started developing a new tool called Annif for automated subject indexing and classification. Annif is built upon a combination of existing natural language processing and machine learning tools including Maui, fastText, Gensim, Omikuji and TensorFlow. It is designed to be multilingual and it can support any subject vocabulary (in SKOS or a simple TSV format). It can be used either via a command-line interface or a microservice-style REST API.

In 2019-2020 Annif development has advanced rapidly. We have evaluated new machine learning algorithms in a joint project with CSC. Using better training data and algorithms, the quality of Annif subject suggestions has improved significantly. We are soon launching Finto AI (development version already online), an automated subject indexing tool and API service for indexers. So far the main focus has been on subject indexing using YSO, but we have also achieved promising results on automated classification using the DDC-based YKL classification used in Finnish public libraries.

## **ISNI**

We have been cleaning and improving our agent database based on the results of the preliminary person data load to ISNI in preparation for the final load later this year. Related to this, we are also planning the processes needed for continual ISNI allocation into our everyday workflows. We are currently in the process of signing the contract for a RAG status and have begun devising the processes delivering ISNIs to other agent databases for other organisations. There has been preliminary interest from the publishing sector as well as copyright organisations.

## **URN**

The National Library provides URN resolution services for Finnish libraries and governmental organizations in Finland. Locally developed resolver application is simple and reliable, but after many years in service it needed a face lift.

As of this writing, we are testing the first added feature, linking from one URN to 1-n URLs. The resolver takes into account whether users are allowed to access a given copy of the resource (based on their IP addresses). So legal deposit documents will be shown on dedicated workstations only, but documents in publicly accessible institutional repositories will be seen by all.

The next step will be the implementation of URN Q- and R-components. Support for F-component (or URI fragment with no role in identification, as specified in URN Syntax, RFC 8141) does not require any changes to the resolver, since clients do not send F-component/fragment to the resolver. Only when the requested document arrives, F-component will be applied to e.g. play the required section of a video.

Q-component (URI query with no role in identification) will not be difficult to implement either. The resolver only needs to know where to forward the query. However, this requires co-ordinated development of the resolver and client applications using it. For instance, a URN:ISBN -link may be resolved to the publication itself, but an SRU search as Q-component, when passed to Melinda union catalogue, will enable us to provide descriptive metadata about the requested resource. The resolver must in this case know that every SRU-based Q-component must be forwarded to Melinda, but that is all the resolver has to know.

Q-component utilization will require changes in VuFind, which we use as the user interface. Such modification could be for instance a menu, where a user can request either a document or metadata about it. Both can be supplied by the URN link, in the latter case with the Q-component.

R-component differs from Q-component in two ways. First, it has no equivalent in URI Syntax (RFC 3986) because its authors ignored URN and other PIDs. R-component is a request sent to the resolver. What the resolver then does, depends on the request. If the client application asks for instance metadata about the identified resource in MARC 21 format, the resolver can transfer the R-component into SRU search (if the target system supports it).

The difference between Q- and R-component usage is that with the former, clients such as VuFind-based Finna user interface, must know the protocol supported by the target system. When technology changes, resolver does not need to do anything (except changes the URI of the target system, if necessary), since client is responsible of the Q-component/URI query. If there are many client systems, making these changes is laborious. Then it is better to use R-component, since client systems will remain the same, but the resolver changes the mapping from R-component to the URI query (or something else) which the resolver then sends to the target system,

The new resolver, when completed, will be made available in GitHub. As far as we know, it will be the first implementation of RFC 8141, and also the first URN resolver application released in this manner.

## **Share-VDE**

In the end of 2019 the National Library of Finland made the decision to join SHARE-VDE collaboration for 3 years (2020-2022). Our primary goals are

- to enrich our MARC record with URIs
- conversion from MARC to RDF using the BIBFRAME vocabulary (and other additional ontologies as needed)
- data publication according to the BIBFRAME data model
- learning more about entity-oriented representation of bibliographic data, e.g. work extraction/clustering and linked agents

## **RDA status in Finland**

The 3R project in Finland is waiting for the English (stable enough) texts for translation. In addition to the value and element terms, the Finnish RDA team has so far translated most of the texts of the Guidance. The aim is to finalize the full translation and the most essential policy statements by the end of this year. The “final” Finnish new RDA will be released in spring 2021, hopefully. The training sessions are organized in spring 2021.

21st April 2020

Authors: Ragna Steinarsdóttir and Sveinbjörg Sveinsdóttir

## **NNG web-meeting, 22. April 2020**

### ***Country Report from the Consortium of Icelandic Libraries and The National and University Library of Iceland***

#### **1. Introduction**

“Landskerfi bókasafna hf.” or Consortium of Icelandic Libraries (CIL), [www.landskerfi.is](http://www.landskerfi.is) is a public limited-liability company. The company is jointly owned by the municipalities and the Icelandic state. The consortium operates the following systems and services from Ex Libris; Aleph, SFX, Primo, Primo Central Index and bX recommender services. The Consortium also has a contract with Overdrive Inc. regarding lending of E-books and Audiobooks. Furthermore, the cultural historical database Sarpur is operated by the consortium.

#### **2. System Operations Overview**

##### **Gegnir – The National Library System of Iceland**

Gegnir is the national library system of Iceland. It serves both as a union catalog and as a library system for approximately 290 libraries. Among the member institutions are the National and University Library of Iceland, several smaller universities, most public libraries, primary and secondary school libraries, also research and special libraries. Gegnir is currently built upon the Aleph software from Ex Libris.

<i>The size of the system by end of 2019 is:</i>	
Bibliographic records:	1.285.496
Items:	5.893.002
Circulation:	3.130.075
Borrowers:	159.603
Libraries:	290

##### **Leitir.is – A National Discovery Portal**

Leitir.is, <http://leitir.is> is a locally hosted National Discovery Portal for Iceland. It is a single access point to the diverse collections of the Icelandic libraries, museums and other institutions. Leitir is the search and discovery platform for the Consortium, and is using the Primo software from Ex Libris. Access to electronic country licenses is provided via the Primo Central Index Service and SFX. A recommendation service for electronic licenses is provided via the bX recommender Service.

##### **Sarpur – A National Cataloging System for Museums**

“Sarpur”, <http://www.sarpur.is/>, is an Icelandic cultural database. It is used to catalog and record artifacts, photographs, archaeological sites, historic buildings, place names and cultural history. Sarpur is used by museums and cultural heritage institutions around Iceland.

##### **Rafbókasafnið - E- and Audio Books Lending Platform**

Rafbókasafnið has been accessible via <http://rafbokasafnid.is> since January 2017. The Consortium of Icelandic Libraries is responsible for the technical aspects of the project but the Reykjavik City Library is in charge of acquisition and user services. All public libraries that are part of Gegnir are now members of Rafbókasafnið. Overdrive offers predominantly books in English and it has turned out to be difficult to acquire e-books from Icelandic publishers for lending through Overdrive.

### **3. Bigger Projects and Activities**

#### **RDA**

We have spent our time waiting to see what the restructured toolkit will bring us, trying to follow as possible. We have added to the RDA translations, for example translated most of the new LRM concepts. Cataloguing experts at the National and University Library attended the ALCTS online workshop on the new concepts in February and March. Two of our experts attended the Nordic Eurig workshop in Helsinki last September and one of them, Hallfríður Kristjánsdóttir, is in the aggregates team.

#### **A new National Library Management System**

In the autumn of 2017, CIL started analyzing needs of member libraries in a new national library management system, the outcome of that work was a [list of requirements](#). In the spring of 2018, CIL issued an invitation to tender for a new national library system, including a search and discovery platform (optional). The type of procurement procedure used was Competitive procedure with negotiations. Bids were received from two bidders: Ex Libris for Alma and Primo VE, and Innovative Interfaces Global Ltd. offered Sierra and a new context based library discovery platform, Inspire Discovery, still in the making. Late June, both vendors came to Iceland and demonstrated how certain pre-defined use cases could be carried out in Alma and Sierra. The performance was judged by a group of specialists coming from member libraries and CIL. As part of the negotiations phase, on-site meetings with vendors took place early September 2018. The stated purpose of the meetings was to have an open and general discussion on the needs and concerns of the CIL, in order to ensure that the vendors understood those as well as could be reasonably expected. The evaluation and negotiations process carried on until 20 November, when bidders submitted their last and final offers. Evaluation of the bids followed a pre-defined formula and was based on replies to requirements, grades for use cases and the total project cost. Innovative scored better in the process, thus the tender from Innovative Interfaces Global Ltd. was accepted on 31 December 2018. The contract between the parties was signed in May 2019.

During 2019 both parties, including the National and University Library of Iceland threw themselves full force into configuring Sierra, working on data mappings between Aleph and Sierra, analyzing test data loads from Aleph into Sierra and last but not least CIL was heavily engaged in the Inspire Discovery development process. On 5 December it was unexpectedly announced that Ex Libris had signed an agreement to acquire Innovative, see <https://www.exlibrisgroup.com/blog/ex-libris-to-acquire-innovative-a-perspective-from-bar-veinstein/>. On 16 January 2020 the acquisition was completed, see <https://www.exlibrisgroup.com/press-release/ex-libris-completes-the-acquisition-of-innovative/>. Then on 4 February it was made known that development of Inspire Discovery would be discontinued. This was very bad news for CIL because Inspire Discovery was one of two cornerstones for the new library system. Things again took an unexpected turn, when the U.S. Federal Trade Commission (FTC) decided to conduct a review of the Innovative acquisition, see <https://www.exlibrisgroup.com/blog/update-innovative-acquisition/>. As a consequence Innovative continues to operate independently on a global basis, for the time being at least. CIL finds itself in the middle of the storm and the outcome is currently uncertain.

## Country Report from the National Library of Latvia

NNG e-meeting, Trondheim, 22 April 2020

### **RDA**

Theoretical and practical methodologies for creation of bibliographic descriptions according to RDA were elaborated in 2019:

- sheet music;
- articles in periodicals (analytics).

Processing of bibliographic records according to RDA is started in 2020:

- serials;
- sheet music;
- articles in periodicals (analytics).

Training activities for data creators of NLL and the Union Catalogue of Latvian Libraries of National Significance are organized.

Elaboration of methodology for creation of bibliographic records according to RDA for audiovisual resources is started in 2020.

**RDA glossary:** It is envisaged that translation of RDA glossary terms, RDA values and Relationship designators and adaptation to local needs will be completed in 2020. The mapping process is completed in which RDA glossary terms, value vocabularies and relationship designators in English and Latvian have been mapped with CURIE (canonical URI for elements), entity classes, values and properties defined in the RDA Registry. The aim is to submit the resulting document to the RDA Registry for publication in Latvian by the end of 2020. In the course of the work, several problematic issues related to the use of entity classes in the RDA glossary have been highlighted.

### **National bibliography**

In 2019 NLL launched a research project with the aim to study and describe “semantic cooperation” potential of cultural heritage institutions in Latvia and test particular models of knowledge management potentially applicable to the case of Latvia based on research of vocabularies and datasets available to the National Library of Latvia, which have an open data potential and are necessary for researchers from humanities, social sciences and their digital sub-fields, as well as arts. The purpose behind this objective is to make heterogeneous data interoperable in a digital space using structured and verified vocabularies and datasets.

In partnership with the Faculty of Humanities of the University of Latvia the project will promote the transfer of knowledge to other cultural institutions and study environment.

The project envisages the publication of the Latvian national bibliography data set in the form of linked open data, which is one of the work priorities for the 2020. In order to ensure the

quality, homogeneity and compliance of those data with the RDA standard, the data set 2017-2019 was selected, but parallelly legacy data will also be prepared for the transition to linked open data and the Semantic Web environment.

New bibliographic records for the national bibliography are created in the Union Catalogue since 2018, and data input in a separate national bibliography database is terminated since then. The historical database of the National Bibliography contains approximately 252,000 bibliographic records and covers bibliographic information on monographs (and serials) since 1525. Data have been created over a long period of time, following various data creation standards and rules; the database also contains automatically created records that were included in the database without editing. Data editing is provided semi-automatically using the global editing capabilities of the ALEPH system. The types of corrections that can be made automatically are currently being identified, but extensive corrections will have to be made, and most of them will have to be carried out manually.

## Authority data

It took a year to resolve the situation with the GDPR: NLL postponed sending authority data to VIAF in 2019 as there was an unsolved legal problem and contradictory opinions regarding the GDPR (regulation stipulated in the article 6.1. points c and e of the GDPR is not sufficient to allow to share personal authority data). The NLL addressed the Latvian State Data Inspectorate with the description of the situation and asked for clarification. The opinion of the Latvian State Data Inspectorate is that the GDPR does not prohibit agreement based transfer of data to cooperation partners located outside the EU or the EEA, if the principle of adequacy is taken into consideration. Thereby NLL resumed sending authority records to VIAF from January 2020.

Types of authority data sent to VIAF till 2019 and resumed since 2020:

- Persons, Families;
- Works;
- Corporate bodies.

Types of authority data sent to VIAF additionally since 2020:

- Geographical Names;
- Meeting Names.

Creation of authority records for Meeting names (conferences, seminars, etc.) and Geographical names according to the RDA started in 2019.

Elaboration of methodology for creation of authority records for Series is started in 2020. Training for data creators will be provided.

**A pilot project was launched** in 2019 — authority records of Persons, Institutions and Geographical names are enriched with identifiers: ORCID, ISNI, Wikidata, VIAF, Researcher ID, ULAN (Union List of Artist Names). These identifiers are added only to Persons and Institutions that are Latvian authors or are in some relationship to Latvia. Identifiers allow to link Latvian authors with the relevant entry of the e-version of the Latvian National Encyclopedia (being prepared by the NLL). Authority records of Latvian Geographical Names are linked with the ID of the Latvian Place Names Database. Created Work authority records are published on Wikidata and then Wikidata URI is inserted in Work authority records created by NLL.



In the newly created authority records identifiers from other databases are inserted manually. These identifiers are acquired automatically by NLL developed interface/search engine.

From the data received back from the VIAF currently only VIAF and ISNI identifiers are added to authority records created by NLL. However, NLL works on the task to retrieve URIs from several other databases (Wikidata, ULAN, etc.) from the data received back from VIAF and insert them in the authority record prepared by NLL as links in the 7XX MARC21 fields. NLL is preparing data for publishing it into the form of linked open data.

**Challenges:** creation of authority records for the aggregate works (collected works, selected works, etc.), as it is necessary to show the relationship and hierarchy of the works included in the aggregate in relation to the aggregate work.

**Another problem NLL faced** is identification of the entity type for cultural and historical buildings with special names (castles, temples, cathedrals, etc.). Authority records for these objects previously were formed as institutions (MARC field 110) but this does not correspond to the appropriate entity type. The decision was made to create authority records for those objects as Topical terms in order to eliminate the contradiction of identification. The possibility of creating authority records for those objects as geographical names was also considered, but this did not resolve this contradiction either. Authority records for various Named moving objects (ships, submarines, space crafts) will also be created as Topical terms.

**National thesaurus:** LCSH is used as basis for creating and maintaining the National thesaurus. The English language form of LCSH is preserved in the authority records. The possibility of adding the LCSH URIs to the authority data of the National thesaurus automatically is currently being investigated. Inclusion of LCSH URIs in the authority data of the National thesaurus would be the first step in preparing to publish thesaurus on the web as an ontology using SKOS. In the framework of project mentioned before, it is intended to convert the National Thesaurus data into SKOS ontologies and connect it with other ontologies in other languages.

In order to facilitate the approximation of the national thesaurus data to the linked open data environment the introduction of the FAST Form/Genre facet has been started. Authority data of the Form/Genre facet mainly are formed, covering general terms (reference materials, dictionaries, teaching aids, etc.), fiction, art and music.

## **NNG enlargement**

At the beginning of 2020 we sent a personal e-mail to a representative of the Lithuanian National Library inviting them to join the NNG. After consultation with the top management of the National Library of Lithuania no specific answer was given. The best solution in this situation as seems would be sending a formal invitation on behalf of NNG (i.e. contact the director directly).

## Country Report: National Library of Norway

NNG meeting 22 April 2020

### Introduction

The National Library of Norway (NLN) is responsible for legal deposit, the Norwegian National bibliography and National Authority files. The library is a part of the BIBSYS consortium.

### Replacing Mavis

Mavis, the system we are using for our audio-visual collection, is outdated and is to be replaced by a new system. Currently we are in the process of analysing our requirements for a new system and have conducted a survey of relevant systems in the market. A key requirement is that the new system must cover both bibliographic and preservation metadata.

### Legal Deposit

The new Legal Deposit Act from 2016 with Regulations from 2018, moves legal deposit from a physical to an electronic workflow, both in terms of receiving the material from the publishers and providing access to the deposited publications. Each document allows online access to four concurrent users from academic libraries and two concurrent users from public libraries. Our main focus is now to establish workflows for digital legal deposit from the publishers. So far, we have implemented workflows for sound recordings, newspapers and other periodicals. Our next step will be a workflow for books.

### The Government's Library Strategy

The Norwegian Government's strategy for Norwegian Libraries 2020-2023 was launched in September 2019. This strategy applies to all Norwegian libraries, public libraries, school libraries and research libraries. One important part of the strategy is a shared metadata repository for all Norwegian libraries. The National Library will populate the metadata repository with metadata from The National bibliography and the catalogue. The repository will also open for reuse of metadata between the libraries. We have just started with the specifications for content and functionality. The National Authority File for Persons and Corporate bodies and the Authority File for Works will be important building block for the metadata repository.

### Norwegian thesaurus of genre and form

A new thesaurus containing genre and form concepts is being developed under the leadership of National library of Norway, in collaboration with Biblioteksentralen SA and Bokbasen AS. Starting as an integration and reconciliation effort between the genre/form terms used by the participants, the work has expanded to develop a fully-fledged hierarchical thesaurus with labels in Norwegian and English, definitions and links to the Library of Congress Genre Form Terms where applicable. According to the current plan, the thesaurus will be made available as linked data through a suitable publication service, possibly SKOSMOS.

## RDA

The National Library has translated RDA into Norwegian and NLN started to use the new cataloguing rules in The national bibliography in 2019. Some libraries have followed but some are still using the old AACR 2 rules.

We have recently also finalized the translation of the new RDA version. The next step is to prepare new policy statements and application profiles. Updated Norwegian RDA Vocabularies are published under Creative Commons License at NLN. The goal is that most of the Norwegian libraries have switched to the new toolkit sometime in 2021.

## Authority file for Works

From summer 2019 onwards, the work on our National authority file of Works is being pursued through participation in SHARE-VDE. SHARE-VDE is a library-driven collaboration between 8 American academic libraries and 3 European national libraries, the latter group being British library, National Library of Finland and National Library of Norway (NLN). The coordinator is Casalini Libre AS, an Italian metadata supplier. Software is developed by the Italian software house @Cult, assisted by the Danish company Samhaeng on the user interaction side.

The main goal of the project is to establish a data processing infrastructure in which bibliographical entities compliant to the BIBFRAME model (with extensions) are extracted and clustered from MARC metadata and authority data submitted regularly by member libraries. The resulting linked data are stored in a joint triple store, all the while supporting full data provenance in the sense that each data element is traceable to a particular MARC record. That way, members may retrieve their own data at any time.

To provide access for end-users, a discovery platform is being developed, along with a linked data editor for data managers, APIs for programmatic access, and more.

Through our engagement in SHARE-VDE, we hope to be able to extract Work entities that fit reasonably well into an RDA setting. However, since the SHARE-VDE entity model is not quite finalized yet, it remains to be seen how it will all shape up in the end. Not least because we also wish to retain and integrate the set of curated Work entities resulting from our previous collaboration with UNIT.

Current status: Processing of our data is still in a testing phase and some of the core infrastructure components still exist only as specifications. With so much development work waiting to be performed, this is a crucial time for the project. Hence, at this point it is hard to estimate a definite completion date for the NLN Work authority file.

## NNG meeting 22<sup>nd</sup> of April 2020

### Country Report from Unit, Norway

#### Unit

Unit - the Norwegian Directorate for ICT and Joint Services in Higher Education and Research was officially established on the 1<sup>st</sup> of January 2018 and is formed by the previous organizations: Ceres, BIBSYS and parts of Uninett.

Unit's main office is located in Trondheim, with a branch office in Oslo. Unit delivers services and support to about 220 institutions in higher education, research and public service.

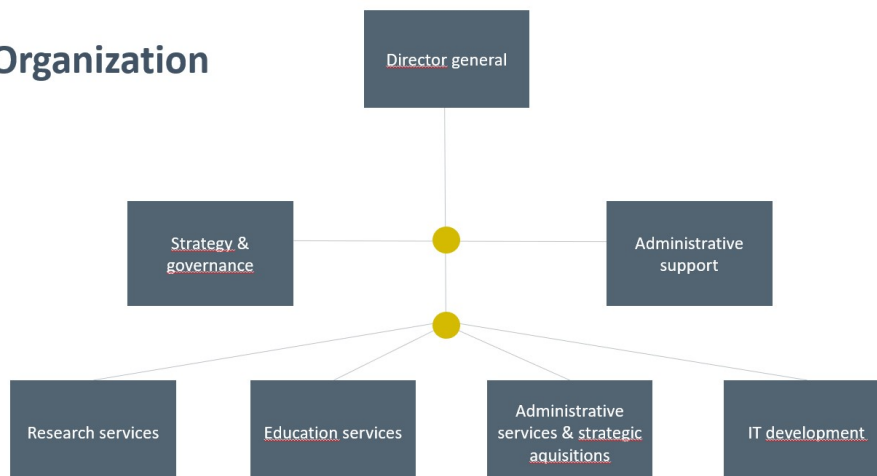
Unit has 4 main branches:

- Research services
- Education services
- Administrative services & strategic acquisitions
- IT development

In addition, there are two supporting divisions with Strategy & governance and Administrative support.

The department of library services are located in the division of research services.

#### Organization





## Library system

Alma has been live for more than four years, and the BIBSYS consortium has become experienced with the new system. Alma is a large and complex system, and with monthly releases there are perpetual ongoing changes to assess. The need for support is decreasing, but the complexity of the cases is increasing. In general, the system largely covers the consortium's current needs, but there are still some challenging areas, like Interlibrary-Loan (ILL) functionality and integration with external systems, especially related to article delivery.

The system supports RDA (in MARC) and the consortium started using RDA during 2019 in compliance with the central work done by the National Library of Norway. Unit will support this transition.

GDPR, data privacy and data security are some of the main strategic areas related to the system and need to be balanced against the need to have an open system in regards of functionality and data.

Unit has initiated work on assessing future solutions for the consortium and will continue work on a strategic approach to what solutions the consortium needs beyond the current library system.

## Discovery & delivery tool

Oria is based on Primo delivered by Ex Libris. Unit provides central configuration and customization, but the institutions themselves can override the central configuration and customize their Oria instance according to their own preferences.

In addition to the standard application from Ex Libris, Unit develops and maintains add-on functionality and services to meet the needs of the consortia.

The search system contains the entire BIBSYS Library Database with about 9 million records, in addition to the Primo Central Index (PCI) of electronic articles. Unit has also added other local content and special collections; e.g. the institutional repositories, the authority registry and special collections from the University of Bergen and NTNU.

All institutions have been transferred to the new graphical user interface offered by Ex Libris.

One of the main focus areas in 2020 will be on universal design and to make sure that the services are in alignment with new requirements in the legislation.

Another major area will be the transition from the PCI to the new Central Discovery Index (CDI). That is a joint index between Primo and Summon.

## Reading lists



Unit provides a solution for maintenance of and access to readings list for the educational institutions based on Leganto from Ex Libris. The solution is organized as a stand-alone consortium with 19 institutions.

The service was established in 2017 with 9 institutions participating. There are currently more than 8000 reading lists in the system and there has been more than 1.8 million reading-list-views<sup>1</sup>.

Verifying compliance with universal design and new legal requirements will be an important area related to the reading list solution.

## National open access repository

The Ministry of Education has released new guidelines to provide open access to research articles, to support EU's decision on full open access by 2020. The suggested guidelines states that deposit of a research article in an institutional repository is a prerequisite to be counted in the results-based financing.

In 2018 Unit delivered a report to The Ministry about how such an archive could be realized. The report suggested establishing a National repository; Nasjonalt vitenarkiv (NVA). The Ministry of Education and Research asked Unit to establish NVA and Unit began the development during the fall of 2019. The development will continue in 2020 in parallel with a pilot-period starting in March 2020.

## DLR – Digital Learning repository

DLR is a digital service that collects, preserves, and distributes learning resources. DLR is an integration solution that constitutes a hub of learning resources used for teaching from various sources. DLR is integrated with several learning management systems to operate as a learning object repository (LOR). There is an increasing interest in the solution, which has been modernized by restructuring the code to micro services.

The service is organized as a stand-alone consortium.

## BIRD - a platform for institutional research data

BIRD is a digital service that collects, preserves, and distributes research data. There is an increasing interest for research data infrastructure, due to requirements from funders to deposit research data on which the research results are based upon. A consortium is established, and several institutions has joined the cooperation. BIRD is merged with the DLR platform, where end user functionality is built on the top of DLR. Data Management Plan (DMP) are implemented within the solution.

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<sup>1</sup> Figures from 2019.



The service is organized as a stand-alone consortium.

## Semantic web, metadata and authority-files

In 2019 Unit has worked on a new generic metadata platform. The main goal for this platform is to store, maintain and share all types of controlled vocabularies that are not maintained elsewhere. Local topic/subject authorities are the first metadata planned for the new platform. These authorities are currently maintained locally.

The base platform are more or less finalized, and realizing subject headings is an ongoing process that is planned delivered during 2020.

The entity-register are part of a bigger project in Unit; Masterdatakilder (Master Data sources) and are planned as the base platform for the authority/vocabulary handling in this project. The entity-register will also be used by the NVA-project.

Authorities for people, corporations and conferences may be moved to the new entity registry, among representations of the bibliographic records. The platform will form the base of the semantic web/linked data approach at Unit, with planned functionality for a new navigation within the data and query-options using SPARQL.

The metadata is licensed with open licenses.

## National strategy for libraries

In 2019 the Norwegian government published a new national strategy for the libraries of Norway.<sup>2</sup> This also includes the educational and research libraries.

The strategy contains a chapter for infrastructure and metadata and Unit has in co-operation with the National Library of Norway been given the responsibility to operationalize some of the measures in the strategy; like the establishing of an open metadata well/data sea for bibliographic records and the distribution of joint/common authority registries. It is the National Library of Norway that has the overall responsibility to follow up the strategy.

## COVID-19 / Corona

As a result of the COVID-19 situation all of the libraries has physically closed. Unit has provided guidance and support to the libraries on how to configure the systems in order to be aligned

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<sup>2</sup> <https://www.regjeringen.no/no/dokumenter/nasjonal-bibliotekstrategi-2020-2023---rom-for-demokrati-og-dannelse/id2667015/>



with the new situation, such as preventing orders on physical material, extend loans, prevent overdue-messages etc.

There has also been a main focus on strengthen the accessibility of electronic materials for the end-users. The overall impression is that the libraries has been digital for some time and that this part of the activity works well in the given situation when the physical material is unavailable.

Unit has supported the institutions with guidelines for configuration and activations of resources that are flipped to open access or where the access limitations has been changed due to Covid-19 from the vendors. Unit has also made necessary adjustments in the discovery-tool to highlight the electronic resources.

One legal obstacle that need to be addressed in future negotiations with the vendors are the limitations in providing the end-users with digital copies of articles as part of the ILL-process.