

Minutes

The first NNG meeting

Reykjavík

November 3rd -4th 2016



Minutes

NNG meeting in Reykjavík 3 - 4. November 2016

Location: Landskerfi bókasafna hf., Katrínartún 2, Reykjavík

Date: 3rd - 4th of November 2016

Attendees:

Institution	Name
<u>Finland, National Library of Finland</u>	Minttu Hurme Nina Hyvönen Tommi Jauhiainen
Norway, BIBSYS	Asbjørn Risan Jone Thingbø (day one)
<u>Norway, National Library of Norway</u>	Jonny Edvardsen Hilde Høgås
<u>Sweden, National Library of Sweden</u>	Anna Berggren Miriam Säfström
Iceland, Consortium of Icelandic Libraries	Sigrún Hauksdóttir Sveinbjörg Sveinsdóttir
Iceland, National Library of Iceland	Ragna Steinarsdóttir
Denmark, DBC	Line Jung Lindhard
Denmark, Denmark Royal Library	Gitte Andersen Leif Andresen

About the meeting: Every participating organization, apart from National Library of Sweden submitted a short status report and distributed it on the mailing list prior to the meeting. Most of the agenda topics were included in the reports. The meeting was organized in such a way that for each agenda topic a short overview was provided at start, then participants were asked to report on the topic and finally discussions took place. The reports will be accessible on the NNG website.

1. Welcome and introductions

2. Approval of **Meeting Minutes** from 2014
Minutes were approved.

3. **NNG (Nordic Network Group)** – Presentation of current draft and discussions.
The aim was to agree on a final version during the meeting. Few steps had to be taken to formalize the **Nordic Network Group**:

a. Replacing the SVUC agreement

The first step in order to finalize the NNG framework was to sign a letter of intent which states that the SVUC agreement will be honored and the members will continue to give each other mutual access, free of charge, to their bibliographical

union catalogues for information retrieval and copying of catalogue records, whilst not stating the exact technical means for doing so. The letter "Mutal free access to union catalogs for information retrieval and copying of records" was distributed in advance in order to gather signatures from the heads of each member organization. Unfortunately the name of the Helsinki University Library was changed to the National Library of Finland after the signature sheets were distributed so it was decided to gather the signatures again with the correct name. The National Library of Sweden volunteered to compile and archive the signed documents from all members.

b. Agreeing the scope for the NNG

Based on the previous draft, a scope for the Nordic Networking Group was agreed. The scope is attached on page 10.

c. The name

It was agreed that the formal name of the group would be:

Nordic Networking Group on bibliographic and infrastructure topics (NNG)

d. Pratical issues

- i. Website – BIBSYS agreed to set up and host a small webpage for the forum, <http://www.bibsys.no/nng/>
- ii. Mailing list – BIBSYS will continue to maintain the mailing list, nng@bibsys.no. Individual members have to send notification to Jone to be added to the list.

e. Meetings

It was decided to have annual meetings in the timeframe March to April. Each member takes turn to host and organize the meeting. At each meeting the host for the next year's meeting is selected.

f. Membership

Members are National bibliographic agencies from the Nordic countries. In the latest version of the SVUC agreement the ELNET (Estonian Library Network Consortium) is listed as a member. Various attempts have been made to contact them in vain. Sveinbjörg will contact ELNET and inquire whether they are using the "SVUC" catalogues for copy cataloguing and inform them on the collaboration.

It was decided to have the NNG cooperation open for other members to join. New member requests would be dealt with in the following NNG meeting.

4. Reports from members

Each institution gave a short report on topics that were not included in the agenda. Subjects on the agenda were reported on and discussed in the special sessions.

Public libraries: It is apparent that there is a general shift on a national basis to give more support and services to the public libraries from the National Libraries and the service providers.

National bibliographies: The boundaries of the national bibliographies are not clear. The dilemma is whether the national bibliographies should mirror the whole range of publication in each country or if it should only contain “quality material”. Self-publication is a gray area where guidelines are needed.

Legal deposit: In general, the scope of legal deposit is expanding to all forms of digital material. The extent of the collective range varies between the countries. The National Library of Norway is leading the way with implementation of new legal deposit laws January 1st 2017. With the new laws they have to collect all websites and it seems that the law could be similar as in Estonia. In the law it is stated that the metadata about publication has to be delivered to the National library and also when applicable the publication should be delivered in digital format so the National library does not have to digitize the new material.

5. **RDA** – status from each country.

The implementation of RDA cataloging rules is in progress in all of the countries. Finland and Iceland have started to catalog in RDA. The bibliographic data in Melinda has been converted to hybrid RDA records. Here is the MARC21 -> RDA MARC21 hybrid conversion rules in <https://github.com/NatLibFi/USEMARCON-RDA>. Finnish archives and museums are also using the RDA rules to describe persons, families and corporate bodies. The Icelandic cataloging community has begun cataloging new records in RDA. No changes were done to the existing data but the plan is to convert the bibliographic records in Gegnir to hybrid RDA records in 2017. The implementation of RDA in Denmark will entail the implementation of an entity-relation data-model before starting cataloging RDA records. Some of the countries will translate the full RDA toolkit, others will just make do with translating the introduction and basic terms and yet some are translating the full glossary. See details in the national reports.

6. **Library Systems – Current trends**

Systems from vendors – Own development (open source) – integration between systems from various sources: What is the current status and/or plans in this regard?

- Are there plans for
 - purchasing readymade library systems?
 - own development based on i.e. open source?
 - mixing commercial and own development i.e. through the usage of API integration?
- Views on SaaS and the cloud versus locally stored?
- What are the pros and cons on these alternatives?

- Timeframes for new library systems?

BIBSYS has moved to Alma and the other NNG members are still in the investigation phase for new commercial or open source systems.

Norway: In the fall of 2015 all of the BIBSYS consortia libraries transitioned to Alma with the pros and cons that come with a new system. Alma has been challenging in order to make the library system a true platform i.e. through the usage of APIs.

The public library in Oslo, Deichmanske Bibliotek, is in the process of implementing Koha open source library system and uses RDF linked data as their core metadata format, see <http://digital.deichman.no/data.deichman.no/>.

Denmark: Cicero Library system has been selected for the public libraries and educational centers. A special working group was formed to select a new library system for the Royal Library. The feeling is that the current systems are too old and that the new ones are too new so probably it is best to wait a little longer.

Sweden: Libris is still using Voyager as an ILS, the National Library uses Aleph. They have had discussions with Ebsco on Folio and are willing to become a discussion partner. Public libraries are converting to Koha. The same applies to Finland.

Finland: is currently in the process of selecting a new back-end system for the National bibliography and Melinda. They will send out a tender in 2017 and hopefully start implementation in 2018. Open source is the key as stated in the report "Finland has committed on the national level to foster open services, open science, open metadata and API's, open source where appropriate, as well as technical and semantic interoperability. This is the set up criteria for the new library system solution."

Iceland: is actively looking for a new library system that would replace the current National library system Gegnir (Aleph). This fall Iceland is getting visits from system vendors.

7. Linked Open Data – Current status

In recent years, various initiatives have been started in order to make linking of data on the internet possible.

- A) Some of the identifiers being used are ISNI, ORCID and VIAF. What are the trends regarding usage of those in the Nordic area? Which identifiers are the most important ones?
- B) BIBFRAME – expectations to "after-MARC" format(s) and possible cooperation on Linked Open Data exchange formats?
- C) Status and value of open linked data in the Nordic area. Which organizations have already implemented open linked data and how was the work carried out? Which experiences were made during the process, were there any particular problems etc.?

For those of us who have not taken this step yet, are there any guidelines to be followed in order to successfully generate “open linked data”? How is linked data presented in current systems and how does the end-user benefit from it? Examples of usage would be welcome.

Identifiers. In general all identifiers, VIAF, ISNI, Orcid, etc. are or should all be supported in linked open data. BIBSYS is an ISNI provider. Orcid is for researchers and ISNI for authority data. Wikidata-Id is uncontrolled but it is valuable in the LOD context.

The National Library of Sweden is in the forefront of open linked data by the development of Libris XL (new infrastructure/backend and cataloguing client for the Libris systems). The Libris cataloging is still done in Voyager in MARC21 and the records are transferred and stored in RDF. The development has halted but the experience of the project is a valuable source for further development of LOD within the National Library of Sweden and the library community as a whole. The expertise from the project will contribute to the development of BIBFRAME.

Id.kb.se is an open linked data project which is based on Swedish authority data. The first version published Swedish subject headings, subject headings for children and genre, see more on: <https://id.kb.se>.

The National Library of Finland is in the process of opening their data. An overview of the current status is to be found in a presentation that Osma Suominen and Nina Hyvönen will give at the SWIB16 conference in end of November. The presentation is called “WHERE ARE WE? From MARC silos to Linked Data silos” will address linked data and opening up the Finnish national bibliography, among other things. An abstract can be found here <http://swib.org/swib16/programme.html>

Experimenting with BIBFRAME. It is easier to work with the data since version 2 is a far better tool than the first version.

Conversion tool from marc2bibframe can be found at:

<https://github.com/lcnetdev/marc2bibframe> and here is a Finnish version, <https://github.com/NatLibFi/marc2bibframe-wrapper>.

[Schema.org](http://schema.org) is essential in the world of LOD, it is the gateway to structured data on the internet.

RDF (Resource Description Framework). DBC published 5 years of the Danish National bibliography in RDF/XML and Turtle. No library system is consuming RDF yet.

Semantic web pilot project in Norway. BIBSYS has led a project in semantic web technology which represents bibliographic and authority data in RDF format. The pilot project was to transfer bibliographic and authority data from selected libraries and

transform it into RDF. Use cases were created and based on those, a mapping of data elements was done. It was decided to continue this pilot as a production service in 2017. The BIBSYS semantic web is here: <https://livedata.bibsys.no/>

- An example of a work in RDF:
<https://livedata.bibsys.no/work/69beb6e9d66d53232ffc4a946812f6316f2eb196>
- The HTML-display of the same work-record:
<https://livedata.bibsys.no/work/69beb6e9d66d53232ffc4a946812f6316f2eb196.html>

It was discussed that NNG could be used to ensure linked data entities in the Nordic area. It should be a topic during NNG meetings, to share information and try to find a common ground. Could this be a topic for the next meeting?

A discussion arose on the future of bibliographic formats. BIBFRAME is one possible successor of MARC, however it seems to be missing some focus, furthermore it is very US focused. The discussion in this meeting shows that a lot of things are being done on a national level in Europe. The question was put forward on how the visibility of this work could be raised. Leif proposed a workshop.

BIBFRAME workshop. In that context an idea emerged to organize a workshop in BIBFRAME and get experts from the leading European National Libraries (Germany and British Library) and Library of Congress to conduct the workshop. An informal organization committee consisting of Leif, Miriam and Anna was formed with the task of organizing such a workshop.

8. Metadata management in central / national catalogues versus repositories

In discovery tools like Primo, structured and relatively rich library metadata in MARC or BIBFRAME formats and simpler data (DC format) in repositories are searched together. The integration of these different data sources affects the search results and can at times give the end user inaccurate information. We are noticing a trend to store special libraries and research data in separate repositories parallel to the library catalogue. The question arises what is the role of the central catalogue? Why is this data not being catalogued in the central catalogue and integrated into the repository? How can we avoid duplicates and ensure data quality?

It varies if the repositories data and the library catalog data are searched together. The key to more unified search results are persistent identifiers and the guidelines are that more is better than less. In Alma it is possible to load the DC metadata into the library system and fix the records accordingly, as well as selecting the record that is displayed in Primo.

9. E-books (public and academic) – Current trends in handling license agreements and lending

Is there anything new emerging in this field in the Nordic area? Are the licenses handled on library-, consortium- or a national basis?

In Denmark the DDB (Danish Digital Library) handles license agreement with Danish publishers, and Publizon, <http://pubhub.dk/> makes it available for eReolen.dk and DBC, who then creates the metadata.

Icelandic public libraries have signed a contract with Overdrive.com/ as their e-book provider. The ambition is that Icelandic publications will also be available there in the future. In the other countries e-book licenses are on a library level. Legal deposit e-books are accessible from workstations in designated libraries. Finland had an e-book project with ELib, <http://www.axiellmedia.com/> for Finnish and Swedish language books. Many libraries are using it, both public and colleges. The National Library of Iceland participates in Knowledge Unlatched collaboration for free scholarly content, <http://www.knowledgeunlatched.org/>.

10. The user's perspective – how are the libraries meeting the user's needs?

How are the libraries ensuring that their software/discovery solutions are meeting the true needs of the user?

- User Service Surveys in regard to services provided via systems/datawells etc.
- Is there a way to “measure” current trends in regard to end-user expectations?
- Self-service options
- Special development in the library (API usage) in order to meet specific needs

Denmark - The national union catalogue sends out a user survey to all the libraries.

Here is the latest report in Danish:

http://www.danbib.dk/sites/default/files/Brugersurvey_2015a.pdf

- Here is a link to a site with surveys for the last 10 years and statistics:

<http://www.danbib.dk/bibdkstatistik#brugerundersoeg>

DBC has increased focus on user behavior. A study was conducted, with interviews, research and workshops, on the concept “What will bring the library to the user”. Based on the findings, several ideas and concepts have been drawn, which all deal with the libraries’ ability to serve the users in a digital context. The fact is that the libraries are at risk of being neglected, and that we have to present the libraries and the library services in a more direct way to the end users. In the beginning of 2017 the Danish library community will decide which of the concepts will actually be developed. The BIBLO project, <https://biblo.dk> builds on the same concept to bring the library to the user. It is a social meeting place for children where you can borrow books, films, games, etc. A community site where the children can make or join groups on any topic they like. They can also write reviews and make recommendations. It’s monitored by librarians.

Sweden - User research was a vital part in analyzing the new technical infrastructure for Libris. User experience designer spent time in the selected libraries to review the workflows. Three cataloging personas were identified:

- National Library
- Part time
- Public libraries / limited cataloging

Finland – User research is heavily relied on in the Finnish library environment. Currently one UX specialist is at the National Library but during the Finna project they were three and were extremely valuable for the project. A user survey is conducted every year.

11. Other issues

- Next meeting will be held in Stockholm the last week of April (27 – 28) 2017. Since there is just half a year until the meeting it might be shorter and even in a workshop format.
- Language identification. Tommi told us about his background in language technology and projects that he has contributed to that identifies the language of web pages. Here are two links on the project:
 - <http://suki.ling.helsinki.fi/eng/project.html>
 - [http://suki.ling.helsinki.fi/Jauhiainen Linden Tromsso.pdf](http://suki.ling.helsinki.fi/Jauhiainen_Linden_Tromsso.pdf)

12. Visit to National and University Library of Iceland

The day finished with a visit to the National and University Library of Iceland. After a short tour of the library we had introduction and discussion on the Library's digitalization and web harvesting projects. The participants from the National and University Library were: Ingibjörg Sverrisdóttir National Librarian, Örn Hrafnkelsson head of National collections and digital conversion and Kristinn Sigurðsson, head of IT.

Here are links to the main projects:

- <http://timarit.is/>
Timarit.is gives access to the printed cultural heritage that is preserved in newspapers and periodicals of the Faroe Islands, Greenland and Iceland. The National and University Library of Iceland has digitized almost every Icelandic newspaper and periodical printed before 1920.
- [http://baekur.is/search/\\$N/TITLE](http://baekur.is/search/$N/TITLE)
Baekur.is contains digital reproductions of old Icelandic books. The goal is to enable access to all Icelandic books published prior to 1870.
- <http://vefsafn.is/>
Vefsafn.is is the Icelandic Web Archive. It has collected snapshots of Icelandic websites since 2004 in accordance with the Icelandic law on legal deposit from 2002. The collection is limited to .is-domains and a hand-picked selection of Icelandic websites within other top-level domains.

Nordic Networking Group (NNG)

on bibliographic and infrastructure topics

Approved: November 2016.

NNG is a networking group focusing on bibliographic and infrastructure topics of common interest. Its aim is to share strategies, policies and information among the Nordic members.

The group holds an annual meeting during the timeframe from March to May. Each member takes turn in hosting and organizing the meeting, including taking minutes. At each meeting, next year's host is chosen. Each member is responsible for writing a status report before the annual meeting and presenting the report at the meeting.

Members

Members are national bibliographic agencies and managers of national bibliographies from the Nordic countries. Each institution chooses its own delegation.

Sweden:	Kungliga biblioteket (National Library of Sweden)
Finland:	Kansalliskirjasto (The National Library of Finland)
Denmark:	Dansk BiblioteksCenter (DBC) Det kongelige bibliotek (The Royal Library)
Norway:	Nasjonalbiblioteket (National Library of Norway) BIBSYS
Iceland:	Landskerfi bókasafna hf. (Consortium of Icelandic Libraries) Landsbókasafn Íslands – Háskólabókasafn (National and University Library of Iceland)

The group can be expanded if requests are received and approved by members.

Topics

- Metadata: standards, policies and cataloguing rules. Share strategies for metadata production, licensing, open data, LOD. Sharing data/interoperability. Infrastructure: standards, data models, open source versus commercial options etc. Sharing open source code
- Product/project update.
- End-user needs and future demands.
- E-resources: business models, handling models, licensing.
- International bibliographic agencies and system vendors.
- Areas for cooperation/common projects.

Status Report from DBC

Nordic Network Group (NNG) meeting, Reykjavik 3rd-4th of November 2016

This is the status report, not from Denmark, but from DBC, as Denmark is represented by both DBC and the Royal Library. We haven't coordinated the content, which means that there might be some overlaps on various issues in our reports.

General trends

- Increased focus on metadata needs in other public institutions than libraries, primarily schools and other educational institutions
- Self-publishing, difficult to curate
- Publishers digitize backlists, has caused a need for an adjustment of the national bibliography agreement
- Apps and SoMe – not us

RDA and authority data

In August this year the Agency for Culture and Palaces decided for Denmark to switch to RDA by 2018.

This means that RDA will become the national standard for cataloguing in the national bibliography and in the union catalogue.

The national Agency for Culture and Palaces is responsible for implementation of the rules and the Danish Digital Library is responsible for the technical preparation and implementation in the national library infrastructure.

DBC is deeply involved: We participate in the Bibliographical Council and the Councils working groups, we host the union catalogue, and we are suppliers of services for the national library infrastructure.

The implementation of RDA entails the implementation of an entity-relation data-model. Whether it will be a full-scale WEMI-model from the start hasn't been decided yet. The goal is to implement all WEM-entities and convert before-RDA-records into the new model.

The plan is to start out in a MARC-environment as we find that other – and for the purpose better – formats as e.g. BIBFRAME is unfortunately not yet mature.

The next years will therefore be a transition period with several different tasks – some of them quite colossal - to perform:

- The Bibliographical Council has established four groups working with; Vocabulary, Policy Statement, Authority Data and Format

- The Agency has had some parts of RDA translated into Danish, e.g. the glossary and the Vocabulary group is revising it at the moment
- A Danish Policy Statement is being formulated by Hanne Hørl Hansen, DBCs bibliographical consultant
- A roadmap for implementation is being drawn by the national Agency for Culture and Palaces and the Danish Digital Library
- Projects on the technical implementation of a new data-model is in process, the projects are managed and carried out by DBC
- Further analyses will have to be made regarding e.g. implementation of a new data-model in the national infrastructure, how old records and new entities can co-exist, which formats to use and support, and search, retrieval and presentation of entities in user interfaces. This work will partly be carried out by DBC, the Bibliographical Council and the working groups
- Decision making by the national Agency for Culture and Palaces
- Establishing of a National Repository for Authority Data – a project plan is not yet prepared
- Information – ongoing
- Education - a strategic plan is not yet prepared

The Joint Library System: Cicero Library Management System

A new library system is currently being rolled out in the Danish public libraries and educational learning centers.

The system uses several different web-services developed by DBC for the national infrastructure and the union catalogue.

Beneath the system and the services lies the national data-well, a repository which holds the union catalogue, plus data from other sources.

The data-well will act as a true union catalogue for libraries using the Joint Library System, as they share the records and supply holding information to the shared records.

Linked Open Data

Because of the activities caused by the implementation of RDA and the development of a National Repository for Authority Data, there aren't any specific Linked Data projects going on at the moment at DBC.

We monitor the field, participate in conferences, and exchange experiences. Our main focus points are the development of BIBFRAME, as we regard it the most obvious inheritor to MARC, the prevalence and use of unique identifiers in different areas, and the general development amongst semantic web agents such as VIAF, wikidata, schema.org and others.

Metadata management in central / national catalogues vs. repositories

In the national data-well both bibliographical MARC-records and DKABM-records (a Danish format based on Dublin Core) from different sources are stored together. A national standard for searching MARC-records exists, and currently an analysis of the possibility of using the same standard for the DKABM-records is being made.

E-books – current trends in handling license agreements and lending

On behalf of the public libraries DDB (Danish Digital Library) handles license agreements with the Danish publishers. The publishers who have entered the agreement display their e-books and digital audiobooks on the website eReolen.dk.

The business model covers both purchase by licensing and purchase by subscription.

The user's perspective – how are the libraries meeting the user's needs?

An increased focus on user behavior has resulted in 25 concepts that will “bring the library to the user”. The concepts are based on end user interviews and workshops.

Development of these concepts is a part of the company's strategic effort to ensure that the libraries still have a role to play for the end users by 2020.



Sag: 16/01196

Status Report The Royal Library – Denmark

NNG meeting 3-4 November 2016

General

This is not a country report, but just as the report from DBC an institutional report with national aspects. And with a few repetitions of what are covered by the DBC report.

From 1.1.2017 *The Royal Library* and *The State and University Library* are merged to “*The National Library of Denmark*” with Svend Larsen as director. Svend Larsen has also since 15 September 2016 been acting director of The Royal Library.

One of many working groups to prepare the merge of the two libraries shall prepare how the new library’s system(s) for ILS and resource discovery.

Leif Andresen from The Royal Library is chair of the Bibliographic Council, which advice The National Agency for Culture and Palaces. Gitte Andersen is from 1.1.2017 member of the Bibliographic Council.

The National Bibliography for periodicals, sheet music and cartographic materials are produced by The Royal Library and are published as part of the national union catalogue.

Bibliographic development – RDA and BIBFRAME

In addition to the DBC report:

The Royal Library has members of all four working groups and participate extensive in the work. The detailed planning of implementation of RDA in the new *The National Library of Denmark* will await the results of the national preparation.



The implementation of RDA in the national library IT infrastructure is managed by DDB (Danish Digital Library). The National Agency for Culture and Palaces have established a RDA Data Model project group to coordinate this implementation between DDB and the national agency. Leif Andresen is member of this group.

The Bibliographic Council have decided to work for a broader attention about how to go beyond MARC. The council don't see other actual proposed new format than BIBFRAME with the intention to replace MARC as global standard for the international library community.

Legal deposit

The Royal Library and The State and University Library have just delivered a report about digitization of the analog legal deposit. The report is not official yet, but we will inform you about some of the investigations we have done.

SVUC/NNG meeting in Iceland, 3.-4.11.2016

Country Report from The National Library of Finland

Finna

The National Library of Finland maintains the Finna service and is responsible for its development and building a cooperation network around it. The customer interface is built on the basis of open source code software VuFind, and Finna is implemented in development rounds in cooperation with archives, libraries and museums. The open source code software also allows for other national and international cooperation in the development of Finna. Finna is continuously evolving, and it is gradually replacing the user interfaces of all Finnish libraries, archives and museums. At the moment, more than 150 organisations are involved in Finna. All Finnish higher education libraries will use Finna as their user interface in the end of 2016.

The National Library maintains also Finna's national interface: [Finna.fi](http://finna.fi) which aims to provide all the freely available material of the partner organisations. At the moment one can find over 11 million descriptions of materials of which 1,5 million are available online. The open interface of the finna.fi service at api.finna.fi was introduced in the beginning of 2016. The Finna API gives developers access to Finnish cultural heritage. The API provides unrestricted access to the metadata of finna.fi under the CC0 licence, which enables open use. This is the largest amount of Finnish cultural data ever offered.

Finto

The national thesaurus and ontology service Finto (www.finto.fi) will be developed further in a research-oriented project in 2016-2018. Both Finto service and the open source software Skosmos powering it are being developed with an emphasis on making them a better fit for the needs of the public sector outside of the memory organization domain. In the library sector one of the main goals of the project is to aid in the change from thesauri to light-weight ontologies in annotation work.

Melinda

Melinda is a data repository currently containing the Finnish national bibliography (2014-) as well as metadata about the materials in university libraries, most joint libraries and polytechnic libraries under the Ministry of Education and Culture, the Library of Parliament, the National Repository Library and the Library of Statistics. Also metadata from the Tampere City Library - Pirkanmaa Regional Library and the Kokkola City Library - Regional Library databases is included.

Libraries included in Melinda describe their materials in the data repository in compliance with shared description rules and guidelines while simultaneously utilising authorised metadata and shared tools. The libraries use shared metadata produced in Melinda, for example, in their own databases. Currently, the service and the database related to it work in Aleph library system.

The National Metadata Repository Project (2012-2016) has brought polytechnics under the Ministry of Education and Culture in as new information providers (2012-2014). The first public libraries in the system are the Tampere City Library–Pirkanmaa regional library and Kokkola City Library–regional

library (2015). In 2016 the Vaski public libraries (the Southwest Finland region) are joining Melinda. Melinda will gradually become the shared metadata repository for all Finnish libraries.

In Finland, all Melinda union catalogue libraries along with the National Library of Finland have implemented new RDA cataloguing guidelines in the beginning of 2016. Finnish archives and museums are also using RDA when describing agents (persons, families and corporate bodies). In the Finnish libraries, as in other countries, RDA will first be implemented in the MARC21 format and in the present library system environment.

We are currently detailing the roadmap for the next project period (2017-2020).

Library systems

Finnish higher education libraries (libraries currently using the Voyager system) are in the process of preparing a tender to acquire a new back-end system. The new system is expected to provide well operating and deep integration possibilities to existing national infrastructures. Finland has committed on the national level to foster open services, open science, open metadata and API's, open source where appropriate, as well as technical and semantic interoperability. This is the set up criteria for the new library system solution. The solution should provide a roadmap for the development of open-linked data. The National library of Finland is coordinating the joint tendering process together with Aalto University. Aalto University will be the responsible organisation for the actual acquisition. The acquisition will take place 2017 and the migration of the new system 2018-2019.

October 2016
Ragna Steinarsdóttir
Sigrún Hauksdóttir
Sveinbjörg Sveinsdóttir

SVUC/NNG meeting in Iceland, November 3rd – 4th 2016

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

“Landskerfi bókasafna” or Consortium of Icelandic Libraries, www.landskerfi.is is a public limited-liability company. The company is jointly owned by the municipalities and the state. The consortium operates the following systems and services from Ex Libris: Aleph 500, SFX, Primo, Primo Central Index and bX recommender services.

1. Gegnir – The National Library System of Iceland

Gegnir is the national library system for Iceland. It serves as a union catalog as well as a library system for about 290 libraries. Among the member institutions are the National and University Library of Iceland, several smaller universities, most public libraries, and primary and secondary schools as well as research and special libraries. Gegnir is a brand for the Aleph software from Ex Libris.

<i>The size of the system by end of 2015 is:</i>	
Bibliographic records:	1.164.188
Items:	5.867.957
Circulation:	3.193.499
Borrowers:	175.817
Libraries:	290

2. Leitir.is - A National Discovery Portal

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

3. Sarpur – A National Cataloging System for Museums

“Sarpur”, <http://www.sarpur.is/>, is an Icelandic designed 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.

4. Projects and Activities

Gegnir

RDA. The main project in the library system Gegnir has been implementing the new cataloging rules, Resource Description and Access (RDA). The formal implementation project was finished in May 2016 after sixteen months of intensive work on every aspect of the cataloging environment. The main components of the project were:

- **Guidelines.** Creating guidelines for cataloging different formats according to RDA.
- **Training.** Creating training material in Icelandic. Eleven training courses were held for 180 cataloguers, each course lasting eight hours with a combination of lectures and practical exercises.
- **System configuration.** Modifications were needed in all aspects of the cataloging workflow, including: validations, error messages, help texts, fix routines for copy cataloging, cataloging templates and indexing.
- **Translation of RDA terms.** The Introduction and part of the Glossary were translated into Icelandic. It was clear from the beginning that it was impossible for a small language area as Icelandic to translate and maintain the complete rules.
- **RDA Toolkit.** Connection to the RDA Toolkit was made available to the whole cataloging community.
- **Global changes to legacy files.** The next step in the implementation is to enrich legacy data with RDA elements through global changes. Content, media, carrier terms and relationship designators are obvious candidates.
- **Authority file.** The authority file in Gegnir is small. It concentrates on Icelandic personal names (round 80.000) and Icelandic subject terms (11.000) which are hierarchically ordered in the authority file. The authority file is not RDA. Steps has been taken towards VIAF participation.
- **Authority file – future developments.** The ideal solution for Iceland would be to integrate different authority files maintained by the National and University Library, f.ex. for the manuscript database, handrit.is, Sarpur and Gegnir.

See more about the RDA implementation in: Magnhildur Magnúsdóttir. (2016). Community of cataloguers in Iceland : New cataloguing rules. (Vol. 49). *Scandinavian library quarterly*, 49 (1-2): p. 42-44. <http://slq.nu/?article=volume-49-no-1-2-2016-22>

Closing the Aleph Web OPAC. In February 2016 the Aleph Web OPAC was closed for public access although it is still running in the background as required by Aleph. It was a major project to include all features of the Aleph Web OPAC into leitir.is (Primo), see more in the next section on leitir.is.

Leitir.is

One search box for leitir.is / Primo. The original Primo setup had two search tabs. One for our local data and the other for the Primo Central Index data or the electronic articles. It proved to be complicated for our users to make a distinction between the search tabs so after thorough discussions it was decided to have one search box for all the diverse databases. At the moment these databases are integrated into leitir.is:

- Gegnir (Aleph)
- Sarpur (Locally developed system for museums and other cultural heritage institutions in Iceland)
- Skemman (DSpace)
- Hirslan (DSpace)
- Two photographic collections (Reykjavík and Akranes)
- Primo Central Index

Closing the Aleph web OPAC. When the Primo system was purchased in 2011, our aim was to offer it as a replacement for the Aleph Web OPAC as the technologies it was built upon were outdated, and so provide better services to library users. Also, it did not make sense to be operating two solutions for essentially the same purpose. We were however soon to find out that this was easier said than done. One of the obstacles was the tight integration of Aleph and the web OPAC. Furthermore certain features did not exist in Primo and had to be developed especially. Last but not least, catalogers were dissatisfied with the fact that changes to bibliographic data in Aleph are not updated on a real-time basis but only on an hourly basis. Many library patrons were accustomed to the old OPAC and unwilling to switch to a new platform.

One of the objectives for closing the Aleph Web OPAC was to ensure that all main features of the old Web OPAC were available in leitir.is (Primo). This included:

- A special tab for searching only the library systems records (Gegnir)
- A view for each library where the search is refined by library
 - Tailoring the item information display so that only items belonging to a selected library are displayed
- New form for placing ILL requests for material not in the system
- Display of Marc records in Primo and an OPAC view in the cataloging module in Aleph

Since February this year, we offer leitir.is (Primo) as our only discovery/search platform.

Metadata standards. Maintaining data from different metadata standards and making it work smoothly in Primo requires a lot of work and deduplication processes, since some of the resources are stored in more than one of these databases. In order to minimize duplication in the catalog and multiple cataloging a crosswalk between Gegnir's MARC records and Dublin Core records in the DSpace databases has been developed. This is of course not an ideal situation. Management of different metadata standards has to be kept in mind when choosing a new library system.

E-book lending

For some time now, we have been looking for ways to enable circulation of E-books and Audio-books in public libraries in Iceland. The consortium has together with its largest public library, Reykjavik City Library, led talks with the Icelandic Publishers Association in order to allow for lending Icelandic E-books in the libraries. Parallel to that we were on the lookout for an appropriate system that will enable to us to lend out E-books in English and other languages as well as Icelandic. After a thorough investigation and discussions it was decided to select Overdrive from Overdrive Inc. An agreement was reached with Overdrive in October. Overdrive offers predominantly books in English but the goal is to include material in Icelandic as well.

The Consortium of Icelandic Libraries will be responsible for the technical aspect of the project but the Reykjavik City Library will be in charge of acquisition and user services. The first phase of the project will be limited to the Reykjavík City Library and after a trial period other public libraries will be free to participate.

Finding a replacement for our current library system

One of the biggest challenges with finding a suitable new library system for our national network of libraries is to find a solution that can accommodate our multi-type consortium. Most vendors seem to focus on either academic libraries or public libraries but not a combination of both as is the situation in our case. The public libraries are more demanding when it comes to offering self-service solutions to patrons, variety of apps is also a must, as are integration capabilities with other systems such as E-Book and Audio-Book lending systems, but first and foremost a library system must consistently progress in step with latest internet technologies.

New website landskerfi.is

Early spring 2016 a new company website, <https://www.landskerfi.is/> for the consortium was launched. Besides providing information about the company and its operations, the website is home to our customer service platform, where member libraries and museums can access help and training materials, sign-up for courses on Gegnir and leitir.is as well as issuing tickets to request assistance or to report system problems. The website and its components are based on the open source CMS Drupal.

5. Gegnir and SVUC

Retrieving records from the SVUC union catalogs has become a vital resource for the Icelandic libraries. Below is a table that shows the number of records retrieved from the SVUC Union Catalogs and the number of cataloged records by year in corresponding language.

Gegnir, number of records retrieved from SVUC libraries 2013 – 2015 and the number of records cataloged in corresponding language

Union catalog	Records 2013	Records 2014	Records 2015
Libris	1.973	1.644	1.729
<i>In Swedish</i>	<i>1.692</i>	<i>1.558</i>	<i>1.916</i>
Linda	200	385	654
<i>In Finnish</i>	<i>222</i>	<i>393</i>	<i>775</i>
BIBSYS	806	478	190
<i>In Norwegian</i>	<i>1.236</i>	<i>1.325</i>	<i>1.186</i>
Danbib	2.019	1.362	1.120
<i>In Danish</i>	<i>1.619</i>	<i>1.487</i>	<i>1.247</i>

6. Gegnir via Z39.50, technical information

GEGNIR is Iceland's union catalogue. It consists of bibliographic records from nearly 300 libraries that are members of the Icelandic Library Consortium. GEGNIR is available for search/retrieval by means of the Z39.50 protocol. Both searching and retrieving catalog records using Z39.50 is free of charge. User-id and password are not required but access is based on IP address. Please contact hjalp@landskerfi.is if you would like to be granted access.

Here are the technical information in order to configure a client.

Technical information:

Protocol version: 3	3
IP address:	217.171.222.121
Host name:	kerfi.eggnir.is
Port number:	9991
Database:	ICE01
Services:	INITIALIZE, SEARCH, SORT, PRESENT, SCAN, CLOSE, DELETE_RESULT_SET
Query type supported:	1 (RPN)
Attribute set:	BIB-1
Record syntax:	MARC21
Character set:	Latin1 (char. conv. UTF_TO_8859_1)
Record composition:	Full, Brief

NNG meeting in Iceland, November 3rd – 4th 2016

Country Report from BIBSYS, Norway

Library System - Alma

All of the consortia members transitioned from the old legacy ILS onto Alma over a five-week period during late October and November of 2015.

During the first year of operation, the main focus has been to get the system up and running with a primary focus on user management, appropriate configuration and consortium functionalities. In general, most institutions are satisfied with the new web interfaced system. It gives them a user interface, which can be customized to the librarian's tasks and discipline.

By using standard Alma functionality and available APIs BIBSYS has implemented the most important requirements for the National Library. It has been a challenging journey as the service platform was not as available as expected and the APIs did not perform as well as expected. Neither did the APIs give access to the necessary data and several APIs were missing during the initial phase of the implementation project.

The Inter-Library-Loan (ILL) functionality within the larger Norwegian Library Community has been a challenge. The Norwegian Library System Vendor Group including the National Library, initiated a process to develop a Norwegian NCIP-profile independent of the decision to procure Alma. The fact that Ex Libris has chosen to use ISO-ILL in Alma, necessitated that they needed to implement support for the Norwegian NCIP-profile separately. The implementation was not straight-forward, but should be functioning properly by the end of 2016, a year after go-live. The lack of functionality in ILL has created a lot of frustration and extra work both at the public libraries and within the consortium.

The BIBSYS Authority File is maintained and used within Alma, but resides as a standalone application. See separate chapter for a description of the authority file.

Discovery & delivery tool – Oria

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

In addition to the standard application from Ex Libris BIBSYS 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 7.5 million records and about 30,5 million holdings, in addition to the Primo Central Index (PCI) of electronic articles. BIBSYS has also added other local content and special collections. The Institutional repositories (Brage) is currently included in the PCI, but BIBSYS plan to harvest the repositories locally as well. Other sources planned are Digital Learning Repository DLR (Learning Objects) and BIRD (Research Datasets).

BIBSYS provides special instances of Oria tailored to special needs. Examples of this is an instance for Norwegian books translated to other languages, Research Data, the joined Sami Bibliography and the National Bibliography from the National Library of Norway.

The main focus of 2017 will be the preparation and start of introduction of the new graphical User Interface provided by Ex Libris.

BIBSYS Brage – a platform for institutional repositories

BIBSYS Brage has its tenth anniversary this year and contains 65 out of 72 repositories in Norway. The platform is based on the open source code DSpace, which will be upgraded to version 5.5 in December.

The Ministry of Education is working on new guidelines to provide open access to research articles, to support EUs 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.

BIRD - a platform for institutional research data

BIRD is a digital service that collects, preserves, and distributes research data. There is increasing interest for research data infrastructure, due to requirements from funders to deposit research data which the research results are based upon. BIRD is developed in cooperation with BI Norwegian Business school, with the intention to become a national institutional platform for research data. A research institute has recently decided to join the collaboration and BIBSYS consider to establish a consortium next year.

National provider of persistent identifier (DOI) - New service

A persistent identifier (DOI) is a useful infrastructure to share, reuse, cite and connect your research data effectively. BIBSYS has established a new service for assigning persistent identifiers (DOIs). The DOIs are provided by DataCite¹ where BIBSYS has become member. The mandate to issue DOIs in Norway is given by the Ministry of Education. The new service is mainly offered to organisations and institutions having a research repository.

DLR – Digital Learning repository

DLR is a digital service that collects, preserves, and distributes learning resources. The Norwegian University of Science and Technology (NTNU) is currently implementing a new Learning Management System (Blackboard), where DLR being considered as the Learning Object Repository (LOR). There is strong enthusiasm in the project where the piloting will start in January 2017. Both NTNU and BIBSYS working hard to be successful with the LMS/LOR project, in addition to establish DLR as a national infrastructure for learning resources. The universities are informed about the project and follow it with great interest.

MOOC – Massive Open Online Courses

BIBSYS provides two MOOC platforms (edX and Canvas) for the institutions that would like to provide MOOCs. Norway's first MOOC delivered on our platform was held in the spring of 2014.

BIBSYS has established a MOOC portal (mooc.no), which provides an overview of Norwegian MOOCs

¹ <https://www.datacite.org/>

or MOOC-like courses (regardless of platform) as well as resources for developing open online courses.

Semantic web pilot

In 2015 - 2016 BIBSYS hosted a project with the largest universities in Norway to look at semantic web technology and to represent the Library database and authorities as RDF. The project was partly funded by the National Library of Norway.

One of the deliveries was to establish a pilot to show various use-cases on the practical use of library data as semantic web. The Advisory Group for the BIBSYS Consortia has recommended that the result of the pilot is continued and that the project should be established as a permanent production quality service.

As part of the project we looked at the possibility to generate the building foundation for a registry of works based on existing metadata. There was established rule sets to generate work-keys based on the metadata and these keys was used to link bibliographic records that represent the same intellectual work.

BIBSYS is part of a working group led by the National Library that deals with works-definitions. BIBSYS will be the technical partner when the National Library shall deliver a work-registry to the libraries in Norway.

Being able to find some common linking points with linked data from other countries would be very interesting, and possible if the other national data could be processed using the same rules for generating work-keys.

Authority registry

BIBSYS provide the technical infrastructure of the authority registry used by the BIBSYS Consortia. Due to the need of some advanced maintenance of the authority-file (split, merge etc.), export to VIAF and the possibility to allow third-parties to interact and contribute to the authority-file, it was decided that the master should reside outside Alma in a standalone application. The integration with Alma is realized using the protocols OAI, SRU and SRU-U. This solution gives BIBSYS the flexibility to allow others to access, use and contribute to the authority-file without locking it inside Alma. BIBSYS also offer various REST-API's against the authority-registry.

The registry consists of in total nearly 2.0 million authority records for persons, corporations, conferences and uniform-titles, and there is plan to include other types of authorities into the file, like subject headings, works and possible bibliographic records. The National Library maintains a subset of the authorities as the National authority file for names. This subset is exported to VIAF and will later on be integrated with ISNI (as the National Library has been registered as an ISNI provider).

The authorities also play an important role in the semantic web/linked data representation at BIBSYS. The authority file is free for all to search and use. Contribution (creation/editing) requires an API-key.

Reading list system

There is increasing demand for a Reading list system globally, also in Norway. BIBSYS is asked to establish a common solution for the HE-sector based on requirements listed in a report. The tender process is ongoing, and the pre-qualifying documents is just published on Doffin² and TED³. A

² <https://www.doffin.no/>

³ <http://ted.europa.eu/TED/main/HomePage.do>

consortium will be established with ten institutions in the startup phase, but the contract will have option for the entire HE-sector to join during the contract period.



NNG meeting in Reykjavik 3- 4 November 2016

Country Report: National Library of Norway (NL)

National Bibliography and Library System

National Bibliography

The National Library is responsible for the National Bibliography. The National Library is a member in the BIBSYS consortium, and the bibliography is produced in Alma. The NL has since 2009 purchased a part of the metadata from Biblioteksentralen. From 2017 metadata will be bought from Bokbasen.

National Authority File for Names

The National Authority File now consists of approximately 100,000 personal and corporate names. The file is a subset of the BIBSYS Authority File.

Library System

In late 2015 the BIBSYS Consortium, including the National Library, went over to Alma from Ex Libris. The transition to the new system has been troubling, especially concerning Legal deposit and integration with the Automatic Storage Vault.

Projects and Activities

The Governments Public Library Strategy 2015-2018

In August 2015 the Norwegian Government presented a strategy for public libraries for 2015-2018. The strategy will mostly be put into action by the National Library. The Infrastructure part of the strategy includes RDA, Biblioteksøk (search across all Norwegian library catalogues), WebDewey, free metadata supply to all public libraries, national authority records for names and works.

WebDewey

The Norwegian version of WebDewey was released in September 2015. This is a complete version translated by the National Library. More than 600 Norwegian all over Norway were given training during the winter 2015-2016.

RDA

The NL will translate RDA into Norwegian. The work started in spring 2016 and is done by a translator - a temporary employee in the NL. She uses translator software Trados. She is still working her way through the glossary. The Norwegian Cataloguing Committee supervises the translation of the bibliographic terminology.



We have yet to make a final decision about training. A small “vanguard” group in the National Library is now looking deeper into the use of RDA. Later on, they will be responsible for the training.

ISNI

The National Library has become a member of ISNI and will start assigning ISNIs for Norwegian contributor as soon as all the practical matters are solved. ISNI for Norwegian contributors will be included in the National Authority Record for Names.

Authority file for Works

The National Library of Norway is in the process of developing an openly available authority file for Works. We are currently basing our definition of Work on a pragmatic interpretation of FRBR (and by extension RDA) and have taken a threefold approach to identifying Works and populating the file.

First, we are examining methods and algorithms to automatically extract Works from legacy records. Secondly, we intend to manually correct catalog posts that have been wrongly identified in the first round. Finally, we are working on developing clear ways to use and populate the file in future cataloging based on RDA guidelines. The authority file will include a global identifier for each Work, attributes such as title and first year of publication, and relevant relationships between Works, like “based on” and “derivative of”. We are also examining ways to identify Expressions (such as translations and audio formats) within the file. Additionally, the authority file for Works will contain links to other authority files, such as our authority file for Names to designate various creator roles. The authority file will be available for use in the form of an API and as Linked Open Data.

More information in Norwegian:

<https://bibliotekutvikling.no/ressurser/kunnskapsorganisering/kunnskapsorganisering-utvikling/verksregister/>



Country report, National library of Sweden. NNG meeting Reykjavik 3-4 November 2016

Libris - union catalogue

The National library is responsible for maintaining and developing the national infrastructure, but the content of the Swedish union catalogue system - Libris, is the result of collective work. All participating libraries catalog directly into the central system and the data is then exported to the local systems. Thus the records are created once and can then be enriched by other participants of the participating libraries/cataloguers. One of the most important contributions from the National library is the National bibliography - bibliographic descriptions for the legal deposit of all printed Swedish material. The union catalog consists of about 10 million bibliographic records.

Over 500 Swedish libraries take part in the Libris collaboration. In the beginning, more than forty years ago, the catalogue was mainly an academic library concern. In 2011 the government decided to expand the assignment for the National library to cover and include all public financed libraries. Over the last five years the number of public libraries within the Libris collective has more than doubled. The public libraries has new demands regarding for instance what kind of metadata is needed in the catalogue (subject headings for fiction etc).

The public libraries in Sweden have a long tradition of using commercial vendors for cataloging. As a result the metadata has been published in closed systems which has been a blocker when the public libraries wants to join the Libris collaboration. The metadata in the union catalogue is open and free to use, and to participate the libraries have to agree on this condition. Over the last few years, public libraries that want to participate in the union catalogue have been discussing with the commercial actors. Hopefully the discussion will lead to a business model that allows cooperation within the union catalogue.

The National library is dedicated to develop the national infrastructure and the participating libraries appoints an advisory board to address the needs and prioritizations of the libraries.

New infrastructure based on Linked Data

Several years ago the National library started to develop a new infrastructure and system, based at its core on Linked Data. The model will directly employ the linked entity description model represented by RDF, and has the capacity to mesh with other linked data on the web, through minimal engineering efforts.

Libris has been publishing linked library data since 2008, but the internal system (Voyager) has continued to be based on MARC, used in everything from cataloguing to various internal and external data flows. The new infrastructure is built on open source components, and the system itself is available as open source.



Even though it is a complex operation to exchange Voyager with new technical platform given all functionality of the interacting system, the greatest challenge has been to replace MARC. When Library of Congress released BibFrame2 last spring was a relief since it confirmed that the work done in Sweden was well aligned with the work of BibFrame2. The developers and format experts in our organisation follow the work of BibFrame and communicates the work in our end.

In June the National Library released a service that makes available the cornerstones we use to publish structured, linked data. The service, id.kb.se, is under development and includes a collection of common definitions and concepts that help to coordinate descriptions of our material. In the first version we have published Swedish subject headings (including special subjects headings for children) and genre terms.

RDA in Sweden

The cataloguing rules used in Sweden are a translation/adaptation of AACR2. For Sweden it is therefore a logical step to progress to the new international cataloguing code Resource description and access. The Swedish RDA have been underway the last two years, and the National library will progress to RDA December 2016. The project team have been working on the Swedish cataloguing practices and translated the core terminology. There will be no Swedish translation of the full cataloguing code, but the Swedish policy statements will be included in the RDA toolkit. The National library will arrange for a national licence that will allow Swedish cataloguers to access the toolkit for the first years after the progression. Sweden is taking an active part in the EURIG network (European RDA interest group).

International standards

Sweden has a long tradition of working with international standards. The National library runs the national ISBN office, and also the Swedish ISSN office. We have participated in VIAF (Virtual International Authority File) for many years now. The National library is following the evolution of the ISNI standard, but is currently not assigning ISNI:s.

National library strategy: e-books and university output

The National library of Sweden has gotten an assignment to prepare for a national library strategy. Closely linked to this are the ongoing SwePub work and the e-book project. SwePub makes publications from Swedish universities available and also allow for bibliometric analysis on the metadata. The e-book project has been going on for some time, but essential questions regarding the licenced material still remains to be solved.

Open source, Koha - a general trend

Several Swedish libraries has shown a great interest in open source library systems such as Koha. In fact both academic and public libraries has implemented and started to use Koha. A network, The Swedish Koha User Group, <http://koha.se/>, is founded and has a board and annual meetings. The National library needs to follow and learn how the system works, at



least at a conceptional level. The union catalogue integrates with the local systems and usually the system vendor is a mediator. To use open source systems demands more insights both from the libraries and the National library.

The National library has been invited to participate in meetups with the EBSCO-founded open source system under construction, FOLIO. EBSCO has approached primary academic libraries and we follow the development of FOLIO with interest.