

NNG annual meeting
National Library of Latvia, Riga, Latvia
May 8-9, 2025
 Agenda

Day 1 Thursday, 8 May

09:00-09:20	Welcome and introduction	
09:20-10:40	Country reports and discussions	DBC Report Presentation 15+5 min NL Finland Report Presentation 15+5 min NL Sweden Report 15+5 min NL Norway Report 15+5 min
10:40-11:00	Coffee break	
11:00-12:20	Country reports and discussions	Sikt Report Presentation 15+5 min CIL 15+5 min NL Iceland Report 15+5 min
12:20-13:10	Lunch	
13:10-14:30	Library tour	Photo session at the People's Bookshelf
14:30-15:40	Country reports and discussions	NL Estonia Report 15+5 min NL Lithuania Report 15+5 min NL Latvia Report 15+5 min
15:40-16:00	Coffee break	
16:00-17:00	<i>Presentation & discussion</i> Metadata models implemented by NNG libraries	Oddrun Pauline Ohren National Library of Norway Presentation
19:00	Dinner at Restaurant Fazenda	

Day 2 Friday, 9 May

09:00-11:10	Welcome speech of the director Dagnija Balčiņa <i>Presentation</i> Digital Cultural Heritage Platform of Latvia	Matīss Bolšteins National Library of Latvia Presentation
	<i>Presentation</i> Automation in cataloging i.e further development of Meteor, Annif etc.	Kristin Lilja Thorlacius Björnsdóttir National and University Library of Iceland Presentation
	<i>Presentation</i> Pilot project for automated subject indexing of electronic publications (Annif)	Uldis Bojārs National Library of Latvia Presentation
	<i>Presentation</i> Automated metadata workflow in the Finnish National Library	Katri Riiheläinen National Library of Finland Presentation
11:00-11:20	Coffee break	
11:20-13:00	<i>Discussion</i> AI development in the NNG Libraries • AI policies in general • AI tools in use	Kristin Lilja Thorlacius Björnsdóttir National and University Library of Iceland
13:00-13:30	Goodbye and next meeting/organizer	Photo 1 Photo 2
13:30-14:30	Lunch	
14:30-16.00	Guided tour to Old City	Viktorija Piščikova

The 2025 NNG meeting at the National Library of Latvia, Riga was attended by 25 participants from 10 delegations, 8 countries.

The NNG participants invited the national libraries of Estonia and Lithuania to consider officially joining the Nordic Network Group on Bibliography and Infrastructure (NNG).

The Swedish delegation invited the NNG to hold its 10th anniversary meeting in 2026 at the National Library of Sweden, Stockholm.

NNG annual meeting
National Library of Latvia, Riga, Latvia
May 8-9, 2025

Participation list

Country	Institution	Participants
Denmark	DBC DIGITAL A/S	Line Jung Lindhard Linda Schwartz Karlsen
	Royal Danish Library	<i>Not participating</i>
Finland	National Library of Finland	Katri Riiheläinen Sarianna Silvonen
Iceland	Consortium of Icelandic Libraries	Sigrún Hauksdóttir Sveinbjörg Sveinsdóttir
	The National Library of Iceland	Kristín Lilja Björnsdóttir Telma Rós Sigfúsdóttir
Sweden	National Library of Sweden	Miriam Björkhem Fredrik Klingwall
Norway	SIKT	Asbjørn Risan Jenny Bakken Aslaksen
	National Library of Norway	Oddrun Ohren Hilde Høgås Irene Hole
Estonia	National Library of Estonia	Urmas Sinisalu Greete Veesalu
Lithuania	Martynas Mažvydas National Library of Lithuania	Genutė Rutkauskienė Tomas Petreikis
Latvia	National Library of Latvia	Ilva Āķe Uldis Bojārs Matīss Bolšteins Maira Kreislere Ansis Garda

NNG meeting May 2025

Nordic Networking Group on bibliographic and infrastructure topics (NNG), Riga – May 8-9, 2025

Background information on different aspects of the Danish national bibliography and the national infrastructure can be found on the last page.

Report from DBC

RDA

The RDA Project

The RDA Project represents the most extensive implementation initiative DBC has undertaken in recent years. Since the project's launch in autumn 2023, we have been working intensively on the development of the Danish RDA Handbook, the definition of new MARC formats, and the specification and coding of the migration from existing to new standards.

Concurrently, our development teams have been dedicated to designing the architecture and building the core infrastructure of the new authority register, **VERA**.

At present, they are developing functionality which, based on the logical data model, will enable the enrichment of bibliographic records with data drawn from linked authority records — a central element of the Danish RDA implementation.

ProKat

To facilitate cataloguing in accordance with RDA and the new data model, a new cataloguing tool, ProKat, is also under development. While progress is ongoing, the tool currently remains at an early and relatively immature stage of development.

Authority records for works

Before we start cataloguing RDA works in the new model, we need to establish a set of work and subwork records that can be reused and contribute to the effectiveness of the data model. Instead of trying to extract RDA work data automatically from all the bibliographic records, we have chosen another approach.

Based on a selection of 100 authors, we will create a minimum of 1000 work records with their corresponding subwork records (a new Danish entity), primarily within fiction literature. The work

records will be linked to the authority records for the authors and a set of relevant bibliographic records will be identified to be associated with the work.

The aim is to gradually build the necessary work and subwork records based on relevant data from our legacy data and this will be the first project in a series.

Online network for cataloguers

We have initiated a Cataloguing Network primarily for employees in public libraries who work with cataloguing and formatting. Members of the network can share experiences and cataloguing questions, explore new bibliographic topics, and strengthen their expertise in the field.

Review of the Danish Classification system - DK5

DBC has been commissioned to perform a review of the Danish classification system, DK5. DK5 is mostly used for searching and shelving in the Danish public libraries, but there is a decreased familiarity with DK5 among library staff and users.

The review will consider simplifying DK5 and reducing subdivisions, and it will include recommendations for a plan of action.

Subject term ontology

As reported last year we are working on transforming our list of controlled subject terms into an ontology, based on the Finnish ontology YSO. However, this work is progressing rather slowly due to other work of higher priority.

LLM's for extracting metadata from pdf's

Inspired by the demonstration from Finland last year, we have set up our own metadata extractor from the github project FinGreyLit that we are just about to test in our metadata production.

Automatic indexing

As reported last year we plan to implement automatic subject indexing of full text articles using AI. Our AI Team has experimented with various language models (LLM's) and we are about to look at what their model so far can do. Our aim is to have a model that can be implemented in our future cataloguing tool, ProKat, which is still at an early stage, as mentioned above.

ChatBib

ChatBib is a prototype project developed to demonstrate how AI can be integrated into library work, and to enhance the library sector's understanding of the technologies and the application of generative AI.

ChatBib consists of four individual chatbots that enable libraries to experiment with different approaches to applying AI in the library field. The chatbots combine large language models with specific library functionality, distinguishing them from other chatbots.

The chatbots are inspired by solutions like ChatGPT but focus on testing AI technologies in a safe and transparent environment where data handling occurs outside of tech giants' commercial frameworks, and without compromising GDPR and data protection.

The four prototypes are:

ChatBib: A chatbot that can help answer general questions based on generative AI and the knowledge built into the language model.

Bibliotek.dk: A chatbot that converts user input into searches in the database containing all library materials. It uses both simple and advanced searching and displays both text and images in the results.

FaktaChat: A chatbot that bases its answers on facts that libraries can vouch for. Currently, it only uses articles from Faktalink (faktalink.dk) but can potentially be expanded to include other reliable library sources.

Web Search: A chatbot that uses a search engine that returns links to relevant pages on the internet without ads and interference from economic interests.

<https://beta.chatbib.dk/>

Common Library System (Fælles Biblioteks System – FBS 2.0)

Systematic has won the tender for FBS 2.0. Now a clarification phase is taking place, where KOMBIT (the Danish municipalities' IT organization) and Systematic are coordinating the basis for development and rollout.

FBS 2.0 will require further development of several existing services and components in the Library Infrastructure, FBI.

Netpunkt

Netpunkt has long served as the gateway for libraries to access millions of materials across Denmark and internationally. However, the underlying platform is becoming outdated, making it necessary to renew and modernize Netpunkt. We are therefore in the process of developing a new version of Netpunkt, designed to provide library staff with a more user-friendly tool where processes related to materials selection, interlibrary loans, and the reuse of bibliographic data become more intuitive and efficient.

Report from The Royal Library (KB)

Metadata and Bibliographic Practice at The Royal Library 2024

2024 has been a year of significant changes at The Royal Library in Denmark. Firstly, several organizational adjustments have taken place across the library, which, in some respects, have influenced how metadata is managed from an organizational perspective. Secondly, the library has initiated an extensive metadata cleansing process. Lastly, DBC Digital's RDA implementation plans have been unveiled and initiated, which, to some extent, involves The Royal Library.

Organizational Changes

Due to the restructuring of departments that previously handled metadata and the increasing number of Danish libraries adopting Alma as their library system, it became necessary to adjust the metadata management framework. The Royal Library, together with interim partners in the Alma consortium in Denmark, has established a committee responsible for addressing issues and proposing changes to local metadata practices.

To support the committee's work and ensure broader knowledge sharing, a network called Forum for Cataloging has been established. Almost a year into this structure, it has proven to be an efficient way to organize metadata work. However, it can also feel somewhat impersonal, as meetings often involve many participants and frequently need to be conducted online.

Metadata Cleansing

The Royal Library has embarked on a comprehensive initiative called Collection Reduction, which aims to enhance the accessibility and strategic use of collections at universities through the development of a retention and disposal policy across the library.

During the early stages of this four-year project, reports indicated substantial bibliographic duplication issues, revealing the necessity for a thorough metadata cleansing. Initial assessments suggested that addressing the problem would require approximately 10–15 full-time equivalent librarians. However, recruitment challenges and financial constraints made this approach unfeasible.

As a solution, The Royal Library established a partnership with DBC Digital to leverage machine learning, guided by staff expertise to train the AI with best metadata practices when handling ambiguous cases. While the project is ongoing, preliminary reports are promising, and there is optimism that the outcome will be successful. In this particular case, it would not have been feasible to tackle these issues without the use of AI.

RDA

The Royal Library plays a smaller role than DBC Digital in developing the RDA handbook and implementing RDA practices in Denmark. Our primary objective in 2025 is to write guidelines for cataloging periodicals and maps, as we are responsible for compiling the national bibliography for these material types.

Conclusion

In short, over the past year, we have strengthened our collaboration with DBC Digital and look forward to continued partnership in the future.

On behalf of The Royal Library,

Sincerely,

John

Background information on different aspects of the Danish national bibliography and the national infrastructure

Danish National Bibliography

The local governments' organization in Denmark (KL) oversees the National Bibliography, the union catalogue, and the national bibliographic infrastructure. KL has assigned this task to DBC, which is also owned by KL.

The state defines the National Bibliography and its standards. The Royal Danish Library is responsible for periodicals, maps, and sheet music, while DBC handles books, articles, images, and music recordings.

In 2024, 67,826 new documents were added to the Danish National Bibliography.

Supplemental Library Data

DBC enhances the National Bibliography with metadata essential for Danish public and school libraries. Cataloguing and supplemental data are integrated into one workflow for efficiency.

In 2024, 27,568 documents received supplemental metadata.

Danish Library Infrastructure

The Danish Library Infrastructure (FBI) consists of key technical systems, services, and the national Databrønd—a comprehensive database housing the union catalogue alongside metadata from various sources.

FBI underpins bibliographic data and IT systems for Danish public, school, research, and special libraries, enabling patrons to search, find, and borrow materials across platforms and library types.

FBI is accessible via an API using the JED (JSON Expanded Data) model, simplifying library data handling for external developers.

The Joint Library System (FBS): Cicero Library Management System

The Joint Library System (FBS) unifies public and school libraries under a shared system. Systematic won the first FBS tender, developing the Cicero Library Management System. Since its launch almost 10 years ago, Cicero has been adopted by additional Danish and international libraries.

Denmark – highlights from country report

The RDA project

Laborem in victoria nemo sentit
In victory nobody feels endeavour

Reflections on the project so far

One of the goals was to simplify, but that's not entirely what we've ended up with

With RDA we want to produce and achieve more structured and unambiguous metadata, but legacy data stands in the way

The data conversion has been a struggle, and still is
- lots of inconsistencies and dirty data

With RDA we will require that cataloguers are better trained to contribute to the shared catalogue and VERA (the authority repository)

Further endeavours

especially in AI

Some work in progress...

- Subject term ontology
 - still working on mapping our subject terms to Finnish YSO
 - currently fixing when several words are mapped to the same YSO term
- Metadata Extractor service from FinGreyLit
 - about to test it with our cataloguers
- Automatic indexing of online articles
 - experiments by our AI team – first look at what their model can do

ChatBib – a prototype for use of AI in library work

- ChatBib: answering general questions based on generative AI
- Bibliotek.dk: searches database of library materials
- FaktaChat: finds answers from a curated set of articles (faktalink.dk)
- Websøgning (websearch): returns links to relevant pages on the internet

<https://beta.chatbib.dk/>



National Library of Finland (NLF)

Country Report

NNG Meeting Riga 8-9 May 2025

Library systems

There are no significant changes to library systems used in Finnish university and research libraries since the previous report. Open-source **Koha** is still used by 17 libraries, including the National Library of Finland, and the NLF participates actively in Koha development. All these libraries use also NLF's Finna as UI and Melinda as cataloguing system. **Alma** by Ex Libris is used in 22 university and polytechnic libraries, of which some use Alma's own discovery UI (Primo) and others use Finna.

Public libraries mainly use a Finnish version of Koha ([coverage map](#)) or Axiell's **Aurora**. The biggest public library network [HelMet](#), serving metropolitan Helsinki, currently uses Sierra, which has come to the end of its technical lifecycle. HelMet is launching an invitation to tender and is planning to select the new system later in 2025.

Axiell's cloud-based **Quria** library system, which uses linked data (FRBR) instead of Marc 21, has already been adopted by several public library consortia in Finland. This development highlights the need for robust conversions between metadata formats.

Metadata repository Melinda

Melinda is a national metadata repository used by both academic and public libraries. It contains the metadata of the Finnish national bibliography (Fennica), the Finnish National Discography (Viola) and the Finnish article index database (Arto), as well as materials in the collections of member libraries.

Melinda provides access to the contents of more than 40 library databases representing 294 individual organizations (2025). Hundreds of active librarians from all sectors of the

field participate in producing metadata. Currently Melinda contains more than 17.5 million bibliographic records.

The NLF is in the process of investigating possible new systems to replace our current Aleph platform. We would prefer an open-source system that supports linked data, but the final decision remains to be made. The platform change is closely connected to the Linked Library Data project, which aims to develop a linked data model for bibliographic description. The project as such ended in 2024, but development of the model continues.

Melinda has furthered the development of a Marc 21 authority database for works and expressions within the Aleph library system. We are implementing a workaround OPAC-based and SRU-based solution enabling all cataloguers, even those who do not use Aleph, to search and view these authority records and link to them in their own cataloguing. Currently the database contains about 15,600 records, mainly musical works, but also legal and religious texts and significant fictional works.

For more information, please contact Thomas Roos: thomas.roos@helsinki.fi

Discovery and delivery tool Finna

The NLF builds and maintains the Finna.fi service, which provides free access to metadata on various kinds of [material](#) collected from 461 Finnish [museums, libraries, archives and research institutions](#). Finna is based on [VuFind](#) open-source portal software, which is actively developed by the NLF, especially for use by library consortia.

In 2024, a total of 91.4 million visits were made to the various Finna sites altogether, an increase of 54 % from the previous year. Altogether 131 participating organizations have their own interface for searching within the organization's own data. Finna currently contains 19.1 million items, 3.5 million of which are available online.

For more information, please contact Katja Hilska-Keinänen: katja.hilska-keinanen@helsinki.fi

E-Library

The E-library service is provided by the National Library of Finland in cooperation with public libraries. The E-library is a shared service for municipalities in Finland from which residents can borrow e-books, audiobooks, and digital journals, mainly in Finnish and Swedish, but also other languages.

The E-library was launched in spring 2024 and has now been available for a year. It is used through the E-library application, which can be installed on mobile devices from the App Store and Google Play. At the moment there are more than 200 000 registered users.

Currently 280 municipalities have joined the E-library, covering 97% of the population. The collection consists of over 7000 titles and provides access to Finnish digital magazines and

newspapers for almost everybody living in Finland. The utilization rate in 2024 was 80% compared to earlier figures of 40-60% for regional library collections. Materials are acquired in a centralized manner, and all E-library users have access to the same collection.

The E-library is still under active development, and the most important task for 2025 is creating a web user interface in addition to the currently available mobile application.

Information in English: <https://www.kansalliskirjasto.fi/en/e-library>

For more information, please contact Annastiina Louhisalmi:

annastiina.louhisalmi@helsinki.fi

Finto

The national thesaurus and ontology service Finto develops linked open vocabularies and ontologies and tools for using vocabularies in the Finnish public sector.

The NLF also develops Skosmos, which is an open-source code thesaurus and ontology browser application operating in the background of the Finto service. In addition to the NLF itself, Skosmos is used internationally in many organizations. Skosmos is actively developed, with 6-7 development sprints per year. The main focus of Skosmos development is working towards a Skosmos 3.0 release by the end of 2025. Version 3 involves a total rewrite of the user-facing front-end code, with a new visual style, improved responsiveness and accessibility.

For more information, please contact Mikko Lappalainen: mikko.lappalainen@helsinki.fi

ISNI project

Our ISNI (International Standard Name Identifiers) projects are coming to an end in October 2025.

On-going projects:

- The adoption of ISNIs in Copyright Management Organisations: <https://www.kansalliskirjasto.fi/en/projects/adoption-isnis-copyright-management-organisations>
- A boost for crediting audiovisual works – Effortless collaboration and compatible metadata with ISNIs: <https://www.kansalliskirjasto.fi/en/projects/boost-crediting-audiovisual-works-effortless-collaboration-and-compatible-metadata-isnis>

Published reports:

- The Adoption of ISNIs in Copyright Management Organisations (2/2022–6/2024): Project report (<https://urn.fi/URN:ISBN:978-952-84-0707-2>)
- Artists Unite! Collaborative and interoperable metadata using ISNIs: Project report (<https://urn.fi/URN:ISBN:978-952-84-0751-5>).

For more information, please contact Katerina Sornová: katerina.sornova@helsinki.fi

Linked Library Data project

The Linked Library Data project's (LKD) aim is to facilitate the move of the National Library of Finland and partly the entire Finnish library sector towards linked data in bibliographic description by developing a BIBFRAME-based data model compatible with Official RDA and the cataloguing conventions of Finland.

The project was active 2022-2024 and the 1.0 version of the BFFI data model was released in January 2025. It supports the full WEMI and aggregate models while retaining interoperability with other BIBFRAME models. For more information, refer to the project's [GitHub Wiki](#). Next, we are developing the conversions related to BFFI as well as work on the data model for agents.

For more information, please contact Matias Frosterus: matias.frosterus@helsinki.fi

Automated metadata workflow for ONIX and Dublin Core

As the volume of online publishing increases, automated solutions are needed to produce metadata. Starting in 2023, an automated record production for online materials was created utilising the publisher metadata included in the electronic legal deposit copies.

The National Library of Finland began to automatically process the publisher-supplied ONIX-metadata using an in-house developed automated metadata workflow. The workflow considers both prepublication metadata and legal deposit records metadata. The aim of the automated workflow is to better utilize the metadata produced by publishers. Since publisher metadata of good quality is received as part of the legal deposit process, the workflow also aims to remove the need to manually catalogue electronic publications.

Key components of the workflow are the following: a management system, a record import API and a replication component. The management system pre-processes the incoming data and tracks the state of items within the workflow. The record import API handles the conversion from ONIX to MARC format and imports the record to Melinda (The National Metadata Repository). The replication component allows the transfer of metadata from Melinda to Fennica (The Finnish National Bibliography). The metadata records stored to Fennica can furthermore be used for different types of internal post-processing activities such as the digital preservation process.

Towards the end of the year 2024 the automated workflow for the publisher-supplied ONIX-metadata was fully in production. Over 76,000 machine-produced e-book records were added to Fennica during the year. This amount includes records that were retrospectively acquired.

In the 2025 we have moved to the next phase of the process. We are currently expanding the automated metadata workflow to process Dublin Core metadata format. The aim is to

acquire metadata related to electronic legal deposit items in publication archives. The work will continue to year 2026.

For more information, please contact Katri Riiheläinen: katri.riihelainen@helsinki.fi

More metadata through Identifier services

The distribution of ISBNs, ISMNs and ISSNs is managed through the publisher register maintained by The Finnish ISBN Agency. Small publishers and self-publishers get their identifiers by sending a request in the system using the ISBN application form. The metadata received through application forms is converted to MARC format and sent to Melinda and Fennica after the identifiers have been assigned to the publications. Large and medium sized publishers receive the identifiers as lists which they manage themselves and the agency has no proper control or knowledge of them or the books that are published.

The tool used for managing the distribution of the identifiers was replaced in 2023 with a custom-made system. At the moment, the new system supports the similar basic functionalities as the old one, but we have plans of expanding the system and introducing new features.

In the next phase, we are developing a publisher portal functionality in the new system. With the functionality, publishers can log in to the system and manage their identifier lists in the system. This would give the agency more control over the identifiers as well as create a way to receive prepublication data from publishers who currently manage their own identifier lists.

For more information, please contact Katri Riiheläinen: katri.riihelainen@helsinki.fi

Automated subject indexing and metadata extraction

NLF has continued the development of the [Annif](#) automated subject indexing and classification tool as well as the [Finto AI](#) service that is based on Annif. Annif is multilingual, open source, and based on traditional machine learning and natural language processing techniques. In Annif development during the last year, we have added support for sharing trained models via Hugging Face Hub, enhanced the Annif REST API with language detection features, and added support for Estonian language by integrating the EstNLTK library. We are also in active collaboration with the National Library of Latvia, as they are planning to apply Annif with their own subject vocabulary, data sets and subject indexing workflows. Annif is quite widely used in libraries and related institutions, for example the National Library of Sweden (Swepub system) and the national libraries of Poland, Germany (DNB, ZBW and TIB) and the Netherlands are using it.

We took part in the [LLMs4Subjects](#) challenge at the SemEval-2025 workshop. The challenge was to use large language models (LLMs) to generate good quality subject indexing for bibliographic records (titles and abstracts) from the TIBKAT database. We

applied Annif together with several LLMs that we used to preprocess the data sets. Our results were excellent: our system was ranked first in the large vocabulary category, second in the smaller vocabulary category and fourth in the qualitative evaluations, out of 14 teams that participated. More information can be found in our system description [preprint](#).

We have also continued the development of our automated metadata extraction prototype system that was presented at NNG 2024 in Oslo. It is based on fine-tuned small language models and we have integrated it with the open source Meteor metadata extraction tool developed at the National Library of Norway. A presentation about the tool was given at the SWIB24 online conference; [slides](#) and [recording](#) are available. Since then, we have continued to work on improved text extraction from PDF files and used newer LLMs as the basis to improve the quality. During summer 2025, we will expand the data sets used for training and evaluating the system by adding ephemera materials (e.g. reports that do not qualify for inclusion into Fennica) from our electronic deposit system. A summer intern will curate the data set, expanding the existing [FinGreyLit](#) data set of grey literature metadata.

For more information, please contact Osma Suominen: osma.suominen@helsinki.fi

Support for Sámi languages in digital services

The support for Sámi languages in digital services [project](#) lasted for two and half years and ended in late 2024. It focused on creating support services for Northern Sámi, the most widely spoken Sámi language in Finland, in three openly accessible digital systems maintained by the NLF. These systems are [Finna](#) (search service), [Finto](#) (ontologies), and Kotoistus (language- and region-specific definitions).

Northern Sámi can now be used as the UI language in Finna and Finto on an equal basis with Finnish, Swedish and English. Finna in Northern Sámi has been viewed by 4000 visitors per month in autumn 2024, and the number is expected to grow. The project has organized training sessions for teachers in Sámi-speaking areas. In addition to the national Finna.fi service, the Northern Sámi UI can be implemented into the Finna-based web services of regional library consortia, for example at the [University of Lapland](#) and the [public libraries](#) of Lapland.

The Finto ontology service currently contains over 21000 terms in Northern Sámi. The translation work has been done by the NLF in the context of this project, building on existing terminology work.

The underlying idea of the project has been to provide interoperability between different services in Sámi languages. For example, terminology from Finto has been used to catalogue museum material in Finna by [Sámi Museum Siida](#). When this material and its cataloguing metadata are shared in Finna, they are easier to find thanks to standardized terminology.

Terminology work at the NLF follows the specifications set by the [Sámi Giellagáldu](#), which is a pan-Nordic expert group coordinating the development of Sámi languages in the Nordic countries. In addition, the NLF has worked together with other Sámi specialist partners in this project.

For more information, please contact Niko Partanen: niko.partanen@helsinki.fi

Adoption of the official RDA

We (the National Library and Finnish libraries) are in the process of adopting the official version of RDA (Resource Description and Access) in 2024-2025. The Finnish translation has been ready for several years, the core policy statements have been created, and the national metadata vocabulary ([Metatietosanasto](#)) has been updated with the concepts and terms of the official RDA. We still need to update the MARC-based instructions and create more policy statements, as well as implement new RDA terms and MARC fields into the cataloguing tools. But in the next few months, Finnish libraries will be ready to start using the official RDA.

For more information, please contact Marja-Liisa Seppälä: marja-liisa.seppala@helsinki.fi

National Library of Finland Country Report NNG Riga 8-9 May 2025

Katri Riiheläinen and Sarianna Silvonen

Library systems in Finnish libraries

- University and research libraries
 - 17 using Koha (open-source)
 - NLF is active in Koha development
 - 22 using Alma (Ex Libris)
- Public libraries
 - Koha-Suomi (Finnish version of Koha)
 - Axiell Aurora
 - HelMet (Helsinki region) preparing for a new system
 - Axiell Quria, linked data

Melinda metadata repository

- Fennica (Finnish national bibliography)
- Viola (Finnish national discography)
- Arto (article index database)
- Metadata about the collections of member libraries
- More than 40 library databases, 294 individual organizations
- 17.5 million bibliographic records (2025)
- Runs on Aleph 24, looking for new platform
- In development: Marc 21 authority database for works and expressions



Example: Works and expressions in OPAC

Records

Results for Words= shakespeare - Records 1 - 10 of 17 (max. 9999)

Select all | View selected | Deselect | Refine your search | Filter

Sorting: ▀ Heading/Discend ▀ Heading/Ascendi

- 1

☐

Stravinsky, Igor, Three songs from William Shakespeare (FI-ASTERI-W)000012247
Säv. 1953. Mezzosopraano, huilu, klarinetti ja alttoviulu
- 2

☐

Shakespeare, William, Macbeth (FI-ASTERI-W)000015481
- 3

☐

Shakespeare, William, Midsummer night's dream. Suomi (Sipari) (FI-ASTERI-W)000015401
- 4

☐

Shakespeare, William, Midsummer night's dream. Suomi (Jylhä) (FI-ASTERI-W)000015400
- 5

☐

Shakespeare, William, Midsummer night's dream. Suomi (Rossi) (FI-ASTERI-W)000015396
- 6

☐

Shakespeare, William, Midsummer night's dream. Suomi (Cajander) (FI-ASTERI-W)000015395
- 7

☐

Shakespeare, William, Midsummer night's dream (FI-ASTERI-W)000015394
- 8

☐

Shakespeare, William, Hamlet (FI-ASTERI-W)000015392

Full View of Record

Note: Clicking the links in the record information opens a new window.

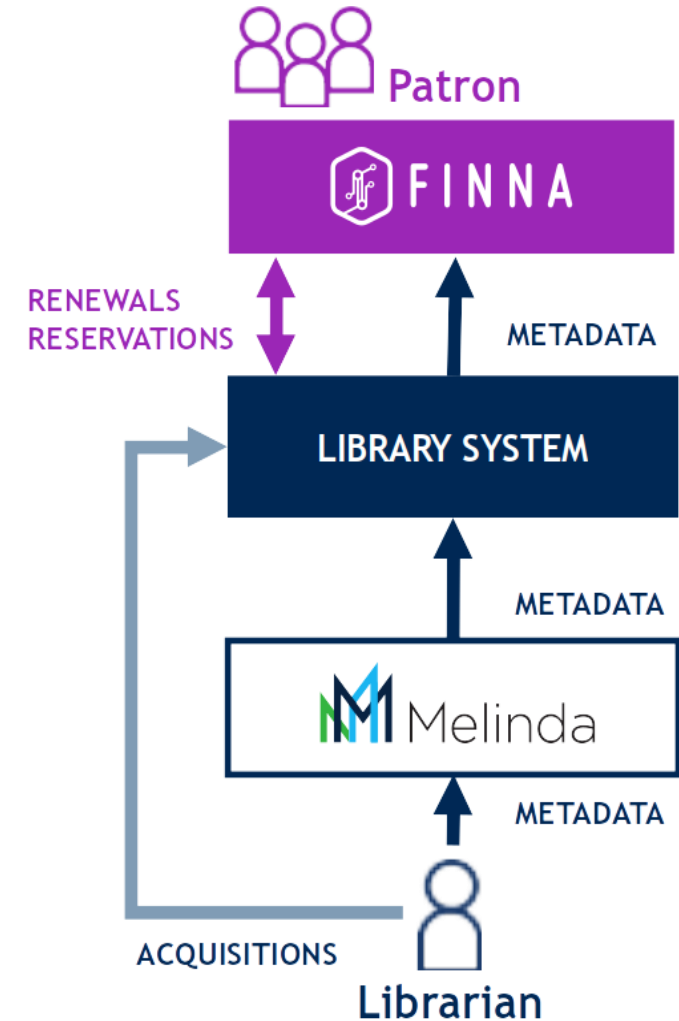
Standard format | MARC tags

Record 5 out of 17

Sys. no.	000015396
Teoksen synty aika	2005
Personal Names	▀ Shakespeare, William, Midsummer night's dream. Suomi (Rossi) (FI-ASTERI-W)000015396
Paikannimi	Suomi (yso/fin)
Kieli	fin
Teoksen muoto	näytelmä (mts/fin) näytelmät (slm/fin) komediat (slm/fin)
TimePer.of Creation	2000-luku (vuosikymmen) (yso/fin)
S.F. Personal Names	▀ Shakespeare, William, Juhannusyön uni (FI-ASTERI-N)000058866
S.A. Personal Names	Kirjoittaja: Shakespeare, William, (FI-ASTERI-N)000058866 Kääntäjä: Rossi, Matti, (FI-ASTERI-N)000057237
Source Data Found	Wikipedia, katsottu 18.4.2024: (Kesäyön unelma, A Midsummer Night's Dream, myös Kesäyön u komedia.) Wikipedia, katsottu 18.4.2024: (Matti Rossi; William Shakespeare: Juhannusyön uni; essee These
Update Flag	Y

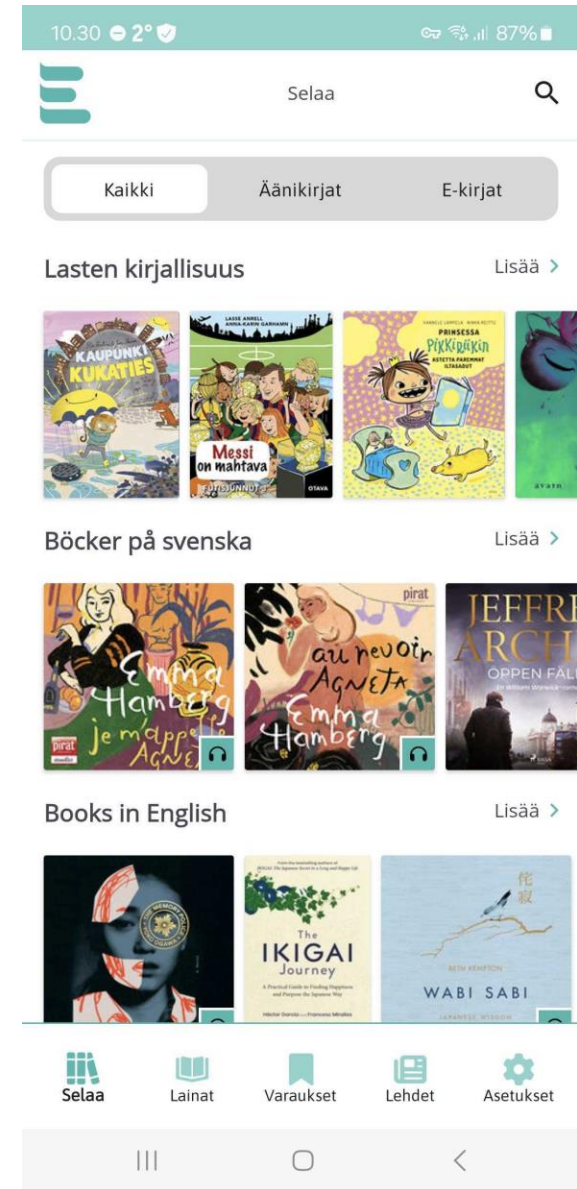
Finna: discovery and delivery tool

- Free access to metadata from 461 member organizations
 - Museums, libraries, archives, research institutions
 - 131 of these have their own Finna interface
- Built on VuFind open-source source portal software
 - NLF is an active developer
- UI in 4 languages
 - Finnish, Swedish, English, Northern Sámi
- 91.4 million visits in 2024



E-Library

- Just celebrated its first birthday 🎉
- Provided by NLF together with public libraries
- Shared service for municipalities in Finland
 - 280 municipalities, 97% of population
 - 200,000+ registered users
 - E-books, audiobooks, digital journals (7000 titles and growing)
- Dedicated E-library mobile application
 - Developed and maintained by the new E-Library Unit at NLF
 - Based on open-source software (Lyrasis, the Palace Project)
- Under active development
 - Main goal for 2025: Web user interface



Finto: national thesaurus and ontology service

- Provides linked open vocabularies and ontologies + tools
 - Used by GLAM and public administration organizations
- Skosmos developed by NLF
 - Open-source code thesaurus and ontology browser application
 - Used internationally in many organizations
 - Actively developed
 - Skosmos 3.0 by end of 2025
 - Totally new front-end



ISNI project

- ISNI: International Standard Name Identifier
 - Uniquely identifies the public identities of contributors to media content
 - 16 digits, four blocks for display
 - Disambiguates entities with the same names
- Ongoing projects:
 - The adoption of ISNIs in Copyright Management Organisations
 - A boost for crediting audiovisual works – Effortless collaboration and compatible metadata with ISNIs
- Published reports:
 - The Adoption of ISNIs in Copyright Management Organisations (2/2022–6/2024)
 - Artists Unite! Collaborative and interoperable metadata using ISNIs

Linked Library Data project

- Officially active from 2022 to 2024
- Developed a linked data model based on BIBFRAME and compatible with Official RDA
 - Version 1.0 of the BFFI data model released in Jan 2025
 - Supports full WEMI and aggregate models
 - Interoperable with other BIBFRAME models
- Next steps:
 - Developing conversions
 - Data model for agents

Automated metadata workflow (ONIX and DC)

- Workflow for automatically processing ONIX metadata supplied by publishers
 - Fully in production at the end of 2024
 - Prepublication metadata and legal deposit record metadata
 - Over 76,000 e-book records added to Fennica
- Key components (partly open-source):
 - Management system to pre-process incoming data and track item state
 - Record import API: ONIX to MARC conversion, import to Melinda
 - Replication component: transfer of metadata from Melinda to Fennica
- Coming up in 2025-2026:
 - Expanding automated metadata workflow to Dublin Core format
 - Electronic legal deposit items in publication archives

Identifier services (ISBN/ISMN/ISSN)

- Finnish ISBN Agency maintains a publisher register to manage the distribution of identifiers
- Metadata from application forms converted to MARC and sent to Melinda and Fennica
- In 2023, a new custom-made open-source system was developed for managing the distribution of identifiers
- Next phase:
 - Publisher portal functionality
 - Publishers can manage their own identifier lists
 - Allows the ISBN Agency to receive more prepublication data

Automated subject indexing and metadata extraction (1/2)

- Actively developed tools: Annif and Finto AI service
- Annif: automated subject indexing and classification tool
 - Multilingual, open source, based on traditional machine learning and natural language processing
 - Widely used in libraries and related institutions (Sweden, Poland, Germany, Netherlands)
- Development in 2024:
 - Added support for sharing trained models via Hugging Face Hub,
 - Enhanced the Annif REST API with language detection features
 - Added support for Estonian by integrating the EstNLTK library
 - Active collaboration with the National Library of Latvia

Automated subject indexing and metadata extraction (2/2)

- Participated in the LLMs4Subjects challenge at the SemEval-2025 workshop.
 - Challenge: Use LLMs to generate good quality subject indexing for bibliographic records (titles and abstracts)
 - Excellent results: first in the large vocabulary category,
- Continued development of automated metadata extraction prototype system
 - Presented at NNG 2024 in Oslo
 - Based on fine-tuned small language models
 - Integrated with open source Meteor metadata extraction tool (National Library of Norway)
 - Work continues on improved text extraction, newer LLMs used
 - 2025: Expanding data sets with documents from the electronic deposit system

Support for Sámi languages in digital services

- Project from 2022 to 2024
- NLF created support services for Northern Sámi in three digital services:
 - Finna (search service)
 - Finto (ontologies)
 - Kotoistus (language- and region-specific definitions)
- Northern Sámi can now be used as the UI language in Finna and Finto on an equal basis with Finnish, Swedish and English
- Training sessions for teachers in Sámi-speaking areas
- Finto ontology service: over 21000 terms in Northern Sámi
 - Translation in the context of this project, but building on existing terminology work.
- Interoperability between different services in Sámi languages
- Terminology work follows the specifications set by the Sámi Giellagáldu
 - Also collaboration with other Sámi specialist partners

Finna in Northern Sámi



FINNA.FI

OHcANDOAIMMAT ▾

DIEHTU MIS ▾

RÁVA

🌐 SÁMEGIELLA ▾

👤 ČÁLIHUVA

Oza...

Buot deaivamat ▾



🔍* Aiddostahtton ohcu



Materiálatiipa:

Girji ✕

Giella:

sámegiella ✕

Buot materiálat ?

Oahppamateriálat ?

RÁDDJE OZU



Čájehuvvo 1 - 20 / 5 984 ➔

Ordne

Deaivilvuotta ▾

Bohtosat siiddus

20 ▾

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☰ Diedut ja govat ▾

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207

GEAVAHANVUOIGATVUODAT ▾

MATERIÁLATIIPA ▲

► Girji

► Aviisa/Artihkal

3 935

► Báddehus

1 619

Nuohtta

215

► Video

163



Imašlaš gomuvuohta

📖 Girji

Eira, Sára Álehtta G. ▾, kirjoittaja ; Utsi, Marit Alette ▾, kirjoittaja ; Billet, Camilla Freng ▾, kuvittaja
2021

🔍 ČÁJET EARÁ VERŠUVNNAID (1)

Oažžasuvvandieđut:

☑ Cájet oažžasuvvandieđuid ▾

Finto in Northern Sámi

YSO - Almmolaš suopmelaš ontologiija

Sisdoalu giella

Northern Sami

x

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Ä 0-9

avvutla

absoluhtalaš monarkiiija → monarkiiija

absoluhtalaš monarkiiija → oktoráđđehus

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absolutisma (filosofiiija)

absolutisma (gárrenávdnasat) → juguhisvuohta

absolutisma (oktoráđđehus) → oktoráđđehus

absorbšuvdna → njammåseapmi

abstrákta algebra

abstrákta dáidda

abstrákta ekspressionisma

abstrákta objeavttat

abstrákta spealut

abstráktavuohta

absurda

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absurdisma

a cappella-musihkka

Access

Access Basic

... > dieđasuoorggit > formála diehtagat > matematihkka > algebra > abstrákta algebra

ÁVŽŽUHVUVON TEARBMA

abstrákta algebra

TIIPA

Oktasašdoaba

BADJEDOABA

algebra

ASSOSIATIIVA DOAHPAGAT

algebralaš topologiija

GULLÁ JOVKUI

04 Matematihkka. Statistihkka

EARÁ GIELAIN

abstract algebra

English

abstrakti algebra

Finnish

abstrakt algebra

Swedish

URI

<http://www.yso.fi/onto/yso/p25946>

LUÐE DÁN DOAHPAGA:

RDF/XML TURTLE JSON-LD

Ráhkaduvvon 2/7/12, maŋimuš rievdaduvvon 2/8/23

edit.button

Adoption of the official RDA

- RDA (Resource Description and Access)
 - Package of data elements, guidelines, and instructions for library and cultural heritage metadata
 - Follows international models for user-focused linked data applications
- NLF and Finnish libraries are adopting the official RDA in 2024-2025
 - Finnish translation is ready
 - Core policy statements have been created
 - Finnish metadata vocabulary has been updated with official RDA concepts and terms
- To do:
 - Update the MARC-based instructions
 - Create more policy statements
 - Implement new RDA terms and MARC fields into cataloguing tools
- Later in 2025 Finnish libraries will be ready to start using the official RDA

Thank you!



www.kansalliskirjasto.fi

Country report from National Library of Sweden

Miriam Björkhem – Fredrik Klingwall

Nordic Networking Group on bibliographic and infrastructure topics (NNG)

Riga – May 8th-9th, 2025

Introduction

The National Library of Sweden (*Kungliga biblioteket*, KB) collect, preserve and give access to almost everything that is published in Sweden – from manuscripts, books and newspapers to music, radio, TV programmes, film, and pictures. In addition, we collect foreign material with a Swedish connection. KB is a government agency under the Ministry of Education, headed by the National Librarian, Karin Grönvall.

KB is also tasked with promoting development and collaboration within the Swedish library sector. In [the national library strategy for Sweden](#) – adopted by the government in April 2022 – the National Library was identified as a key actor in strengthening the library sector. To this purpose, KB leads and partakes in a host of activities. Among other things, we collect Sweden's official library statistics, detailing loans and activities at libraries throughout the country. We also coordinate work with open access to scientific publications. The aim is to make tax-funded research freely available to read, download and distribute.

An important area for cooperation is the Swedish national library catalogue, Libris, which KB administrates and develops. Libris contains ten million titles – books, newspapers, magazines, pictures etc. – from about 600 Swedish libraries. KB produces the Swedish national bibliography, which serves as the spine of the Libris metadata content in Libris. KB also produces an extensive range of controlled bibliographic and other entities, used nationally and internationally.

The Libris infrastructure and services is mostly developed in-house using open standards and open sourcecode.

KBLab is a national research infrastructure for digital humanities and social science. Since the start in 2019 the lab provides access to KB's digital collections in structured and quantative form. The lab also design and make models.

Metadata Modeling (BIBFRAME/RDA)

Since the release of the Libris XL infrastructure in 2018 KB has developed its own linked data vocabulary. This is called KBV and published on <https://id.kb.se>. KBV relies heavily on BIBFRAME 2 as the foundation for bibliographic data, but is extended with other well known ontologies and controlled vocabularies like RDA, SKOS and Schema.org. This was originally mostly for practical reasons. With time other uses has transpired, e.g. to be able to semantically map against several ontologies depending on usage. KBV has a strategic purpose, serving as a common information model that can be applied for all (or as many as possible) services in the KB system infrastructure.

As many others we are looking into how to align BIBFRAME with RDA Official and the LRM data model. The work is slowed down by the need for compatibility with legacy data, both regarding data formats and differing cataloging rules. We strive to improve our source metadata and normalization efforts are in high demand. We have observed a disconnect between practical usage, conceptual modeling and actual data. Sweden have not yet an implementation plan for RDA Official and are eager to discuss different solutions for combining and implementing BIBFRAME and RDA.

Reducing MARC usage

In our current roadmap we aim to reduce or eliminate unnecessary conversion via MARC in our metadata systems. We aim to create a more compressed and precise MARC flavour: MINIMARC. This will be KB's new MARC export format. It will be a defined subset of the international MARC21 format. The activities aiming at reducing our MARC usage are multifold and closely

connected. The purpose is to: (1) reduce complexity at several stages, (2) give the outside world a better picture of our "offer" (metadata in export), and (3) contribute to a simplification of MARC21 exports to users. We wish to support users' transition from MARC21 to linked data formats, by offering alternatives, i.e. exports that more closely align with and benefit from the linked production format.

Libris Search

The current version of Libris Search interface (libris.kb.se) was built and released almost 20 years ago. Although still popular and widely used, we have started the development of a new national catalogue service (as mentioned in our report from last year). The new interface will be updated, more user friendly, and serve as a showcase for our linked data, displaying e.g. the clustered “work” entities and agents.

There is a live beta version at beta.libris-qa.kb.se. The beta does not contain updated metadata, but should show the direction in which we are aiming.

Accessibility

Following the European Accessibility Act a new law, [Act \(2023:254\), on the accessibility of certain products and services](#) is coming into effect in Sweden 2025. This will cover a range of products and services, including e-books and the software used to read e-books. Although the directive is directed primarily towards the industry, Libris is affected in many ways. As a union catalogue Libris is the metadata source for a lot of library services which makes accessibility a very important question. Libris also have a lot of automated workflows based on metadata ingest from publishers. We are currently working out how to handle and implement the new demands on metadata. KB is working closely with the Swedish Agency for Accessible Media (*MTM*) and also participates in the international work, for example in IFLA groups.

FOLIO as ILS

The National Library of Sweden's current library system, an Aleph system, was introduced in 1999. Since the system is based on older technology it has become increasingly difficult to develop and improve our workflows. The older technology also poses a problem in maintaining competence and education of new staff.

In replacing the old system we had some strategic requirements for a new ILS:

- Must be hosted locally at KB, without cloud dependency
- Must have potential to support linked data, and not be built on MARC
- We want to reduce vendor dependencies by transitioning to open source

In February 2024 it was decided to implement FOLIO and VuFind as a replacement for Aleph. Before deciding we spent about 2 years mapping our business processes, analyzing the library system market, and getting to understand FOLIO better, e.g. by active involvement in the FOLIO community activities.

The project started officially in March 2024, and after a procurement process the service provider Index data was selected to complement KB staff with FOLIO and VuFind expertise.

Some of the current activities:

- Implementing FOLIO and VuFind (KB project team and Index Data)
- Migrating data from Aleph to FOLIO
- Customizing VuFind
- Setting up FOLIO test servers (KB operations unit)
- Developing FOLIO functionality to fill gaps, i.e. for reading room loans (KB and IndexData)
- Preparing for a linked data integration between FOLIO and Swedish union catalogue Libris. Currently testing the [Entity Metadata Management API](#).

Automation

KB has conducted some AI experiments in the KBLab project KBx. They have generally focused on collections where metadata is scarce, but we have access to digital material (e.g. digitized postcards lacking metadata). One such pilot enables search in transcribed digital audio from broadcasted radio in Sweden. For more information on lab activities and model training please visit the [KBlab blog](#).

A hot topic in automation is subject indexing. Currently KB has an implementation of the Annif Tool in the Swepub system (Swedish research publication and bibliometry). Here Annif is used to classify research publications with [SSIF](#), which is a classification system used to analyse the scientific output from Swedish universities. SSIF is built upon the OECD-classification Fields of Research and Development ([FORD](#)).

KB have also experimented with another approach combining the natural language processing (NLP) capacities of large language models (LLM) with topic modelling, to cluster and order texts according to topics derived from the material, rather than any pre-defined term. So far we this have only been tested in small scale. The lack of benchmarks makes assessment of performance a challenging issue. It has however led to interesting discussions and attention to the matter on how to compare effectiveness and efficiency of manual and automated systems used to describe the content of library collections.

KB has a new automated metadata routine for digital music. It uses the DDEX standards in which the metadata are delivered, and has been implemented in our audiovisual catalogue [SMDB](#). This radically decreases the time needed to describe phonograms.

Summary

KB is in a transformational phase addressing many challenges and possibilities in a world where both technology and the media landscape are changing fast and profoundly. We play the long game, and while having taken steps toward a more consolidated system infrastructure, we are in many ways still in an explorative phase.

Country Report: National Library of Norway

NNG meeting in Riga, Latvia 8-9 May 2025

Introduction: Legal deposit and national bibliography

The National Library of Norway (NLN) is responsible for legal deposit, the Norwegian National Bibliography, and National Authority files. NLN is part of the BIBSYS consortium, utilizing Alma as its management system. Metadata for books from Norwegian commercial publishers are produced by the subcontractor Bokbasen.

Printed documents and other physical publications, as well as digital publications and digital printing files, are subject to legal deposit according to the Legal Deposit Act of 2016 and its Regulations from 2018. NLN receives digital printing files from Norwegian commercial book publishers via Bokbasen, and digital music recordings from several music distributors, including The Orchard, Ingrooves, and Diger Distro. These files come with a minimum set of metadata, which are then converted and imported into Alma. Smaller publishers, including those producing maps and sheet music, can upload and deposit monographs along with a minimum set of metadata using a form available on the NLN website.

Until June 2025, NLN has used Mavis as the management system for its audio-visual collection and digital newspaper collection, both for legal deposit and archival material. Starting June 2025, Mavis will be replaced by Axiell Collections.

The Metadata Well

For some years NLN has been investigating how a central national vault for production and sharing of metadata may be implemented – working title: Metadata Well. The establishment of the Metadata Well was mandated in the National strategy for libraries – extended throughout 2025, a policy document from The Ministry of Education and Research and the Ministry of Culture.

Conceptualizing the Metadata Well and its role in the Norwegian metadata landscape has taken a considerable amount of time and effort. However, last year NLN was finally able to issue an invitation to tender for a Metadata Well in the form of system as a service (SaaS). The actual procurement was finalized early 2025, with the Norwegian company [Biblioteksentralen](#) as the chosen vendor.

The Metadata Well will provide libraries and others with a single authorized source of uniquely identified metadata descriptions. The system will offer an open API for retrieval of metadata in Marc 21 as well as RDA/LRM. Its internal data model is closely aligned with RDA/LRM. Hence works, expressions and manifestations are represented separately yet interconnected, enabling a more coherent and user-friendly presentation.

Currently, basic features for data processing (import, export, conversion) are being implemented and the first acceptance test is scheduled for June 2025. We anticipate the Metadata Well to be up and running as specified by November, initially containing a baseline set of metadata and subscribed to by a subset of public libraries. Then gradually, we hope to extend the group of connected libraries to comprise the whole library sector within the coming 2-3 years.

Share-VDE

We are still a member of SHARE-VDE, a library-driven collaboration between several American academic libraries including Library of Congress, and some European national libraries (British library, National Library of Finland, and National Library of Norway (NLN)). The coordinator is Casalini Libre AS, an Italian metadata supplier and software provider, assisted by the Danish company Samhaeng on the user interaction side.

The main goal of the project is to establish a data processing & discovery infrastructure in which bibliographical linked data entities are extracted from metadata and authority data submitted regularly by member libraries, to be made available for exploration through the joint discovery interface. The linked data are generated according to BIBFRAME, but extended with a Work-like entity type, to fit into RDA oriented settings.

Progress in 2024 has been slow, at least as seen from the user point of view. However, tests (on dedicated environments with small data sets) of the latest release indicates clustering algorithms of good quality, and the accompanying J.Cricked linked data editor has been greatly improved. We are currently looking forward to installation of the newest software release on the staging (public) portals as well as a full data reload.

NLN has made a slight reorientation in our Share-VDE engagement, in that we are going to expose our national bibliography on the tenant set up for this purpose (<https://www.natbib-lod.org/>).

AI for broadcasting

NLN possesses a large collection of broadcasting materials, and we are currently testing the conversion of speech to text to make the text searchable using NB Whisper. NB Whisper is a language model based on OpenAI's Whisper, trained on data from the digital collection at the National Library. Additionally, we plan to make summaries available in the search user interface in the near future.

Alma Metadata Editor AI assistant

We have just started to test the Alma Metadata Editor AI assistant. So far, we have tested uploading image files to the AI assistant from a PC and using the photo function in the Alma Mobile 2 app. Both have worked fine technically. (However, after the May update, which is available in Alma Sandbox at the time of writing, we can no longer create new records.)

The material we have tested so far is a translated novel, a collection of articles, and some music scores.

The initial impression is that data is correctly and accurately reproduced in the fields for title, other title information, secondary entries, main entry, publication information, series title (100 \$a \$b, 700 \$a, 245 \$a \$b, 264 \$a \$b \$c, 490 \$a \$v).

The 520 note with content description seemed to work quite well with books, without us having checked these carefully against the content itself. This does not work very well on music scores, though. The assistant makes up meaningless and generic 520-summarizing fields which are truly superfluous in most bibliographic records for notated music materials. So are many of the attempts at keyword generation for music scores. These are minor things, however, that can probably be customized or adjusted later or even removed and adapted through normalization rules.

Among the more promising aspects lies the potential to generate 505 fields from images of lists of contents. However, testing on music scores, 505 generation for some reason didn't work in all of the test cases, and only to a certain degree. In the cases that it worked satisfactory, the assistant was given a photo of the contents list in combination with a photo from the title page. It provided a great conversion of image to text, which again was utilized by the cataloguer to create a proper 505 field (enriched with title- and creator-subfields, and punctuation according to practice), saving a lot of registration work. This did not work when the cataloguer tried the "enriching assistant", however, for unknown reasons.

In the record for the collection of articles, a 505 note was created with contributions by the editors that are not found in the book, contributions that are probably fictional. A 700 entry was also made for a fictional person. But that may be because the cataloguer uploaded more than just the title page, cover, and table of contents. It may be an advantage to limit oneself to the book cover (front and back), title page, and table of contents.

The placement of data is somewhat problematic. For example, the first editor of a collection is placed in 100, not in 700 as desired.

The 008 field is particularly problematic. The AI assistant here gives a result that takes more time to tidy up than if the field were added using a template.

Some things should be configurable or cleaned up using normalization rules, e.g. the use of ISBD characters. This must be done by an Alma administrator. We have not tested this.

All in all, we would say that as the AI assistant is today, it makes sense to use it to create new records if you cannot import from external databases. However, it should be possible to deselect fields when creating the record, instead adding these using templates – we are thinking in particular of the 008 field. It looks like this is possible as of the May update, but this must be configured by an Alma administrator. We imagine that AI generation could be used to create preliminary records, which can then be proofread and enriched by a cataloguer, and the AI assistant's potential for easing workloads and relieving tiresome registration tasks is big.

It would be useful to be able to connect the AI assistant to local subject vocabularies, the Norwegian authority file and generate \$4 codes from MARC21. Future plans listed at Exlibris include support for multiple languages, subject vocabularies, and cataloging formats, as well as support for creating and enriching multiple records in batches. We have no specific plans to test this yet.

NLN also plans to test automatic classification of fiction, but this hasn't started yet.

Status RDA Official

NLN is planning to migrate to the Official RDA within the deadline of the original RDA shutdown (May 2027). Two issues are particularly important in that context:

1. **Metadata model/format:** While it is possible to apply Official RDA together with traditional metadata formats like Marc, we feel that it is much more tuned towards linked data, with BIBFRAME and RDA ontology as the most prominent model options. NLN has recently decided that its linked metadata are to be represented according to the LRM-based RDA ontology. The decision is based on our experience with BIBFRAME through the Share-VDE project, on testing the RDA ontology using the Rimmf software (reported at NNG 2024) as well as analytical comparison between the two models. Although the RDA ontology is not yet widely used and therefore is less supported by tools so far, we do think it is the sounder and more stringent model of the two. Concerning tool support, see also the chapters on Metadata Well and New library system, respectively.
2. **Management of local/national policies and guidance:** The RDA toolkit allows for storage and management of application profiles, policy statements and other guidance. That way, one's local practice may be seen in the context of general guidance. However, the institutions currently supporting Official RDA represent a multitude of approaches in this regard, from managing all local guidance in the toolkit itself to storing it all outside the toolkit, offering a proprietary platform for cataloguers and other end users. Although NLN has not yet decided in detail which approach to take, our overall thinking goes towards using the RDA toolkit as much as possible/feasible.

When the above issues are resolved, the task remains to develop the actual guidance, policy statements and application profiles. Some initial application profiles do exist, but being rather maximalistic in nature, a certain degree of pruning and adapting is probably needed. Specifying Norwegian practice in the form accepted by the RDA toolkit is a big task and will be aided by a group of competent cataloguers, to be appointed within the coming few weeks.

Acquiring new systems

We are still in the process of implementing Axiell Collections as the management system for our audio-visual collection. Unsurprisingly, this has taken longer than initially planned. However, we have now reached a significant milestone: shutting down our old system, Mavis, and beginning the final import of legacy data into Collections. A significant portion of our efforts so far has been directed towards rewriting the software for our digitizing production lines. The next step will be training, before we start using Collections on a broad scale during the summer months.

For the rest of our material, NLN shares its main catalogue with about 80 other academic libraries, all organized under the BIBSYS consortium. As the current LSP contract with Clarivate (Alma) expires by the end of 2025, a comprehensive procurement process has been carried out by the Consortium's working groups lead by Sikt, finalized in March this year by choosing Alma once more. To take care of special requirements related to our function as national library, NLN formed a separate working group during the procurement process. One of our important requirements was full support for metadata in the RDA/LRM form, which will be fulfilled during 2027 according to plan.

NNG meeting 8th – 9th of May 2025 – Country Report from Sikt, Norway

Sikt & The BIBSYS Consortium

Sikt - Norwegian Agency for Shared Services in Education and Research

Sikt is a public administrative body under the Ministry of Education and Research. Our mission is to support education and research in achieving their goals by providing shared, value-adding services they can trust. Sikt comprises approximately 400 employees, with its main office located in Trondheim, and additional offices in Bergen and Oslo.

Goals of the Ministry of Education for Sikt:

- The education sector has access to high-quality infrastructure and shared services.
- The education sector shares data to enhance knowledge development, innovation, and value creation.
- Strong information security and privacy protection within the education sector.

Sikt is organized into four divisions

- Joint Services
- Data and Infrastructure
- Research- and Knowledge Resources
Library Services Product Area: Managed by Asbjørn Risan and Anita Ellerås
- Education and Administration

The BIBSYS Consortium

The BIBSYS Consortium is composed of 77 institutions (with a total of approximately 230 libraries) covering areas of higher education in both the private and public sectors, research institutes, museums, and hospitals. The consortium maintains a shared catalog of bibliographic metadata, with holdings and items managed at the institutional level. Collaborative efforts focus on resource sharing, configuration, and best practice workflows. It is also important that we have a unified content standard and have a uniform registration practice for metadata.

New Contract for Library System and Discovery Solution

The BIBSYS Consortium currently utilizes Alma, Primo, and Leganto from Clarivate as its core systems. The consortium went live with Primo in 2013 and Alma in 2016, making BIBSYS one of the first large consortiums to adopt Alma. The contract with Clarivate was set to expire by the end of 2025, and so the work on the requirements specification, tender, and contract has been a significant and prioritized part of the efforts in 2024.

Key Activities in the Process:

- User satisfaction survey
- Survey among Library Directors
- Develop requirement specifications
- Review and evaluate offers and product demonstrations
- “Notification of award of contract” and “Evaluation report” based on the evaluations conducted

Clarivate was ultimately chosen as the supplier, and the new contract will be signed later this year.

This process has ensured that the BIBSYS Consortium's current and future needs are met. Lessons learned from this process will be valuable when initiating the tender for the reading list solution before the current contract expires in 2027.

The Sikt working groups have played a key role in collaborating with the Sikt staff to prepare the requirements specification for the tender. This specification encompassed 748 total requirements for the library system and discovery, along with six appendices that (among other things) included 55 User Stories, requirements for national library statistics, and the BIBSYS Authority file (BARE). It was a comprehensive effort to review and, as neutrally as possible, assess the quality and functionality in the responses from suppliers.

The National Library of Norway has also been involved in this process.

The list of requirements has been published on the website for the project¹.

Sikt and the BIBSYS Consortium are still somewhat concerned with the market for ILS and LSP solutions. There are few options and little competition. Although the tender process is demanding and comprehensive, it also provides significant value and learning. With this in mind, it would be desirable to have more suppliers making offers.

¹ <https://sikt.no/tiltak/ny-anbudsrunde-biblioteksystem#publisering>

RDA

At present Norwegian libraries use RDA Original as metadata registration rules. According to plans the BIBSYS Consortium will transition from RDA Original to RDA Official by May 2027. The cataloguing will with this go from record-based (manifestation records) to entity-based.

Currently, there is a significant focus on BIBFRAME within the library community, but the Norwegian Cataloguing Committee recommends that the ontology RDA Elements (aka the RDA implementation of LRM) forms the basis for entity-based cataloguing in Norway and that RDA application profiles are developed by the National Library.

This was also a focus area in the procurement process, and the list of requirements included criteria related to the RDA/LRM and BIBFRAME cataloguing. It was important that the supplier had concrete and time-bound plans for RDA/LRM and that these were set to align with the timeline for RDA Official. We feel confident that these plans are well accommodated in the new library system, ensuring good support for our cataloguing needs.

Other activities

Due to the significant allocation of resources to the tender process in 2024, a substantial portion of Sikt's capacity has been dedicated to this effort. Consequently, we have had reduced capacity in other areas. Therefore, we have prioritized day-to-day operations, system maintenance, and customer support.

Webinars

An important part of Sikt's delivery to the consortium is training and guidance in the use of the systems we manage. As part of this effort, we conducted the following 8 webinars in 2024:

- Digital Delivery of Articles to End Users
- Use of Enhance Record in Cataloging
- Subject Heading Systems in Alma
- Testing RDA Elements (RDA Ontology) in Cataloging
- Acquisition – Licenses and Alma
- Oria Catch Up Part 1
- Oria Catch Up Part 2
- Registry Data – A Rich but Underutilized Source of Knowledge

In addition, two informational meetings were held.

Customer support

Customer support is a highly prioritized task for Sikt. It is essential to ensure that libraries receive the support they need to maintain efficiency in their daily tasks.

Sikt handled 1,012 user support cases in 2024, with 542 cases related to Alma, 226 to Primo, and 244 to Leganto.

Continued Development of Digital Delivery Solution

Early 2024, Sikt implemented automatic digital delivery of interlibrary loan (ILL) article requests to the end user. We have continued to develop this solution, which is based on several key components:

- Legal rights
- Support in Alma
- License terms for interlibrary loans
- Coordination between Alma and Edvarda (consortium license agreements)

Lenders providing document delivery services can indicate whether the supplied document can be made available digitally to the patron or requires manual handling by the borrowing staff.

This option enhances copyright control by allowing the lender to specify how the document can be shared. The following choices are available in the 'Send item digitally' screen with two conditions: 'Electronic to end-user permitted' and 'Print only to end-user'. Libraries use an Analytics report to retrieve information from the licenses, ensuring correct delivery conditions.

Advantages of the Solution:

- No unnecessary time delays
- Reduced manual work for the borrowing library
- Eliminates the need to print articles before delivery

The solution has been developed in collaboration with Ex Libris for Norwegian Alma libraries that are part of the consortium license agreements.

New as of 2024

During the latest negotiations for the consortium license agreements, we successfully persuaded more providers to approve digital article delivery. This was achieved by

including Terms of Use in the delivery letter. When patrons receive the letter with a link to the article, they are also presented with the following Terms of Use:

- Only for scholarly, personal, educational, or professional use
- Not for commercial use
- Not for onward transmission or distribution
- Not for conversion to any other format

Continuing efforts in Importing User Data to Alma – New SIS Integration Progress

The existing solution has become outdated, prompting a multi-year process of modernization and development within the Norwegian student information system (FS). There is a strong desire to establish a standardized solution for the sector.

The development work began in spring 2021 with the goal of creating a platform that provides access to all data in the Norwegian student information system (FS). The first version of the platform was launched in production in March 2022.

New Solution – Overview

The new solution consists of four main components:

- FS GraphQL API
- Interface for setting import parameters (GUI)
- Web-import – an integration that listens to events in FS
- API endpoint to Alma
(+ Import via file)

Import parameters are set via the GUI and managed by each institution. The GUI lets institutions configure integration options and ensure GDPR compliance and access control.

The import integration is event-based and operates in near-real-time. Events in FS are placed in a message queue, and the integration captures these changes. The changes are then sent to Alma to update user records.

Future Plans

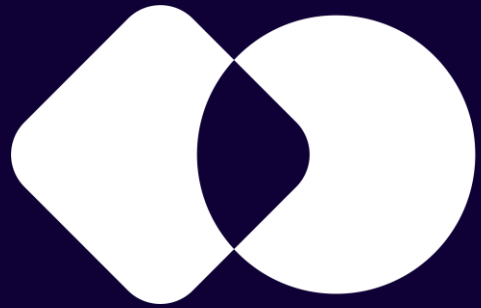
- Testing in sandbox environments.
- User involvement and evaluation of the GUI.
- Piloting – going live with a single institution.

- Gradual rollout throughout the consortium.
- Next development phase: Employee records
- Further development: User deletion

NVA – National open access repository

Sikt has in previous reports informed about the development of a national repository of research material. The development of the National Knowledge Archive (NVA) began during the fall of 2019. There have been some delays underway, but the project has conducted extensive user-testing, and it has been concluded that the system is ready for the full-scale migration. The system has been in production for a few years for smaller institutions, and the migration for the rest of the institution will start in June 2025.

Country Report from



Sikt
Norwegian Agency for Shared
Services in Education and Research

New contract for Library- and Discovery system

Key Activities in the Process:

- User satisfaction survey
- Survey among Library Directors
- Develop requirement specifications
- Review and evaluate offers and product demonstrations
- “Notification of award of contract” and “Evaluation report” based on the evaluations conducted

New contract for Library- and Discovery system

- Clarivate chosen as supplier
- Transition from Primo BO to Primo VE
- RDA/LRM
- This process has ensured that the BIBSYS Consortium's current and future needs are met
- Concerns regarding the market for ILS/LSP solutions

Webinars

- Digital Delivery of Articles to End Users
- Use of Enhance Record in Cataloging
- Subject Heading Systems in Alma
- Testing RDA Elements (RDA Ontology) in Cataloging
- Acquisition – Licenses and Alma
- Oria Catch Up Part 1
- Oria Catch Up Part 2
- Registry Data – A Rich but Underutilized Source of Knowledge

Customer Support

1 012 user support cases

542 – Alma

266 – Primo

244 - Leganto

Digital Delivery Solution

Automatic digital delivery of ILL-requests to end-user

- Lenders providing document delivery services can indicate whether the supplied document can be made available digitally to the patron

Advantages of the Solution:

- No unnecessary time delays
- Reduced manual work for the borrowing library
- Eliminates the need to print articles before delivery

Digital Delivery Solution

Terms of use in delivery letter:

- Only for scholarly, personal, educational, or professional use
- Not for commercial use
- Not for onward transmission or distribution
- Not for conversion to any other format

Importing User Data to Alma

– New SIS Integration Progress

- Development work began in spring 2021
- Goal:
Create a platform that provides access to all data in the Norwegian student information system (FS)

The new solution consists of four main components:

- FS GraphQL API
- Interface for setting import parameters (GUI)
- Web-import – an integration that listens to events in FS
- API endpoint to Alma (+ Import via file)

NVA – National open access repository

- The development of the National Knowledge Archive (NVA) began during the fall of 2019.
- Extensive user-testing
- Already in production for smaller institutions
- Migration for all other institutions: June 2025

May 2025

Hallfríður Kristjánsdóttir / Kristín Lilja Björnsdóttir / Telma Rós Sigfúsdóttir, National and University Library of Iceland
Sigrún Hauksdóttir / Sveinbjörg Sveinsdóttir, Consortium of Icelandic Libraries.

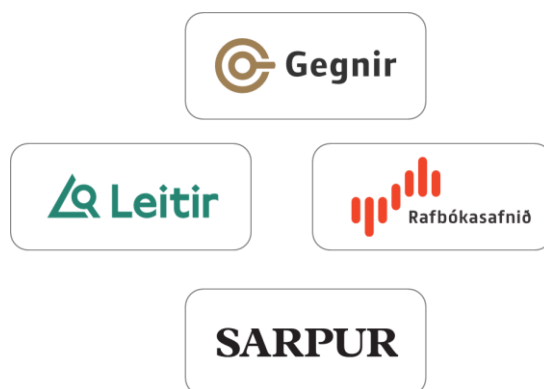
NNG meeting in Riga, 8. - 9. May 2025

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

1. Introduction

Landskerfi bókasafna hf. (e. Consortium of Icelandic Libraries), <https://landskerfi.is/>, is a private limited company founded in 2001. The purpose of the company is to operate a national library system for Iceland and offer services to libraries, museums and similar institutions. The company is jointly owned by Icelandic municipalities and the Icelandic state. Around 300 libraries in Iceland use the national library- and discovery system. Among the member libraries are the National and University Library of Iceland, university libraries, public libraries, primary- and secondary school libraries, as well as research libraries.

2. Gegnir, Leitir, Rafbókasafnið and Sarpur



The national library system in Iceland is branded Gegnir (Alma from Ex Libris) and the national discovery system goes by the name Leitir (Primo VE from Ex Libris). Rafbókasafnið is a brand of the Overdrive platform operated by the Consortium for public library members of the Consortium for lending of E-books and Audiobooks.

Furthermore, the national cataloging system for museums in Iceland, Sarpur is operated by the consortium. Sarpur is used to catalog and record artifacts, photographs, archaeological sites, historic buildings, place names and cultural history. Sarpur is used by over 60 museums and cultural heritage institutions around Iceland.

2.1 Software as a Service and Automatic Updates

A new reality in cloud-based library systems is automatic updates. These updates can have a substantial impact on project planning and processes. The workload required to successfully launch some of these updates often must take priority over other ongoing and planned projects.

Major updates are a significant undertaking, as the new functionalities have a direct impact on daily operations in the libraries. The complexity of the consortium, which consists of approximately 300 libraries and a much higher number of staff, further increases the complexity of the job.

Our experience has shown that new updates need to go through the following steps.

1. Testing based on our system setup (topology) and specific needs.
2. Reporting errors to Ex Libris. There is often a delay in resolving problems related to our system setup, and the resolution may or may not be ready when the update is activated in the production environment.
3. Checking and modifying the Icelandic translation.
4. Reviewing and updating existing workflows as well as instructions.
5. Training and supporting the library staff.

Ex Libris is currently working on a new user interface (UX) for the Alma system. This past winter two major updates were rolled out: one for circulation and another for title search. Even though we had planned for these system updates, they ended up taking more time and effort than we expected, which meant other projects had to be put on hold.

It leaves us wondering: How can we plan better for future updates like these? Or do we have to wait and see how much work they'll actually take? That said, although the updates had a significant impact on the day-to-day workload, they were a success and brought some great improvements to our libraries.

2.2 Gender information in user records

Recently, Ex Libris announced its intentions to remove all gender information from user records in Alma. The company states „Since gender is not essential for product functionality, retaining it poses unnecessary compliance risks according to GDPR requirements that personal data be collected and processed only when there is a clear legal basis and business need.“

We are not happy about this as our business needs are indeed quite different. The topic of gender is an important issue at both the federal and regional levels in Iceland. A prerequisite for any gender analysis is access to gender-disaggregated statistical data. Accordingly, the consortium has been providing gender-based statistics to stakeholders over the years and has developed a series of Analytics report for this purpose.

This issue raises a question about current practices in the Nordic regarding gender-based statistics.

2.3 Software License Additions

Last year, the larger universities in Iceland, together with the Consortium, conducted an analysis of two potential course resource list management systems for use with Alma and Canvas learning management system: eReservePlus (from eReserve Pty Ltd.) promoted by Ebsco and Leganto from Ex Libris. The result was that the University of Akureyri decided to implement **Leganto**. The contract, signed at the end of 2024, is held by the Consortium. Implementation is about to begin.

The Consortium is also considering whether to subscribe to Ex Libris's service, previously known as Alma-D, now called **Alma-Specto**, for managing digital collections.

2.4 Implementation of new Sarpur

A major task in recent months has been the implementation of new software for Sarpur. As mentioned in our country report last year, the software is **MuseumPlus** from Zetcom AG. As is customary in project like these, data migration from the old system to the new one was a major undertaking.

User Acceptance Testing (UAT) has just been completed. The majority of users are satisfied with the system and its configuration, although, of course, there are issues that need improvement. Work on the external website for Sarpur has just started and is expected to conclude before the launch of the system, planned for the second half of October.

2.5 Centre for Digital Humanities and Arts in Iceland

The Icelandic Centre for Digital Humanities and Arts (MSHL/CDHA) is a collaboration between 15 institutions including the Consortium of Icelandic Libraries and the National and University Library. These institutions all have knowledge and experience in the processing of digital data. The aim is to build a digital infrastructure for research in the humanities and arts, improving access to research data and developing digital research methods. See also chapter 3.1 for information on one of the projects ran by the Centre.

3. National and University Library of Iceland (NULI)

The National and University Library of Iceland is a part of the Consortium of Icelandic Libraries and uses the Alma software run by the CIL office for acquisitions, subscriptions, fulfillment, metadata management etc. The main catalog is stored in the shared bibliographic database in Alma and is made available to the public in the Primo VE view: lbs.leitir.is.

In addition to the Alma/Primo VE setup, the National library runs two repositories for electronic legal deposit materials. [Rafhladan.is](https://rafhladan.is) (D-space) for textual files and [Hljodsafn.is](https://hljodsafn.is) for audio files. The library has two ongoing digitization projects: [Baekur.is](https://baekur.is) for digitized books and timarit.is for digitized journals. Metadata originally created in the bibliographic database (Alma) is extracted via APIs and reused in rafhladan.is and timarit.is. As a part of our services to the University of Iceland, the Nat Library operates digital repositories for outputs of students and teachers/researchers at the university ([Skemman.is](https://skemman.is), [Opinvisindi.is](https://opinvisindi.is)) and a research portal ([Iris.ra.is](https://iris.ra.is)) for research activities of several Icelandic institutions.

3.1 Sögulegt mann- og bæjatal / Historical register for personal names and place names

At the NNG meeting in Reykjavík in 2023, Pétur Húni Björnsson, had a brief presentation of the project Sögulegt mann- og bæjatal, which uses data from NULI and other institutions. The project is now completed and made available at <https://smb.mshl.is/>

The outcome of the project is a central database with time-set information about place names and personal names in Iceland. The data, which is from different sources, census databases between 1703 and 1920 and land and place registers, has been linked together for research purposes. It is possible to view, search and browse the data and see the location of most of the places on the map.

3.2 Library System collaboration projects with the Consortium

Counter/Sushi and Alma Analytics

The vendor setup has been done in Alma for ejournals, e-books and databases. SUSHI harvesting job is scheduled to run monthly. There is a bit difference in the usage statistics we receive from the vendors and in Alma analytics, and in how the collections are defined.

The Consortium is a project partner, as this process needs to be carried out also for other universities in Iceland as well as the national licenses. Currently, we are in the process of trying to decide upon needed Analytics Reports. We would be interested in hearing experiences from you in this regard.

Research Assistant in Primo VE

We are testing the Research Assistant (AI) in Primo VE (Sandbox). There are several problems which prevent us from activating the tool in the production environment yet. The

Icelandic language is far from good enough and the suggestions for related questions are not always in Icelandic. The advantage of using the tool is to receive links to relevant sources, but the disadvantage is the search in all CDI material, instead of searching only in the library material. The Consortium is a project partner.

3.3 LÝSA - ingest system for legal deposit of grey materials and metadata from publishers

The National and University Library is a legal deposit library and is by law responsible for legal deposit delivery, claims and permanent preservation of published text and music resources. We are also by law expected to make the resources accessible for viewing, and to maintain catalogs and statistics on print and music production in Iceland (National Bibliography). One of the biggest challenges for both Legal deposit and the National Bibliography has been how to deal with electronically published gray materials. While web-harvesting does fulfill laws on preservation, it does not make the resources accessible/findable in our catalogs nor can we provide reliable statistical reports on number of titles, publishers etc. One part of the problem is how challenging it is to have overview over reports/grey materials published online (who publishes, where is it published, how often does the entity publish new titles etc). Another issue is how to catalog the large number of titles produced and published online. In order to address this second issue, we took inspiration from a presentation made at the NNG meeting in 2024 in Oslo, on the Norwegian METEOR project and the Finnish ANNIF project.

Our programmers worked on making the METOR software compatible with the Icelandic language as well as linking the ANNIF software to our authority file and training it for subject analysis with an export of our bibliographic records. ANNIF is trained weekly with a fresh export from our BIBs and AUTs. We are getting between 30 and 70 % match score when using ANNIF for subject analysis on grey materials catalogued with METEOR. We would be interested in training ANNIF further with a bigger set of data but as of now there are no further training plans.

When both softwares were ready to be used in our language and data environment the programmers made a Java Springboot platform, called Lýsa, where catalogers can add PDFs (either by uploading a file or by adding URLs) and then view and/or edit the metadata before it is imported to Alma and our legal deposit repository Rafhlaðan (where the PDFs are also preserved). We also have the possibility of adding PDFs already in our web archive in batches to Lýsa but we have yet to test that feature.

In Lýsa, catalogers can also view/edit ONYX metadata that we receive from publishers before accepting for import to Alma. This workflow has saved a lot of time already even though we are currently only using it for gray material PDFs and the limited amount of ONYX records we receive (it's not common for Icelandic publishers to use ONYX). In the future we would like to be able to use the Lýsa platform to work with other kinds of metadata, whether it is metadata we receive from publishers (in other formats than ONYX) or metadata extracted from other kinds of electronic materials.

3.4 Cataloging: Authority Control, VIAF and Linked data

Catalogers at the National library are responsible for the Icelandic authority database and a large part of the quality control for bibliographic data in the shared system. We currently link bib headings for most non-Icelandic persons/corporate bodies to LCNames, but use our local authority file for Icelandic names.

In Alma and Primo VE, we have activated the functionality for enriched display and search using LC and Wikidata, for bib-headings that are linked to LC Names. Our local authorities are enriched with VIAF IDs, making it possible to also offer linked data enrichment for those. While we do see this data enrichment as a positive addition to the system, there are considerations when it comes to linked data enrichment that is primarily in English (data pulled from LC and Wikidata). Should the National Library of Iceland offer its users enriched data on Icelandic entities in English? We feel that if we do, there should at least be some plan in place, to offer comparable services in Icelandic. How this can be achieved is a question that needs to be addressed. We are interested in seeing if and how other non-English communities and libraries manage this issue.

3.5 National bibliography

The National bibliography is published to the website utgafuskra.is and to a specific Primo-view. All the data in utgafuskra.is is pulled from the shared bibliographic database in Alma, based on specific local and non-local marcfields and values that catalogers in NULI add to individual bib-records. In 2024 work on updating and restructuring the website started and is still ongoing. The current site no longer accurately reflects the national output or answers relevant questions such as how many e-books v/printed books get published per year or how many books per year are actual books v/technical reports and other gray materials.

In 2024, NULI received a grant for hiring an additional cataloger for 4 months to work on enhancing bibliographic records for books and journals 1973-2018 (data from 2018 to current day does not need enhancing). This makes it possible to add 50 years to the online publication of the National Bibliography, when the website reopens, later in 2025

**National Library of Estonia (NLE)
Country Report,
NNG Meeting Riga 8-9 May 2025**

**National Library of Estonia – Development and Activities Report 2024
Annual Short Overview**

- The year 2024 was a year of reconstruction for the National Library of Estonia. The construction company stayed on schedule, and the building will be handed over to the National Library (RaRa) on September 1, 2025.
- As a development and competence center for the library network, RaRa launched a wide-ranging public library reform project, focusing on enhancing cooperation, setting structural goals, and developing an operational and collaboration model.
- Preparatory activities for implementing the nationwide library system—the prerequisite for the reform—were launched. A tender for the e-catalog was announced, and development will begin in April 2025.
- As an additional service on the MIRKO platform, a web library solution for the blind people was developed and will be completed in the first half of 2025.
- Development began on RAJU, a national environment for library statistics and performance analysis. The solution will be completed in June 2025.
- The nationwide library e-catalog tender was made public. Development will begin in April 2025 and is scheduled for completion in the first half of 2026.
- RaRa expanded its activities promoting digital humanities and the reuse and cross-use of data. The innovation project "Automatic Cataloging and Keywording" was launched. There was broad cooperation both in Estonia and internationally, and the digital humanities initiative received national recognition: Data Pearl 2024 award winner.
- As part of the Ministry of Culture's digital transformation projects, digital services were developed: an update to the DIGAR user interface, which will be implemented in 2024. The migration of digital archive data continued and will be completed by September 2025.
- The number of ISBNs issued via the publisher portal more than doubled, along with the number of digital deposit copies. This change was driven by two publishers using artificial intelligence to produce books. The conditions and processes for issuing standard numbers are planned to be automated in 2025. A significant portion of the service's activities involved developing the publisher portal.
- RaRa's goal for the digital transformation is to reduce legacy systems and develop user-friendly services. The IT portfolio included 11 projects during the reporting year.

Development and Competence Center for the Library Network

On October 14, 2023, the Ministry of Culture's Public Library Council approved the designation of the National Library (RaRa) as the provider of state-level tasks for public libraries. Within the public library domain, RaRa carries out the following governmental administrative responsibilities:

- The creation, management, and development of nationwide public library services;
- Collection and analysis of reports on the substantive work of public libraries;
- Regional professional consultation for public libraries and annual identification and coordination of staff training needs;
- Organization and coordination of nationwide library acquisition;
- Coordination of public library participation in international, national, and regional programs.

Activities in 2024 focused on designing the legal framework for nationwide library services and aligning the operational and governance model, which defines the roles and responsibilities of stakeholders including the Ministry of Culture, the National Library, regional units, central libraries, and local governments.

The most important activity in implementing the library reform is the creation of a **one unified nationwide library system**. This system will merge the current three separate library systems and integrate libraries and users into a single ecosystem. In 2024, a resource mapping necessary for this effort was carried out in collaboration with the Ministry of Culture. An analysis of possible solutions was prepared, potential partners were identified based on functional requirements, and initial discussions began with system providers.

A working group composed of library representatives was formed to analyze functional requirements and actively test services during the development process. The goal is to develop the national MIRKO service into a unified user environment—an e-catalog—designed for all libraries.

e-book lending service MIRKO

The goal of the service's development was to integrate the MIRKO service with the Library for the Blind and the new DIGAR user interface. A UI/UX analysis of the user environment was conducted, and the developments adhered to WCAG 2.1 AAA accessibility standards. Additionally, systems, web environments, and mobile applications were kept up to date. The integration of the Library for the Blind with MIRKO was postponed to early 2025. The launch will coincide with the opening of DIGAR's new user environment.

The objective for the MIRKO book lending service was to add 100 libraries to the platform. By the end of the year, the service contained 2.2 million items. Users have embraced the convenience of borrowing physical books, and despite the absence of any marketing campaigns in the second half of the year, the number of loans increased by 47% compared to the previous year.

To improve the borrowing experience from libraries, a feature was developed that allows users to search a specific library, choose to pick up the book in person, and benefit from differentiated shipping rates for postal delivery. These capabilities also serve as a foundation for the development of the nationwide e-catalog.

To reduce licensing issues, RaRa implemented several additional developments that minimize the risk of unintentionally using a license. These include:

- the ability to preview 10 pages of an e-book and listen to 5 minutes of an audiobook without consuming a license,
- the option for schools to purchase e-books specifically for their students and teachers,
- the ability to "return" a usage count if the user only previewed the book or did not read it within the loan period,
- and a redirect to a purchase page when usage counts are exhausted, offering an additional means of acquiring the book.

Data Management

The implementation of data management software was successfully completed on schedule in April 2024. As a result, RaRa now has the technical capability to perform data quality checks within its databases and maintain a comprehensive overview of the collected data. Activities continued to improve the maturity level of RaRa's data collections, with the goal of reaching maturity level 3 across all data sets by 2025.

Digital Humanities and Data Accessibility

The overall goal of this activity is to expand the reuse and cross-use of RaRa data, to promote digital humanities, and to encourage data usage among the library network and professionals in Estonia's memory institutions.

In 2024, the RaRa Digital Lab (digilab.rara.ee) published quarterly case studies, tools, and blog posts. Collaborative projects were planned and/or initiated with institutions both in Estonia and abroad. A curated dataset of the Estonian National Bibliography (ERB) was completed. Previously, this data was only available in a library-specific file format, which is generally unfamiliar to data enthusiasts. Based on this dataset, a new "curated data collection" was created, integrating in-house expertise with standard steps for data cleaning and enrichment—allowing culturally engaged data analysts to focus on practical use. In 2025, the dataset will be featured in the Journal of Open Humanities Data in the article “Curated Bibliographic Data: the Case of Estonian National Bibliography”, as part of the issue Amplifying GLAM Collections: Scalable and Inclusive Data Practices.

As part of the exhibition celebrating the 95th anniversary of Lennart Meri, titled “Üks Meri kõik – rännumees ja riigimees Lennart Meri”, a map application (<https://lennartmeri95.rara.ee/kaart>) and a conversational AI bot mimicking Meri's speaking style—MeriGPT—were created. A campaign was launched to encourage thesis projects based on RaRa materials, and six bachelor's and master's thesis topics were agreed upon with students from the University of Tartu and TalTech.

Cooperation began with the Institute of the Estonian Language on the project “Support for the Estonian Language in Large Open-Source Generative Language Models”, where high-quality Estonian-language text data is being shared. In collaboration with Tallinn University researchers, a data story titled “The Digital Galaxy of Estonia's Translation History Reveals the Fabric of Culture and Society” and a tool called “Network of Estonian Translated Literature” were developed.

In 2024, RaRa's digital humanities work was recognized with the Data Pearl 2024 award and a nomination for the Estonian Librarians Association's Act of the Year in Academic and Special Libraries.

Due to a delayed funding decision, the start of the Automatic Cataloguing Project (KRATT) was postponed, with a new completion date set for July 2025. A separately planned activity—OCR quality assessment for RaRa's newspaper collection and comparison of overlaps between the ISE and DEA databases—will now be conducted as part of the KRATT project.

Visits to the Digital Lab exceeded expectations by 158%

Digital Archive DIGAR and Web Archive

The main goal in 2024 was the migration of Digital Archive objects to the new archival environment, **Rosetta**. By the end of the year, the migration of the Web Archive and DIGAR.ee was nearing completion, with finalization expected in the first half of 2025. The migration has also revealed extensive data correction work due to errors from 20 years of manual archiving. For example, over 450 migration rules were programmed.

An integral part of the Digital Archive is the new mass digital material submission solution, completed in early 2025. This allows the transfer of objects into the archive environment and creates an opportunity for smaller memory institutions to store their materials in RaRa's digital archive.

The volume of the Digital Archive continues to grow steadily. As of 2024, the total volume reached 1,426 terabytes,

Digital Transformation and RaRa Development Portfolio Overview

At the National Library of Estonia (RaRa), development activities have been consolidated into an IT project portfolio, ensuring a systematic and strategic approach to implementing technological advancements and the digitalization of business processes. The primary aim was to replace outdated systems with modern and secure alternatives that meet user expectations, and to prepare for and initiate nationwide projects. RaRa's development initiatives are part of the Ministry of Culture's digital transformation portfolio and are funded through EU programs.

Key projects include:

- **“Development of the automatic cataloguing and subject indexing assistant (KRATT)”** – This innovation project (funded by EU, part of the Ministry of Culture's digital transformation initiative) focuses on applying AI to cataloguing and subject indexing of publications. It impacts the services “Preservation and Use of Digital Content” and “Publisher Service”. Expected completion: October 31, 2025.
- **“Library Management Dashboard”** – A nationally significant project (funded by EU) launched in summer 2024. Its goal is to develop a tool that supports decision-making based on library statistics. The first to use the new system will be school libraries in autumn 2025. The platform will serve as a decision-making and data visualization tool for libraries, RaRa, the Ministry of Culture, and the public. Expected completion: June 30, 2025.

- Two other major national projects are in the preparation phase:
 - **“New Library System: Procurement of e-Catalog”**
 - **“New Library System: Procurement of Library Software”**
(both EU-funded, part of the Ministry’s digital strategy) – These aim to consolidate current systems into a single national solution by 2026–2027.
- **“Migration of Veebiraamatukogu.ee to the MIRKO e-loan environment”** – A project improving accessibility for users with special needs. Launch: September 2025, alongside the new DIGAR platform.
- **“Implementation of Data Management Software”** – Finalized to improve internal efficiency at RaRa.
- **“Implementation of the Digital Archive”** – Based on the Clarivate Rosetta platform.
- **“User Environment for the Digital Archive (digar.ee)”** – A parallel project (funded by EU) launched in February 2024. It merges DIGAR, DEA, and the Web Archive into a one platform. A major challenge is poor data quality due to 20 years of manual archiving with limited oversight. Data migration and validation are scheduled for completion by September 2025. The user environment will support the IIIF standard, enabling RaRa collections to be displayed globally in IIIF-compliant platforms, enhancing international accessibility and reuse.
- **Publisher Portal Development** – Began in November 2023, while much of the work was completed by the end of 2024, full functionality expecting: April 7, 2025. The new platform automates ISBN verification and transmission of legal deposit copies to the Digital Archive.

For any questions, please contact:

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NNG annual meeting
National Library of Latvia, Riga, Latvia
May 8-9, 2025

Martynas Mažvydas National Library of Lithuania
Bibliographic information management processes

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Martynas Mažvydas National Library of Lithuania,
Information Management Department,
Librarianship Methodology and Research Unit



About the National Library of Lithuania

<https://youtu.be/h4Y9qWyn43A>

Martynas Mažvydas National Library of Lithuania is a national cultural institution open to all users, active in the areas of dissemination of information, culture, science and education, performing library activities and ensuring implementation of the national information policy falling within its competence.

On 20 December 1919, the Provisional Government of Lithuania issued a decree on the establishment of the Central State Bookstore (the official title of the document was “Decree on the Central State Bookstore”), which was subordinated to the Ministry of Education. This date is considered the official birthday of the National Library.

Mission: to be Lithuania’s knowledge space, creating value for society.

Vision: to be an integrating part of the advancement of public information policy, culture, education, science and economy.

[Strategic direction and priorities, 2024-2026](#)

Since April 15, 2024, the Martynas Mažvydas National Library of Lithuania has been led by Aušrinė Žilinskienė – the first woman in the 105-year history of this national institution to hold the position of director.

Main functions

- The National Library is currently the main publicly accessible research library in Lithuania.

- The National Library also acts as a parliamentary library, providing information to members of parliament and the national government.
- Collects and preserves in Lithuanian language documents published in Lithuania and abroad.
- Collects and preserves the National Archive of Published Documents
- Controls the provision of free deposit copies to the National Archive of Published Documents and libraries
- Performs international standard numbering of documents published in Lithuania, assigns ISBN, ISSN, ISMN
- Compiling statistics on publishing in Lithuania.
- The Library prepares and publishes the Lithuanian national current and national retrospective bibliography, bibliographic indexes in various fields of science, and compiles cumulative catalogues and databases.
- Develops and implements the Lithuanian Integrated Library Information System (LIBIS).

Library systems in Lithuania

Lithuanian Integrated Library Information System (LIBIS) since 1997

The system is designed to systematically and centrally collect, manage, store, and catalog information resources using information technology tools, as well as to provide centralized public library services to readers and system users, in accordance with the so-called single window principle.

LIBIS main manager: Martynas Mažvydas National Library of Lithuania

LIBIS data governors: 1,200 libraries (including the national library, 2 state libraries and public libraries).

Key highlights of the LIBIS

Cloud-based system, unified LIBIS libraries information network and unified libraries' online services, multilingual and multiscript, integrated Radio-frequency identification (RFID) self-service equipment.

LIBIS consists of two main functional parts:

- Libraries' online services for readers, publishers and organizations portal,

<https://ibiblioteka.lt>

- Library staff portal, <https://darbas.libis.lt>, for managing library processes (acquisition,

cataloging, etc.) for LIBIS network libraries.

Standards & formats

- *Bibliographic records*: UNIMARC/B.
- *Authority records*: UNIMARC/A (VIAF, ISNI, ORCID, VIAF).

The authority records database, an integral part of LIBIS, containing personal names, corporate bodies, family names, territorial or geographical names, titles, subjects, and trademarks, has been developed at the National Library since 1993. Since 2018, authority records have been submitted to the Virtual International Authority File (VIAF). Work and Expression authority records have been created since 2021. Authority records are created by the Martynas Mažvydas National Library of Lithuania, the Wroblewski Library of the Lithuanian Academy of Sciences, and the Kaunas County Public Library. The authority record database is used by all nationally significant, public, academic, and educational institution libraries in Lithuania, as well as by some museum and government institution libraries.

- *Descriptive standards*: ISBD & RDA ; *LIBIS Resource Record Creation Manual* (combines ISBD and UNIMARC rules, includes IFLA LRM and RDA guidelines, one unified approach for resource description).

- *Classification & subject access*: UDC ; Library of Congress Subject Headings ; Keywords (for analytic, component parts records).

UDC: Since 1995, the Martynas Mažvydas National Library of Lithuania has held a publishing license for the UDC tables. A Lithuanian UDC database is accessible to libraries using the LIBIS system. Since 2012, Lithuania has participated in the UDC Summary project (with translations available in 57 languages).

Library of Congress Subject Headings are translated into Lithuanian since 1993.

Keywords for analytical and (or) component part records are taken from the keyword database, which is an integral part of the LIBIS system.

- *Protocols & data formats*: Z39.50 ; JSON ; ISO 2079 ; OAI-PMH & Europeana Data Model (EDM).

A specialized software is developed for reading electronic books on e-book readers.

"Book Path" within the LIBIS

Publishers: provides the main data about the resource to order an international standard number (ISBN, ISMN, ISSN) for the planned resource through the Libraries' online services portal (<https://ibiblioteka.lt>).

Data Publication: the data provided by the publisher about the planned resource is posted as CIP in the Libraries' online services portal (<https://ibiblioteka.lt>) and the Library Staff portal (<https://darbas.libis.lt>) for managing library processes.

Legal copy: CIP is an effective record for collecting mandatory copies.

Acquisition processes: received mandatory copies are registered, and all other acquisition processes are carried out (inventory, uploading electronic resources into the system, etc.).

Publishing Statistics of Lithuania: information about documents published in Lithuania is included in the Lithuanian publishing statistics.

Cataloging processes: Authority records and detailed bibliographic records, including subject information, are being created.

User services processes: resource ordering, reservation, preparation, and issuing.

Reports: the system generates reports for the ISBN International Agency, reports on resource and e-book readers usage, publishing statistics, and others.

LIBIS metadata strategy: purposes, principles and directions

Purposes: to ensure a unified, high-quality, and sustainable metadata creation practice across all libraries using the LIBIS system ; facilitating efficient information discovery ; exchange, and service delivery.

Principles: standardized metadata formats and description rules ; centralized data (knowledge base, authority records, classifiers, reader data, etc.) management ; no data or process duplication.

Strategic directions: continuous improvement of metadata creation methods; staff training to enhance understanding of the importance of metadata and its proper use; improving user experience through the unified services portal www.ibiblioteka.lt, which provides access to all LIBIS libraries' services and resources; preparation for the transition to Linked Open Data.

Main issues: a high number of duplicated bibliographic records and concerns regarding the quality of bibliographic records. A tool for identifying and linking duplicate bibliographic records has been developed within LIBIS.

Virtual Electronic Heritage System (VEPIS) since 2005, <https://www.epaveldas.lt>

The information system for the digitized cultural heritage of Lithuanian memory institutions.

Users can to search and view cultural heritage objects, with the ability to share them.

A registered user can: submit an application for representation by a data provider (institution) ; create, edit, publish, or remove a virtual exhibition, blog post, or map created on the portal; comment on, evaluate cultural heritage objects, report inappropriate content, add cultural heritage objects to a favorites list, add text annotations.

VEPIS main manager: Martynas Mažvydas National Library of Lithuania

VEPIS data governors: libraries, museums, archives

Standards & formats: OAI-PMH & Europeana Data Model (EDM)

Integration interfaces have been created between the LIBIS and VEPIS information systems for the exchange of bibliographic and authority records.

Lithuanian Academic Electronic Library (eLABa) since 2006, <https://www.elaba.lt>,

The information system for the scientific and academic documents and/or their metadata are and made publicly accessible.

eLABa main manager: Vilnius University

eLABa managers and data governors: 41 academic libraries, research, and higher education institutions in Lithuania.

Software: *Ex Libris (Israel) Aleph* is used for managing library information resources in the eLABa system ; *Ex Libris Primo* serves as the search portal for the eLABa system ; the repository of eLABa electronic objects is based on *Fedora* ; The software of for submitting e-documents and anti-plagiarism detection is custom made for eLABa consortium.

Standards & formats: ISBD&RDA ; MARC21

MOBIS, the information system for school libraries since 2012, <https://www.imobis.lt>

MOBIS software is designed for small school or organizational libraries. MOBIS enables full automation of library operations: cataloging, collection development, serving readers, providing the catalog on both the intranet and the internet, and managing all library processes.

MOBIS managers and data governors: ~400 school libraries

Software: the system is based on an open-source platform, which does not require licensed third-party products

AI

In Lithuania, the application of artificial intelligence (AI) in libraries and other public sector institutions is still in its early stages. Lithuanian libraries are actively organizing training sessions for their staff to ensure they can effectively use AI tools and understand their potential applications and challenges.

The Virtual Library of Vytautas Magnus University (VMU) has introduced a tool called "Mokslo asistentas" ("Science Assistant"), which utilizes large language models (LLMs) to allow users to ask questions in natural language, receive answers, and access related documents. The Scopus AI tool, available at the VMU library, generates brief summaries of scientific topics, visualizes concept maps, and provides lists of experts based on user queries.

In 2021, the National Library began developing an artificial intelligence (AI)-based tool designed to automatically recognize Lithuanian-language text from PDF files of periodicals and structure the extracted information according to predefined criteria (such as article titles, authors, keywords, summaries, etc.). Although the initial version of the tool did not fully meet expectations, the project is being continuously improved – more efficient technological solutions are being explored, user feedback is taken into account, and the accuracy of the results is being enhanced.

National Bibliography

Archive of Published Documents (integral part of National Library)

Each year, the Archive receives more than 5,000 printed books published in Lithuania, as well as e-books and audio books, and collects around 700 titles of serials (periodicals) in print and electronic serials.

Archive also acquires old printed books and takes over individual collections from other libraries.



***Example:** The National Library in 2019 has received more than 11.5 thousand physical items (3,699 titles) from the Lithuanian Library for the Blind (now the Lithuanian Audiosensory Library since 2023).*

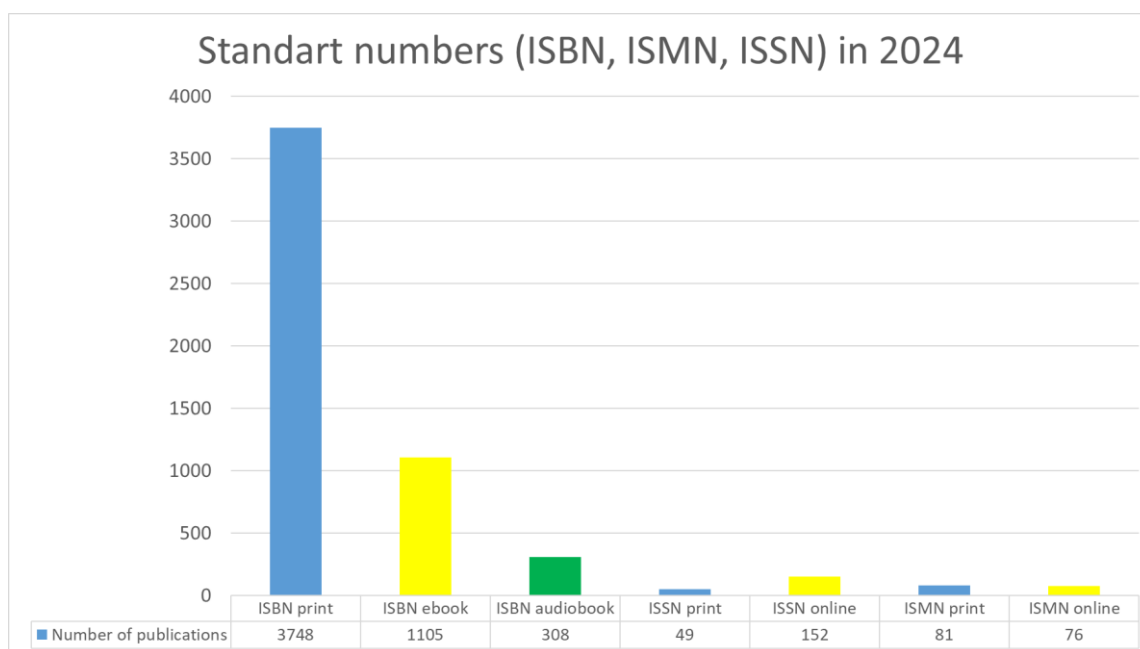
The National Library has an ISBN and ISMN Lithuanian agency and an ISSN Lithuanian agency

ISBN – since 1992

ISSN – since 1993

ISMN – since 1994

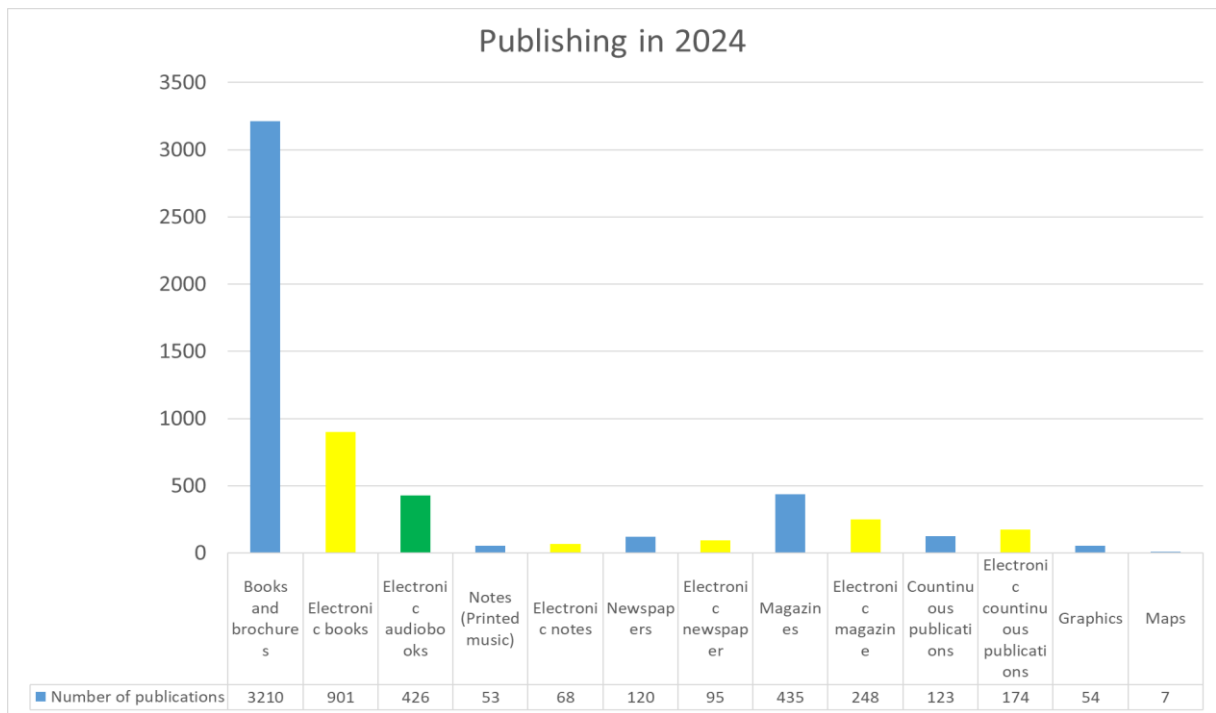
In Lithuania, standard ISBN, ISSN and ISMN numbers are mandatory for many publications. The ISBN and ISMN Lithuania agency and an ISSN Lithuanian agency issue standard numbers. There is an inventory of planned publications, public information about planned publications, and a planned collection of free deposit copies.



A total of 5,519 standard number plates were issued in Lithuania in 2024.

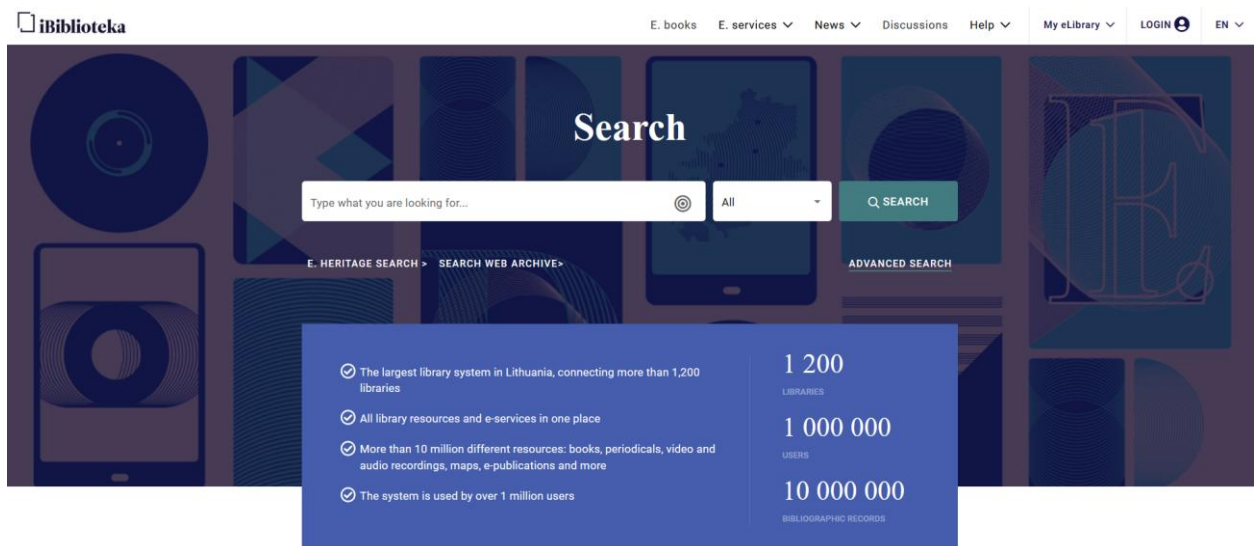
Publishing Statistics of Lithuania

The National Library is the compiler of the official Publishing Statistics of Lithuania. The main source is the free legal deposit copy. Printed publications (circulation from 25 copies), electronic publications and audio publications are collected. Publications are placed in the National Archive of Published Documents. The production of publishing statistics is semi-automated: part of the data is collected during the cataloguing process, and part of the other data is collected from publishers and additional copies.



A total of 5,914 publications were published in Lithuania in 2024 and received by the National Library.

The creation of a consolidated integrated library data system has enabled the further development of LIBIS and the VEPIS. This is important for a systematic view of cultural data as a whole, rather than as databases held by individual institutions.



Available online: <https://ibiblioteka.lt/metis/>

The National Bibliography

The resources of the National Bibliography include **announced**, **current** and **retrospective** bibliographic resources. All information is held in the *iBiblioteka.lt* portal. These data are the basis for the production and publication of bibliographies.

ISBN, ISMN and ISSN questionnaire information is the basis for announced bibliography.

The iBiblioteka portal provides bibliographic information on forthcoming publications.

Available online: <https://ibiblioteka.lt/metis/advanced-search>

Title and other details	Užrašų knygelė : romanas; [elektroninis išteklius] / Nicholas Sparks ; iš anglų kalbos vertė Žita Edita Giniūnienė
Publication details	Vilnius : BALTO leidybos namai, 2025
Physical data	1 epub3 failas
Language	lietuvių (translated from anglų) ✓ Translated from original language
Audience	for adults, common
ISBN	978-609-8233-68-1

Bibliographic information about the forthcoming audiobook „Užrašų knygelė“ (2025) on the iBiblioteka portal.

A bulletin “Publications to be Published” is published from the primary bibliographic data collected. It indicates, on a rolling basis, which publications will be published soon.



NUMATOMI LEIDINIAI
ISSN 2669-0438
Leidžiama nuo 2019 m.
Nr. 16
2025 m. balandžio 14–20 d.

CIVILIZACIJA. KULTŪRA. PROGRESAS

Kultūros ir švietimo iššūkiai XXI amžiuje : tarptautinės mokslinės-praktinės konferencijos straipsnių rinkinys, 2024-12-02, Vilnius : [elektroninis išteklius] / Vilniaus kolegija, Menų ir kūrybinių technologijų fakultetas, Kultūros vadybos ir šokio pedagogikos katedra. – Vilnius : Vilniaus kolegija, 2025. – 1 pdf failas. – ISBN 978-609-436-074-9

FILOSOFIJA. PSICHOLOGIJA

Bijau būti matomas : 11-os dialogų Herojaus kelionė ir jo draugų istorijos : [garsinė knyga] / Donaldas Duškinas ; skaito Donaldas Duškinas. – Vilnius : Vaga, 2025. – 1 mp3 failas. – ISBN 978-5-415-02845-0

Netikėk niekuo, ką galvoji : kodėl mąstymas yra jūsų kančios pradžia ir pabaiga : [garsinė knyga] / Joseph Nguyen ; iš anglų k. vertė Neringa Jagelavičiūtė-Teišerskienė ; skaito Kristupas Ališauskas. – Vilnius : Laimės laikas, 2025. – 1 mp3 failas. – ISBN 978-609-96156-6-0

Suaidintos šypsenos / Tadas Kardauskas. – Bridžiai, Šakių rajonas : T. Kardauskas, 2025. – ISBN 978-609-08-0820-7

RELIGIJA. TEOLOGIJA

Biblija, arba Šventasis Raštas. – 6-asis pataisytas leid.. – Vilnius : Lietuvos Biblijos draugija, 2025. – 1528 p.. – ISBN 978-609-8073-80-5 (jr.)

Biblija, arba Šventasis Raštas. – 6-asis pataisytas leid.. – Vilnius : Lietuvos Biblijos draugija, 2025. – 1528 p.. – ISBN 978-609-8073-81-2

Biržų parapijos Šv. Vincento Pauliečio globos namai / Angelė Jurevičienė. – Panevėžys : Panevėžio spaustuvė, 2025. – ISBN 978-609-8268-49-2

Kaėdianiai elaitiniai ania Dėava / Gabrielius Lukošius. – Vilnius : Gauniniai, 2025. – 382 p. : iliustr. – ISBN 978-

*ISBN, ISMN and ISSN questionnaire information is the basis for the weekly bulletin
“Publications to be Published”. Available online: <https://www.lnb.lt/istekliai/leidiniai/kiti-leidiniai/numatomi-leidiniai>*

After publications (books, journals, newspapers, etc.) are published and made available to the National Library in the *iBiblioteka* portal, a detailed bibliographic description is prepared and a bulletin „Information on publications published in Lithuania, received at the National Library“ is published.



INFORMACIJA
APIE LIETUVOJE IŠLEISTUS LEIDINIUS, GAUTUS NACIONALINĖJE BIBLIOTEKOJE
ISSN 2538-6859
Nr. 17(4566)
2025 m. balandžio 21–27 d.

* Informacija apie leidinius skelbiama gavus jų privalomąjį egzempliorių

** Išsamūs bibliografiniai įrašai pateikiami www.ibiblioteka.lt

*** Skelbiami tik leidiniuose nurodyti tiražai

**** Lietuvos audiosensorinės bibliotekos (LAB) sertifikuoti prieinami leidiniai

MOKSLAS IR ŽINIOS APSKRITAI. INTELEKTUALINIO DARBO ORGANIZAVIMAS

16th International Conference on Humanities, Psychology and Social Sciences : 14–16 March 2024, Berlin. – [Vilnius] : [Mokslinės leidybos deimantas], 2024. – 1 pdf failas (29 p.). – ISBN 978-609-485-501-6

Lietuvos mokslų akademijos ... metų veiklos ataskaita / redakcinė taryba: Jūras Banys (pirmininkas) ... [et al.]. – Vilnius : Lietuvos mokslų akademija, 2025. – ISSN 2029-9397
2024 / sudarytojai Andrius Bernotas, Rolandas Maskoliūnas. – 2025. – 167, [5] p. : iliustr. – Tiražas 100 egz.

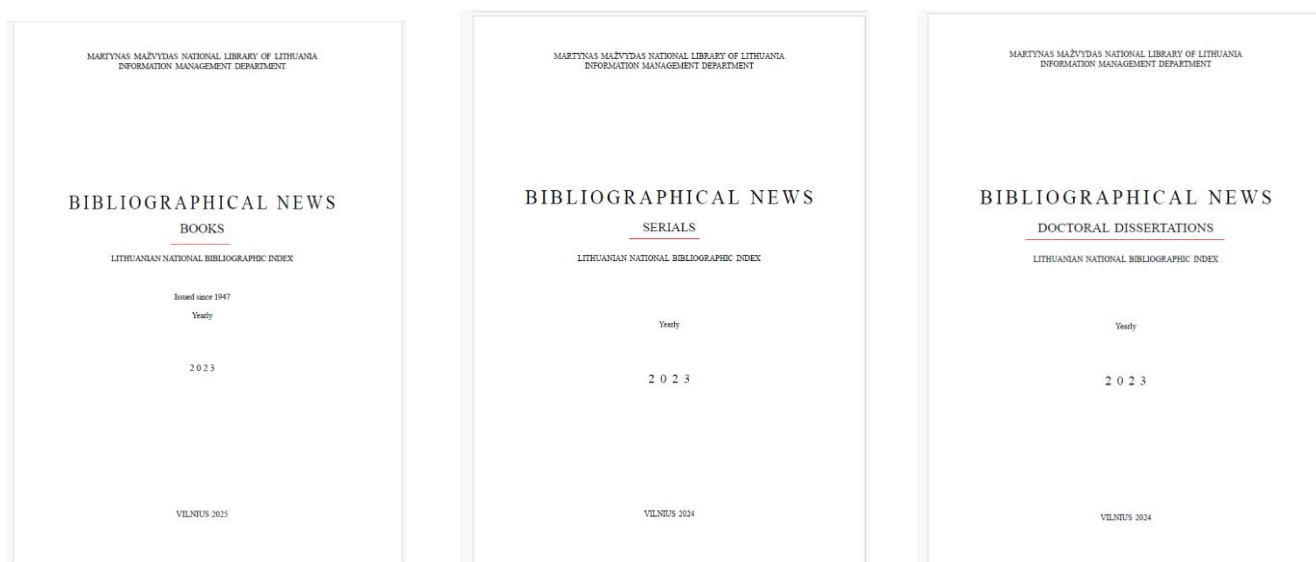
VADYBA

4th International Conference on Advanced Research in Supply Chain Management : 28–30 June 2024, Amsterdam. – [Vilnius] : [Mokslinės leidybos deimantas], 2024. – 1 pdf failas (15 p.). – ISBN 978-609-485-546-7

6th International Conference on Advanced Research in Management, Economics and Accounting : 20–22 September 2024, Prague. – [Vilnius] : [Mokslinės leidybos deimantas], 2024. – 1 pdf failas (15 p.). – ISBN 978-609-485-545-0

21-27 April 2025 Publications published in Lithuania received by the National Library.
Available online: <https://www.lnb.lt/istekliai/leidiniai/kiti-leidiniai/informacija-apie-lietuvoje-isleistus-leidinius-gautus-nacionalineje-bibliotekoje>

Based on the material collected in these weekly bulletins and other publications that reach the National Library, three annual parts of „Bibliographical News“ are still being prepared and published: ‘Books’ (since 1947), ‘Serials’ (since 1995) and ‘Doctoral dissertations’ (since 2019). It should be noted that in Lithuania, dissertations are not given ISBNs, so dissertations are not considered as independent publications, but rather as manuscripts that are entered and bibliographed by the National Library, even though the vast majority of them are printed.



Current bibliographical indexes of publications published in Lithuania in 2023. Available online: <https://lnb.lt/istekliai/leidiniai/nacionalines-bibliografijos-leidiniai/einamosios-bibliografijos-leidiniai>

National Retrospective Bibliography

National Retrospective bibliographic data are integral part of Lithuanian Integral Information System of Libraries (LIBIS), *iBiblioteka.lt*. In 2021, the National Bibliographic Data Bank was abolished. All data has been transferred to the *iBiblioteka* and linked to data managers libraries. Separate parts of the catalogues (datasets) have been created according to the types of publications, the linguistic background and the chronology. A total of 31 bibliographic datasets were created.

Advanced search

Search field

Title

Search phrase of fragment

Lietuvos bibliografija

Phrase match

All words

A...

Search field

Personal name

Type

Author

Search phrase of fragm...

Phrase match

All words

+ ADD NEW LINE

Library data

Library

Lietuvos nacionalinė Martyno Mažvydo biblioteka

Fund / branch

Catalog part

Search...

Nacionalinė bibliografija. Kartografiniai ištekliai lietuvių kalba, 1889–1917

Nacionalinė bibliografija. Kartografiniai ištekliai lietuvių kalba, 1918–1940

Nacionalinė bibliografija. Knogos ir autoriiniai smulkieji spaudiniai lietuvių kalba, 1905–1917

Nacionalinė bibliografija. Knogos ir autoriiniai smulkieji spaudiniai lietuvių kalba, 1918–1940

Collection

Last six months

Last year

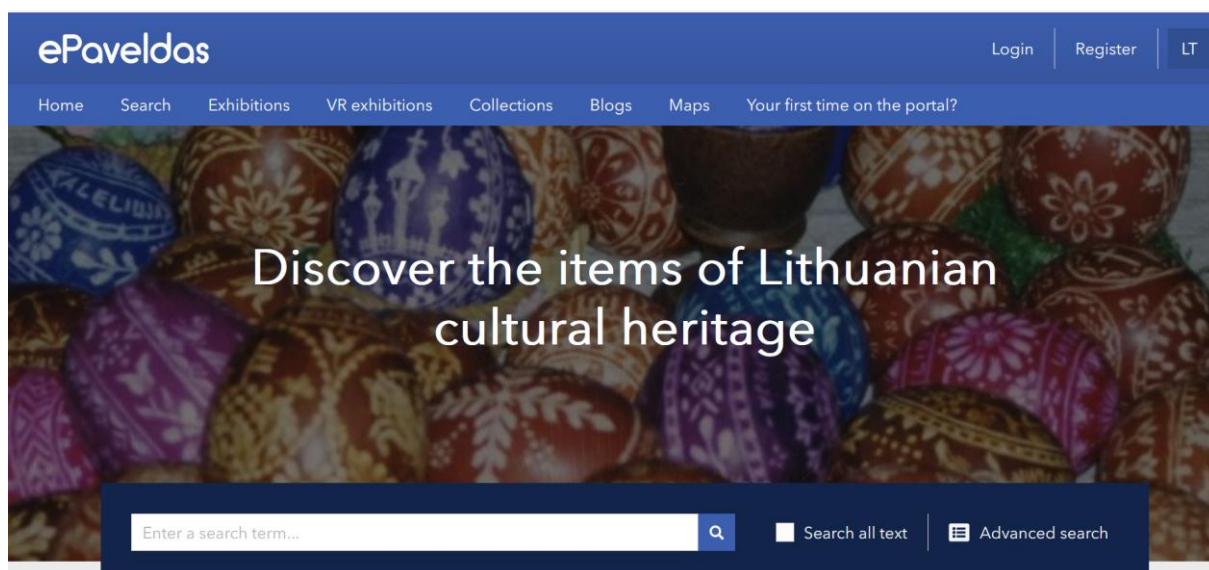
The National Retrospective Bibliography datasets are available via iBiblioteka Advance search.

Those publications that are in the LIBIS network in libraries can be ordered through iBiblioteka.lt, while those that are not in the LIBIS network in libraries are only given bibliographic data.

Comments	UNIMARC	ISBD
06893cam# 2200625 450 001C1R0000070520 0052050215081104.5 100 \$a2001051461547 ###01ity50 ###0a 1010 \$lit \$lit 102 \$aRU 140 \$m ###0ab ##091001## 2001 \$fCatechismas prasty szadei, maklas skaitima rashta yr giesmes del krikscianistes bei del bermeliu ianu nauiej sagulditas Karaliavcvi VIII. dena menses sausla, metu vzgaima Dieva MDXLVII 210 \$fIscbrvktas Karaliavcviu \$c[per Jana Weinreicha ...] \$d[1547] 215 \$f[79] p. \$natos 508* (17 cm) 304 \$aAut. nurodytas 2-oje, eiliiutoje, pratarėje „Kniģiesle pacias byla“ akrostichu: MARTYNVS MASVDVDS (lap. Aiiiį versio, eilutė 3-19, p. [8]) 304 \$aAntr. lapo kt. pusėje eiliiuota aut. dedik. Lietuvos Didžiajai Kunigaikštystei, p. [2] 304 \$bDvi pratarės: p. [3-7], lot. k. „ret. eiliiuota pratarė „Kniģiesle pacias byla“, p. [8-12], liet. k. 306 \$aIšleid. v. ir spaustuvė nurodytos knygos gale 307 \$aSign.: A-Eviiį 307 \$aDrifitas got., lot. 307 \$aAntr. p. orn. rėmelyje 307 \$aTaip pat prieinama: 3211 \$aHerzabitskasis P. [42] 3211 \$aPlioteris 20-25 3211 \$aStankevičius 1-2, 5 3211 \$aStreicher XXII 594, XXIII Papild. p. XXXIV 3211 \$aBalttrasmaltis 4 3211 \$aBruziis 7, 22, 26, 70 3211 \$aBiržiška 1, II-IV/ (1-osios d. 1-iejis, 2-iejis, 3-iejis papild.) 4 3211 \$aLeksandrynas I 95/1 3211 \$aLR II 776 3211 \$aVilniaus universiteto bibliotekos paleotipai. Vilnius, 2003. 935 3211 \$aLietuvos TSR bibliografija. Serija A, t. 1, I, p. 678 325 \$aFaks. persp.: [1] Seniausieji lietuvių kalbos paminklai iki 1570 metams / spaudai parūpino Jurgis Gerullis. Kaunas : Švietimo ministerijos leidinys, 1922. P. 1-79. [2] Die ältesten litauischen Sprachdenkmäler bis zum Jahre 1570 / hrsg. von Georg Gerullis. Heidelberg : C. Winter, 1923. [3] Pirmoji lietuviška knyga / Lietuvos TSR mokslų akademija. Lietuvių kalbos institutas. Kaunas : Valstybinė enciklopedijų, žodynų ir mokslo literatūros leidykla, 1947. [4] Martynas Mažvydas pirmosios lietuviškos knygos autorius. Čikaga : Pedagoginis lituanistikos institutas, 1963. [5] Mažvydas M. Pirmoji lietuviška knyga. Vilnius : Vaga, 1974. [6] Mažvydas M. Katekizmas ir kiti raštai. Vilnius : Baltos lankos, 1993. [7] Martyno Mažvydo Katekizmai 450 metų. Vilnius : Vilnius, 1995. [8] Mažvydas M. Katekizmas. Vilnius : Baltos lankos, 1997. P. 47-125. [9] Michelinį G. Martyno Mažvydo raštai ir jų šaltiniai. Vilnius : Mokslo ir enciklopedijų leidybos institutas, 2000. P. 61-139 3271 \$aLurijus: Pygus ir trumpas mokslas skaititi yr raschity : [elementorius]. P. [13-16] ; Catechismas prasty szadei del prasty zmanis ... P. [17-32] ; Vvedai hokiniv. P. [33-39] ; Upaminiginas. Skaitifiaip : [kreipimasis, kuriame prašoma nepiekti jo darbo ir nurodoma, kad lietuvių kalba tik dabar pradadama vartoti raštu]. P. [39] ; Pradestyse giesmes	345 \$aIšrašas apie 200 egi. 456 1112001 \$aSeniausieji lietuvių kalbos paminklai iki 1570 metams \$fspaudai parūpino Jurgis Gerullis \$i210 \$aKaunas \$cŠvietimo ministerijos leidinys \$d1922 456 1112001 \$aDie ältesten litauischen Sprachdenkmäler bis zum Jahre 1570 \$fhrsg. von Georg Gerullis \$i210 \$aHeidelberg \$cC. Winter \$d1923 456 1112001 \$aPirmoji lietuviška knyga \$fLietuvos TSR mokslų akademija. Lietuvių kalbos institutas \$i210 \$aKaunas \$cValstybinė enciklopedijų, žodynų ir mokslo literatūros leidykla \$d1947 456 1112001 \$aMartynas Mažvydas pirmosios lietuviškos knygos autorius \$i210 \$aČikaga \$cPedagoginis lituanistikos institutas \$d1963 456 1112001 \$aPirmoji lietuviška knyga \$fMartynas Mažvydas \$i210 \$aVilnius \$cVilnius \$d1974 456 1112001 \$aKatekizmas ir kiti raštai \$fMartynas Mažvydas \$i210 \$aVilnius \$cBaltos lankos \$d1993 456 1112001 \$aMartyno Mažvydo Katekizmai 450 metų \$i210 \$aVilnius \$cVilnius \$d1995 456 1112001 \$aKatekizmas \$fMartynas Mažvydas \$i210 \$aVilnius \$cBaltos lankos \$d1997 456 1112001 \$aMartyno Mažvydo raštai ir jų šaltiniai \$fGido Michelinį \$i210 \$aVilnius \$cMokslo ir enciklopedijų leidybos institutas \$d2000 5100 \$aKatekizmo prasti žodžiai ... 5100 \$aKatekizmas 620 \$aRusija \$cKalinigrad (Karaliaučius - Mažoji Lietuva) 675 \$a274-282.4 675 \$a274-535.35 700 1111NB:V*12820-1A \$aMažvydas \$bMartynas \$fapie 1520-1563 \$4220 \$4078 \$4208 \$4088 702 1111NB:001:48 \$aWeinreich \$bHans \$fapie 1490-1508 \$4750 801 \$aLT \$dC1R \$c20030514 801 \$aLT \$dC1B \$c20071210 801 \$aLT \$dC1 \$c20020420 830 \$aŠiuo metu jau neabejojama, kad pirmoji knyga lietuvių kalba yra M. Mažvydo „Katekizmas“, nors T. Narbutas (Dziefė narodu lituiskiego. T. 9. Vilno, 1841. P. 287) ir tvirtino matęs agendą (ypnraa duszy na taeten świat) su tekstais lenkų, lotynų, lietuvių ir vokiečių kalba, išėjusį Vilniuje 1553 m. Toji žinia atrodė nepatikima tiek J. Jaroševičiui (Niezienki i roztrzasania naukowe. 1842. T. 23. P. 216-219), tiek ir M. Stankevičiui, kurie argumentuotai įrodė, kad T. Narbutas klydo. Pirmąją lietuvišką knygą M. Mažvydas parengė, naudodamasis visa tuo, kas buvo padaryta jo pirmtakų. Galbūt, todėl ir antratiniamie puslapyje nėra M. Mažvydo pavardės. Kelių žmonių darbas yra ir pirmosios knygos giesmydis. Manoma, kad, be M. Mažvydo verstų giesmių, kitos jo giesmės gali būti išverstos S. Rapolionio, A. Kulviečio ir A. Jomanto. Prie „litania naujiej sugulditu“ 1570 m. giesmynė yra pažymėta J. Zablockio pavardė. Atrodo, kad ir pirmoje knygoje ši giesmė buvo taip pat J. Zablockio išversta. Pirmosios knygos giesmė daugiausia verstos iš J. Sekliučio lenkiskiojo 1547 m. giesmyno, nors pora giesmių versta ir iš vokiečių kalbos. Savarankiškiausias M. Mažvydo darbas yra katekizmas. Ch. Stangas išaiškino, kad jo pagrindas - J. Sekliučio lenkiskasis 1545 m. katekizmas. Be to, M. Mažvydas naudojoji ir J. Maleckio 1546 m. lenkiskiojo katekizmo, o „vvedai“ ir „Juras Dena grasiitas“ versti iš J. Vilicho 1542 m. lotyniško katekizmo. Elementorius sudaryti pasinaudojo 1529 m. G. Saurmano lotynišku mažųjų katekizmu, skirtu mokykloms. Pratarė „Kniģiesle pacias byla“ yra pirmasis eilėraštis lietuvių kalba. M. Mažvydo akrostichų eiliiutoje knygos pratarėje išskaidė 1938 m. lenkų mokslininkas Z. Safarevičius (Safarewicz). Šiuo metu žinomi du pirmosios lietuviškos knygos egzemplioriai: vienas - Lenkijoje, kitas - Vilniuje. Pastarasis gerai išsilaišęs, ištisas pergamentu. Knyga gauta 1957 m. iš Odesos M. Gorkio v. mokslinės bibliotekos. Žinoma, kad knyga buvo dar Karaliaučiaus universiteto bibliotekoje Šc 4958 bloke, ir kita kartu su kitais septyniais katekizmais 942 \$aB I 990 \$aC1 \$j0 \$j04 990 \$aC2 \$cHF133 mikrofilmas \$cHF455 mikrofilmas \$yLT 990 \$aC3 \$cLR5050 \$yLT 990 \$aC192 \$cPol.-6.11 189 \$yPL	

First lithuanian book – Martynas Mažvydas “Catechism” (1547) date in UNIMARC. The book is not available from the LIBIS network libraries and cannot be ordered.

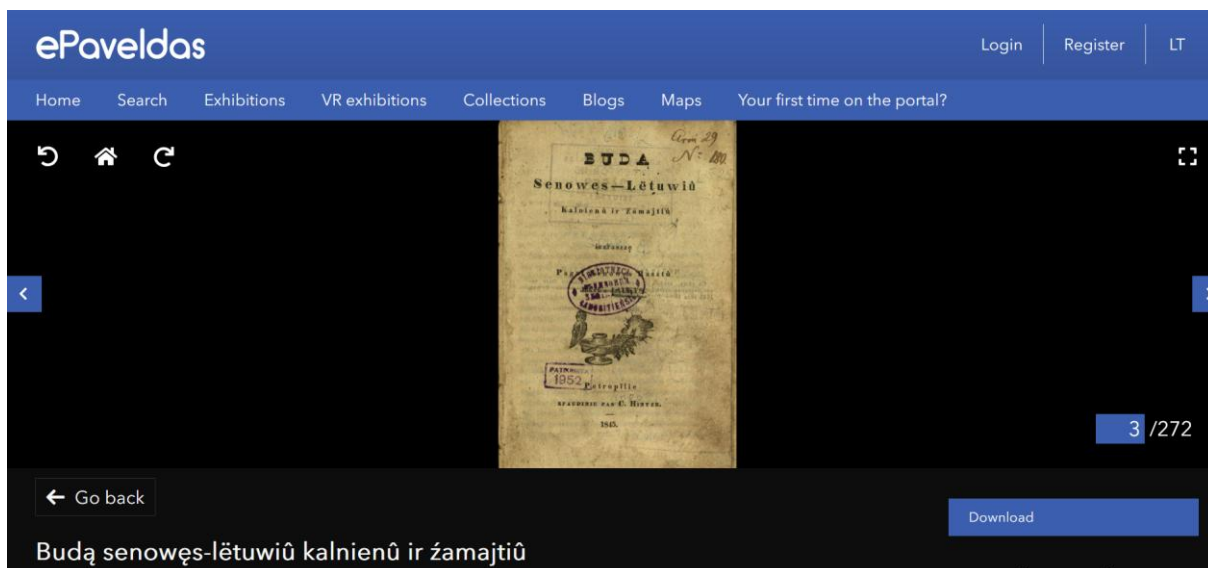
Many of Lithuania's printed heritage publications have been digitised and are available on the *ePaveldas.lt* (eHeritage) portal. Bibliographic data is taken from the *iBiblioteka.lt* portal. Users of the National Retrospective Bibliography are directed to the ePaveldas resources.



ePaveldas (eHeritage) portal. Available online: <https://www.epaveldas.lt/>

Budą senovės-lėtuvių kalnienų ir žamajtių	
Knygos (Elektroninis)	
Pavadinimas ir kiti duomenys	Budą senovės-lėtuvių kalnienų ir žamajtių / Iszraszę pagal senovės rasztų Jokyb's Łaukys
Autorius (-iai)	Daukantas, Simonas (1793–1864) >
Kolektyvas	C. Hintze spaustuvė (Санкт-Петербург, Россия) > K. Hincės sp. (Peterburgas) >
Publikavimo duomenys	Vilnius : Lietuvos nacionalinė Martyno Mažvydo biblioteka, 2014
Fiziniai duomenys	Archyvinė kopija: 132MB
Kalba	lietuvių
Susiję dokumentai	Budą senovės-lėtuvių kalnienų ir žamajtių > Budą senovės-lėtuvių kalnienų ir žamajtių >
UDK	316.728 >
Dalykas	Rusija. Sankt-Peterburg >
Nuoroda	https://www.epaveldas.lt/preview?id=C1B0003125794
Pastabos	Vartotojo kopija: sistemos reikalavimai: interneto naršyklė, Adobe Acrobat Reader Archyvinė kopija: kreipties būdas: Lietuvos nacionalinės bibliotekos kompiuterinis tinklas

Digitised publications in the ePaveldas portal have separate bibliographic records in the *iBiblioteka* with online links to ePaveldas and links to the original publications.



Available online. <https://www.epaveldas.lt/preview?id=C1B0003125794>

Publications of the National Retrospective Bibliography

„The Bibliography of Lithuania“ has been published since 1969. It is divided into three series:

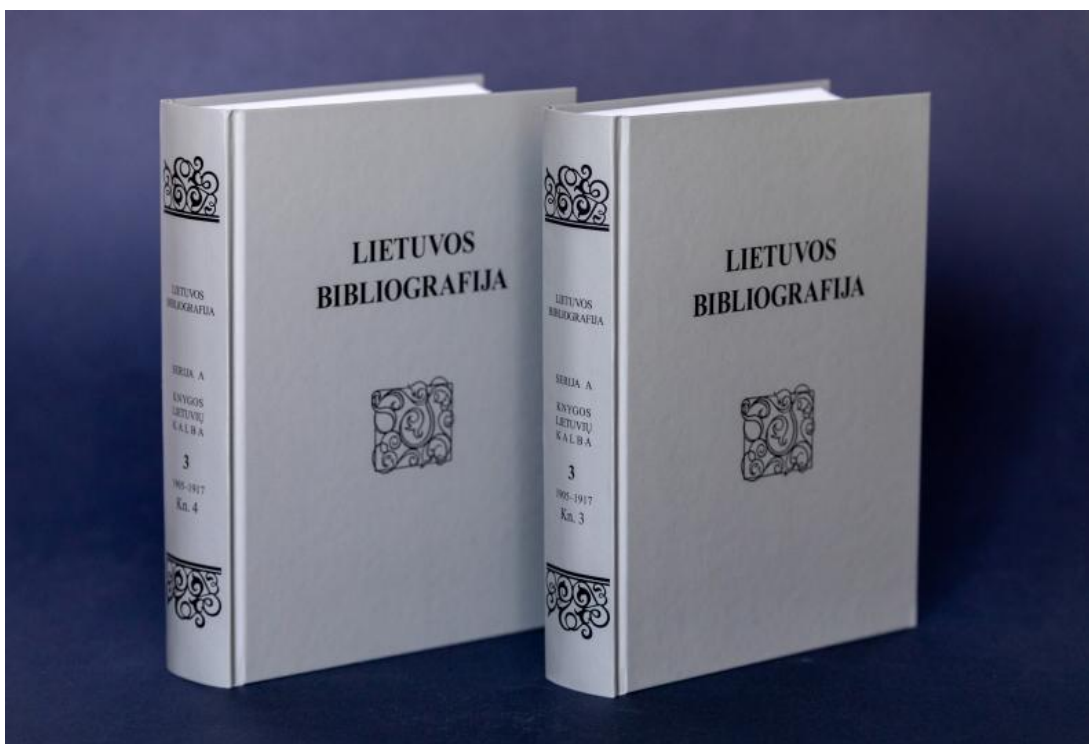
„Serie A, Books in Lithuanian“ [1547-1917] - 3 vol. (7 bk.);

„Serie B, Lithuanian serials, 1823–1940“ – 1 part. (2 bk);

„Serie C, Publications of Lithuanian periodicals [1832-1919] - 34 vol.“.

Checklists are also drawn up to cover publications in other languages published in the territory of Lithuania: books in polish (XVI-XVIII), in latin (XV-XVII) and in hebrew (XVIII-XIX).

All the information recorded in the bibliographies is also available in the *iBiblioteka*. Bibliographers encode the bibliographic information and technical editors prepare the output templates (forms) and produce the bibliography manuscript with all supporting texts. These software options facilitate the publishing process.



Last Bibliography – Serie A, Books in Lithuanian. Vol. 3, 1905-1917. Bk. 3 and 4. (2023).

This bibliography is devoted to ephemera (proclamations, decrees, resolutions, orders, religious pictures, etc.), postcards, sheet music, maps, and albums published in Lithuanian around the world in the years 1905-1917.

Current Project



Funded by the
European Union
NextGenerationEU



NAUJOS KARTOS
LIETUVA

ekultūra

The National Library, together with 19 partners, is currently implementing the project “E-Culture Platform (a unified portal for digitised and digital cultural and audiovisual content, e-services, and dissemination)”, funded by the European Union (NextGenerationEU) and Lithuania’s Recovery and Resilience Plan “New Generation Lithuania”.

The platform is being developed by modernising the Virtual Electronic Heritage System (VEPIS) and the Lithuanian Integrated Library Information System (LIBIS), upgrading the information systems and databases of partner institutions, and ensuring data interoperability.

Project objective: to enhance access to and reuse of cultural resources by creating a unified platform for the digital data of memory and cultural institutions, implementing integrated organisational and technological solutions, and developing a user-friendly portal.

To address this issue, a centralised and modern access platform — the eCulture Portal — will be developed. It will serve as a one-stop shop for users seeking access to digital content from a wide range of cultural institutions, including archives, museums, libraries, and other heritage organisations. A user-friendly and contemporary interface, tailored to diverse audiences (children, seniors, and people with disabilities), will make content not only more accessible but also more engaging and relevant to a broader public.

Another key solution to this challenge is the implementation of advanced search and data analysis tools that ensure fast, accurate, and meaningful access to relevant information.

RDF indexing and semantic technologies will uncover connections between cultural objects, providing not just individual results but also a broader context, thus enhancing the relevance and value of the content.

The quantity and quality of digital content will be increased, with new content created or existing materials adapted (e.g., educational exhibitions, interactive storytelling).

To enrich the content, artificial intelligence solutions will be employed, including translating or transcribing audio/video materials, analysing user behaviour, and offering personalised recommendations.

Country Report from the National Library of Latvia

NNG meeting, Riga, 8-9 May 2025

The National Library of Latvia (NLL) is a state cultural institution of national significance under the supervision of the Ministry of Culture. NLL is the keeper of all printed works of the Republic of Latvia, and the centre for the development of the State library system. It is a universal research library of the Republic of Latvia which is generally accessible by the public and serves for the intellectual development of the whole nation, it is a component of the national treasure of the Republic of Latvia.

Responsibility for the collection, storage, data creation, and distribution of the Latvian national bibliography in accordance with the Law of the Republic of Latvia “On the National Library of Latvia” (1993) is entrusted to the National Library of Latvia. [Par Latvijas Nacionālo bibliotēku \(likumi.lv\)](#)

On 3 September 2024, Dagnija Baltiņa took up the position of Director of the National Library of Latvia (NLL). Previously, D.Baltiņa was the Director of the Special Collections Department of the National Library of Latvia, a researcher, lecturer at the Latvian Academy of Culture, and former Secretary General of the Latvian National Commission for UNESCO.

The national bibliography is produced on the basis of a Legal Deposit Law (2006) [Obligāto eksemplāru likums \(likumi.lv\)](#). Bibliography Institute (BI), the creator of national bibliographic resources, is a subdivision of the National Library of Latvia.

National Library of Latvia uses ExLibris Aleph (MARC 21) and Primo.

Union Catalogue is created by 13 libraries of national significance. The Union Catalogue reflects publications that have been added to libraries collections since 1990. There are about 1 230 000 records in total, annual growth 41 000 records approximately (including records from retrospective cataloguing). NLL is responsible for the quality control of the entries.

National bibliography for searching can be selected separately on discovery user interface Primo.

Working in a closed Aleph system no longer meets the requirements of the era, therefore the NLL is looking for a library system to replace Aleph that supports linked open data. During the previous reporting period, several experience exchange visits to libraries in different countries have taken place in order to get to know the workings of different library systems in situ, which could facilitate the decision on the most appropriate library system for NLL. No Decisions have been taken at this stage.

Creating a Unified Library Catalogue (VBK)

The technical specification for the Unified Library Catalogue was updated in September 2024.

The aim of the VBK is to create a single register of Latvian library data with the possibility of collective enrichment and centralised management. The establishment of the VBK will provide all libraries with a complete and high-quality bibliographic and technical data register, where the data maintained could be reused directly by any library in Latvia.

The Bibliographic Objects Register; the Items Register; the Readers Register; the Authoritative Data Identifiers Register are planned to form the basis of the VBK. The data source for all these registers will be the individual collective catalogues of Latvian libraries.

In order to provide the VBK with basic data, it is first necessary to establish integration with the common catalogues of Latvian libraries, which have been created on the basis of various library systems. In order to ensure the completeness and quality of the information maintained in the VBK, it is also necessary to integrate and exchange data with the Reference data system (ATS) and Digital Object Management system (DOM) systems, thus integrating the VBK into the Latvian Cultural Heritage Register.

The requirements for the development and implementation, functional and non-functional requirements of the Catalogue, and the organisational requirements for the development and implementation have been defined and the project's technical implementers are currently working on the development of data flow scenarios.

This is the first time that a project of this size has been undertaken, i.e. there is no experience of a project of this scale bringing together such a large number of libraries at national level. The development of the VBK is coordinated by the Culture Information Systems Centre. NLL is one of the project participants.

Reference data system (ATS)

The ATS is a unified knowledge organisation system for reference data on Latvia's cultural heritage, which collects entities that can be used to describe and structure digital objects. The types of entities used in the ATS are person, institution, family, group, event, work, place, subject (=object) and form/genre. The aim of the ATS is to aggregate, normalise, and link the data produced by Latvian cultural heritage institutions, which have so far been stored in different information systems, databases, and documents.

Reference Data System is part of the Single Digital Heritage Distribution system, established by the NLL in 2023. In addition to the Reference Data System (ATS), it also integrates the Digital Library, the Digital Object Management System (DOM) and the Copyright Management and Licensing System (APLIS).

In the course of the implementation of the different systems, technical limitations have been identified in the practical use. Experience has shown that more attention should be paid to the interoperability and synchronisation of the systems developed and used by the NLL. Work is ongoing to fill gaps and find more efficient solutions for integration of systems.

There is a strong need for training of system users in Latvian museums and archives.

For more information contact

Matīss Bolšteins

Matiss.Bolsteins@lnb.lv

National Bibliography

The current national bibliography is created in a Union catalogue. Gradual editing of historical national bibliography data is done manually and semi automatically keeping in mind the capabilities of the ALEPH system.

The data set of the National Bibliography monographs 2014-2023 has been prepared in accordance with RDA and published on the NLL Open Data Portal <http://dati.lnb.lv>. Other national bibliographic datasets are also being prepared for publication. It has been decided to publish the national bibliographic data without data editing. Practical experience has shown that data editing is laborious and time-consuming, but NLL's priority is to make the bibliographic data accessible.

The Institute of Bibliography continues its work on the preparation of a UDK dataset for publication on the Open Data Portal.

In 2024, the NLL BI prepared and submitted the Latvian Science Council project application "Latvian National Bibliography in the Digital Ecosystem: Towards Open and FAIR Research Data". The project was evaluated, highly appreciated, but not supported. In 2025, the project objectives were revised, refined and the project was resubmitted to the Latvian Science Council. The project aims to evaluate the current practice of national bibliography production, to develop a Concept for national bibliography (policy document), to prepare a national bibliography dataset for publication, and to evaluate how the national bibliography data conforms to the linked data format. It is planned that the project will be carried out by the NLL BI in cooperation with the Faculty of Social Sciences of the University of Latvia, thus promoting inter-institutional cooperation and involving young professionals in knowledge transfer.

For more information contact	Uldis Bojārs	Uldis.Bojars@lnb.lv (open data)
	Ilva Āķe	Ilva.Ake@lnb.lv (national bibliography)
	Rita Legzdaine	Rita.Legzdaine@lnb.lv (UDK, project application)

Bibliographic data production

In 2024, NLL BI started to test and evaluate the possibility of using AI for bibliographic record creation: for recategorization titles in Russian using a template minimum bibliographic record is created from a photographed book title page for uploading to the system, where record is edited manually. A small-scale pilot project was carried out and the efficiency of the workflow was evaluated, as well as the possibilities for integration of AI tools into the data creation processes.

For more information contact	Matīss Bolšteins	Matiss.Bolsteins@lnb.lv
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Pilot project for automated subject indexing of electronic publications

The plan for the implementation of for automated subject indexing of electronic publications in the National Library of Latvia has been developed in 2024 and implementation of the pilot project continues in 2025. The purpose of the pilot project is to implement at semi-automatic and automatic subject indexing at NLL using the automatic subject indexing tool Annif and NLL Ontology Service datasets. 2 staff members had the opportunity to participate in an exchange visit to the National Library of Finland.

For more information contact	Māriņe Apenīte	Marite.Apenite@lnb.lv
	Uldis Bojārs	Uldis.Bojars@lnb.lv

Authority data

NLL is responsible for authority control in Latvia.

To optimise the workflows in the NLL BI, an authoritative data subunit of 6 people was created at the end of 2024. Training of data creators takes place on a regular basis. The authoritative data group consists of authoritative records of different types of entities.

- Authority files are created according to RDA for Persons, Corporate bodies, Series, Geographical names, Meeting Names, Works/Expressions. Since summer 2013, the National Library of Latvia has been sending its Authority Data to the VIAF (Virtual International Authority File).

Creation of authority data is done manually.

- Authority records are enriched with persistent identifiers: ISNI, Wikidata, VIAF, ULAN (added automatically from VIAF), Researcher ID, ORCID (added manually 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 Encyclopaedia (prepared by the NLL).

For more information contact Jogita Sauka Jogita.Sauka@lnb.lv

Feasibility study for the establishment of an ISNI agency

NLL continued to evaluate the possibility of becoming an ISNI Agency in Latvia.

In January 2025, NLL BI and the Latvian authors' society AKKA/LAA (the Copyright and Communication Consulting Agency / Latvian Authors Association), a delegation of 4 people, went on a 3-day working visit to the National Library of Finland to see the results of the Finnish ISNI implementation project.

The management of the NLL has given the green light for further development to introduce ISNI in Latvia.

Since November 2024, NLL has been participating in the Copyright Infrastructure Working Group (CITF) at the invitation of the National Library of Finland.

For more information contact Jogita Sauka Jogita.Sauka@lnb.lv
Aija Uzula Aija.Uzula@lnb.lv

Training activities

Wikidata courses

A 3-day training course for NLL BI staff on Wikidata functionality, usage and metadata creation with international guest speakers was held in October 2024 (ERASMUS+).

Learning from the experiences of the Nordic national libraries

The National Library of Latvia has been accredited for the ERASMUS+ mobility programme until 2027, which provides an opportunity to develop the professional skills and knowledge. 23 NLL staff members trained in 4 countries over the period 2023-2025.

Number of employees	Library		Exchange of experience issues
3	Royal Danish Library	2023	Data harvesting, legal deposit copy of digitally born documents
5	National Library of Finland	2024	Project cooperation, document preservation, digitisation services
1	Nasjonalbiblioteket	2024	International cooperation, national bibliography
2	National Library of Finland	2025	Open data, subject analysis
4	National Library of Finland	2025	Copyright, individual identification systems (ISNI)
4	National Library of Finland	2025	Digitisation services, digitisation projects and databases
4	Kungliga Biblioteket	2025	Automation, library system interoperability

Training and mentoring support

During the reporting period, NLL BI experts provided training and mentoring support to various libraries in Moldova and Armenia on bibliographic and authority data production and management within the framework of cooperation projects (project EU4Dialogue: Improving exchanges across the divide through education and culture).

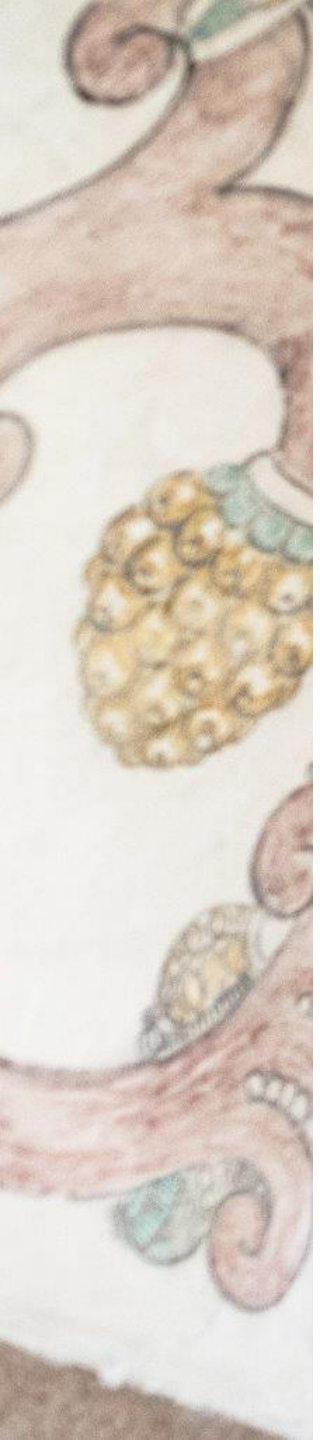


Oddrun Pauline Ohren
Nasjonalbiblioteket

20.05.2025

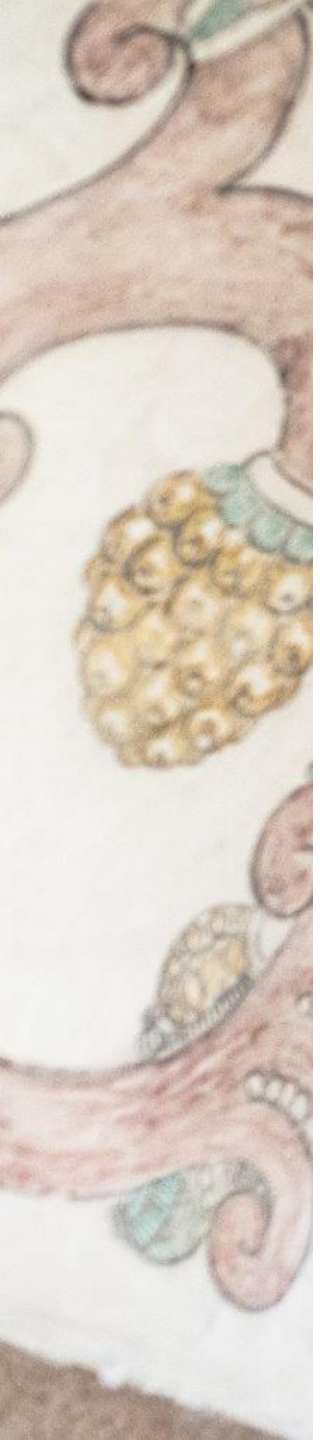
Choosing metadata model- RDA or BIBFRAME?

NNG meeting in Riga 8.-9.5.2025



Motivation

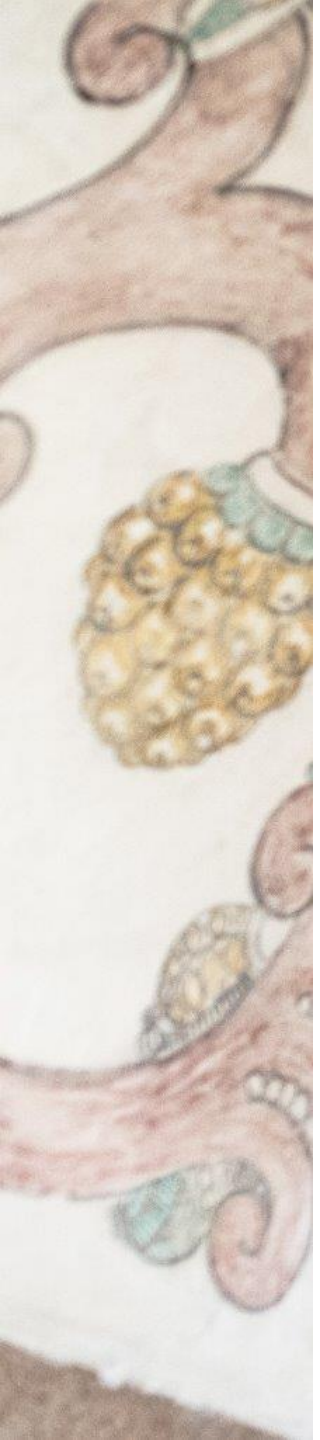
- Upcoming shutdown of Original RDA (2027)
- Newly implemented system for AV collections
- Acquisition of a Metadata Well
- Joint acquisition (with BIBSYS consortium) of new LSP



Model requirements

- Expressivity:
 - Be able to represent **works** (in the RDA sense)
- Well structured
 - Easily **queriable**
- Clearly defined **semantics**
 - Necessary for reliable machine processing
- **Model governance** sufficiently open and transparent

2 main roads to pursue:
BIBFRAME-based or
RDA/LRM-based

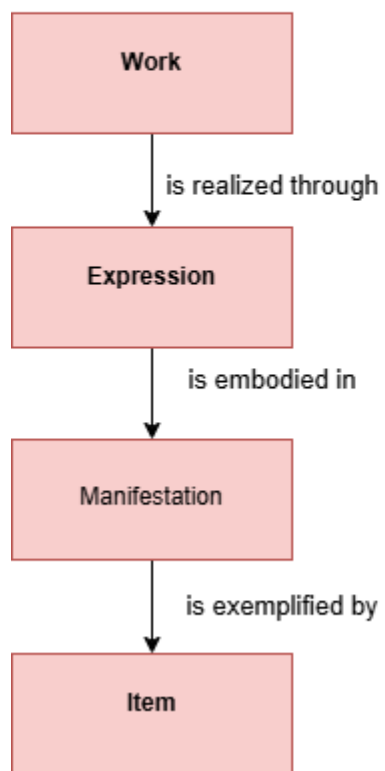


Basis for our considerations

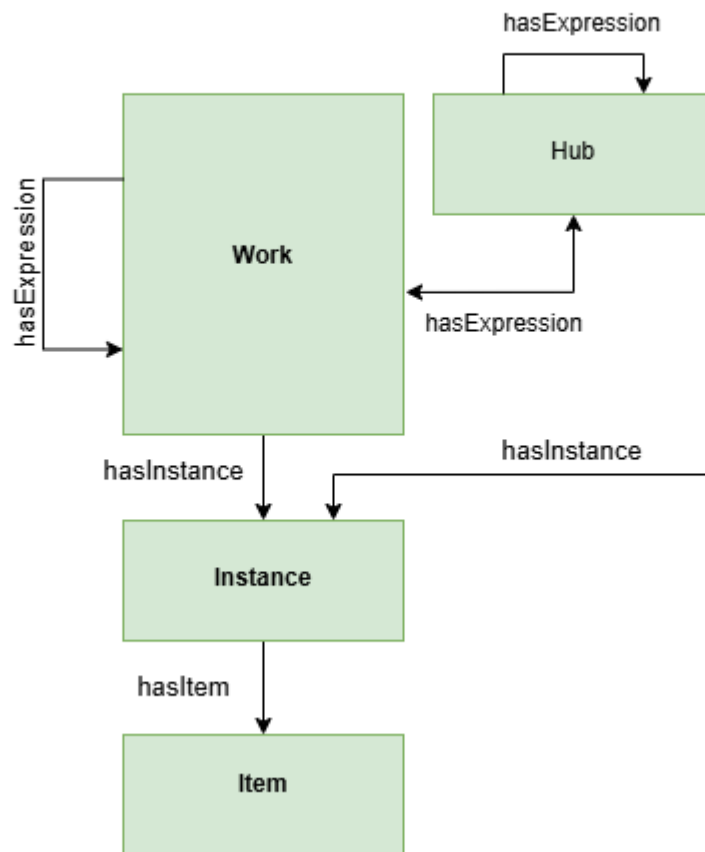
- Experience from Share-VDE participation
- Analysis performed by an NLN-supported national project
- Practical test of cataloguing with the RDA ontology
- Improved chemistry between communities

About the models

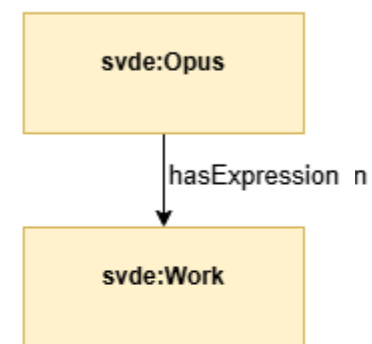
LRM/RDA



BIBFRAME



SHARE-VDE extension



About BIBFRAME and RDA

- Bibliographic Framework
 - Library of Congress
 - Version 1 i 2012
 - Version 2 i 2016
 - Today multiple variants exist
 - Extensions:
 - Library of Congress
 - Share-VDE
 - NL Finland
 - NL Sweden(?)
- Resource Description and Access
 - RDA Steering Committee
 - Owned by 3 library associations
 - Original version 2010
 - From cataloguing rules to bibliographical framework
 - RDA Official 2020
 - The RDA-ontology
 - Properties/fields
 - Declared as an «LRM implementation»

Both have advantages and disadvantages

- **BIBFRAME:**

- Large user community(USA)
- Tool support increasing
 - Editors
 - Convertors (from/toMarc)
- Too many MARC reminders
- Unclear distinction between the concepts of Works and Expressions
- Semantically not very precise
 - Weak definitions allow flexible usage
- Interoperability problems

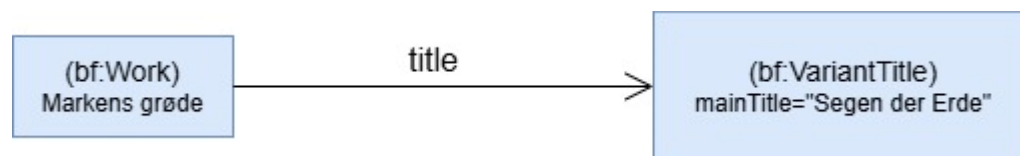
- **The RDA ontology:**

- Small user community so far
- Less tool support (increase anticipated)
 - Used by key Norwegian agents (Biblioteksentralen, Bokbasen)
- Better model structure, more stringent definitions
 - Closer to LRM
- Better adapted as linked data
- Full Norwegian translation exists
- Recommended by The Norwegian Cataloguing Committee

Example of differences (1)

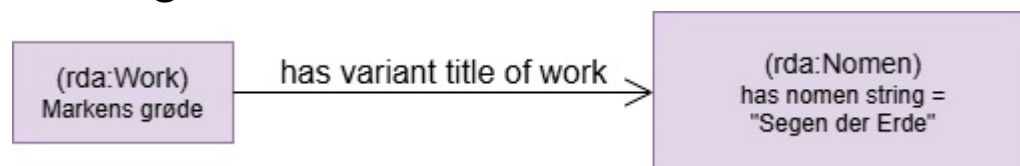
- Expressing that a work has a variant title

BIBFRAME



title is defined as a relation between any type of resource and an entity of type bf:Title (or any of its subclasses)

RDA-ontologien

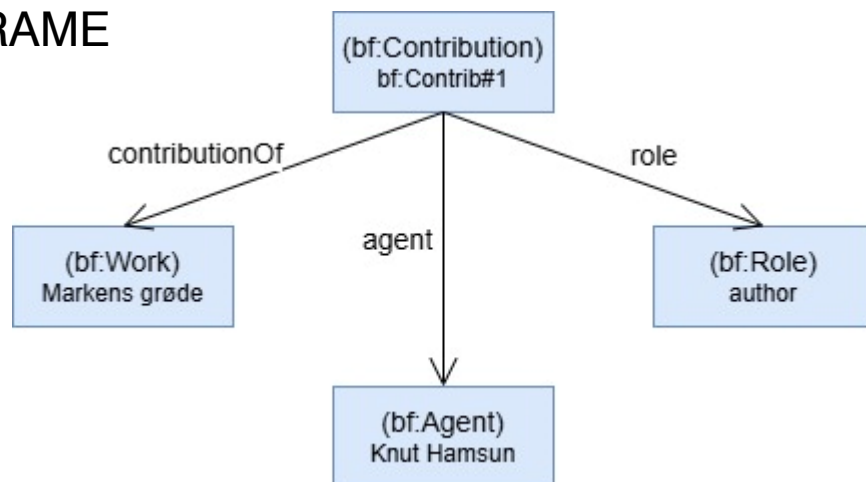


has variant title of work is defined as a relationship between a work and a Nomen/string

Example of differences (2)

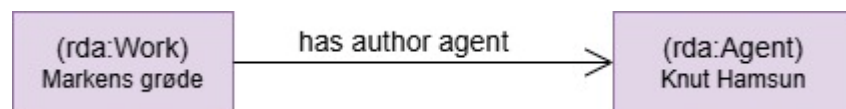
- Expressing an author's contribution to a work

BIBFRAME



An agent's **contribution to a work** is expressed as a **ternary relation** between the work, the agent and his/her role

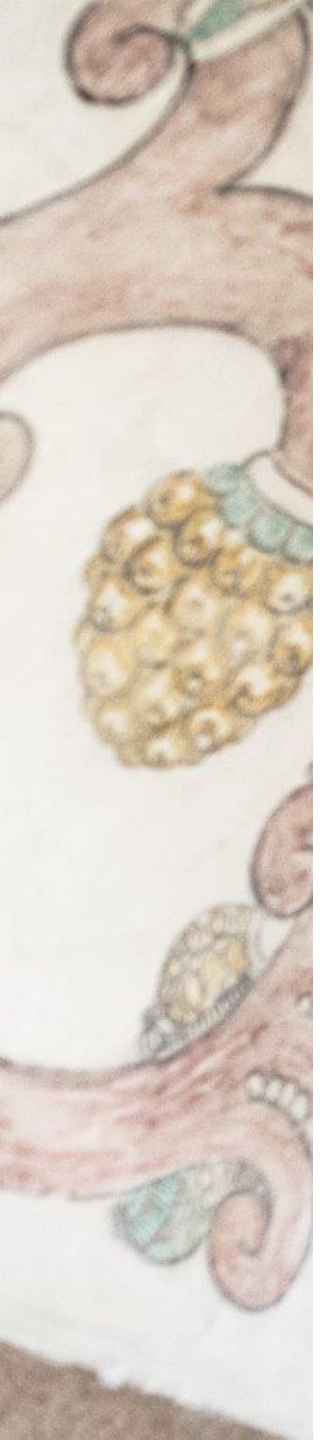
RDA-ontologien



Has author agent er definert som relasjon mellom et verk og en rda:Agent. Rollen forfatter er innbakt i relasjonen

NLN recommends...

- ...using the RDA ontology as linked metadata model in Norway, and will work towards that goal henceforth
 - <https://bibliotekutvikling.no/kunnskapsorganisering/datamodel-l-for-bibliografiske-lenkede-data-i-norske-bibliotek/>



Sharing/discussion points

- Your approach – lessons learned?
- Ways of adopting a standard model
 - Applying it as is?
 - For example: Using BIBFRAME classes and properties
 - «Copying»/adapting classes and properties within your own domain
 - For example: instead of using bf:Work, define a new `<myNameSpace>:Work`
- Mixing linked data ontologies - any experiences?



Oddrun Pauline Ohren
Nasjonalbiblioteket

20.05.2025

Choosing metadata model- RDA or BIBFRAME?

NNG meeting in Riga 8.-9.5.2025

Digital Library of Latvia



3.8 million digital objects from
over **500 partner** collections

DIGITAL LIBRARY

**Our cultural heritage, stories
and people** are brought
together in the Digital Library



 **DIGITAL LIBRARY
OF LATVIA**

OUR PRINCIPLES:

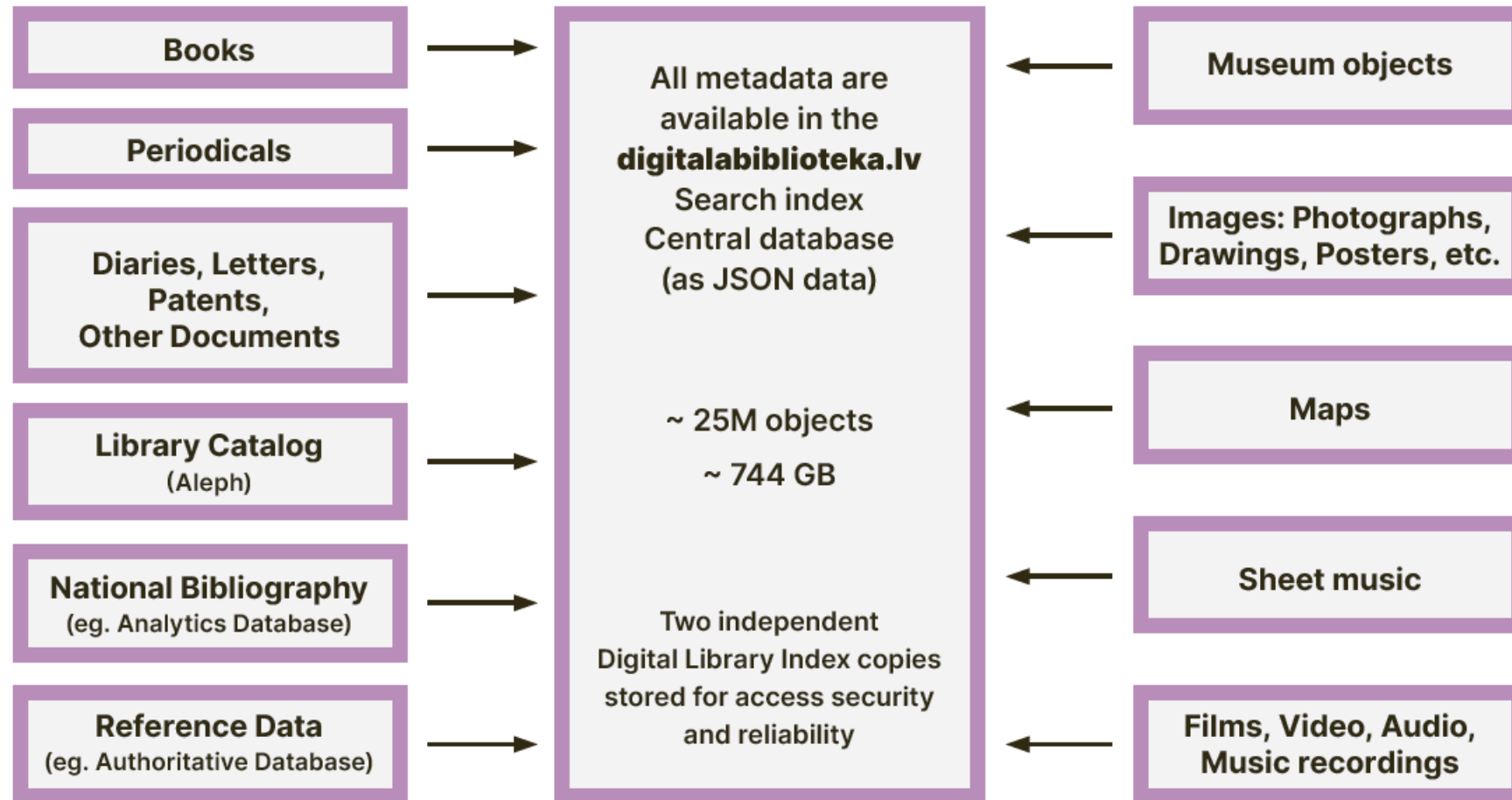
**CONTENT IS
A SHARED ASSET**

**THE USER IS
CENTRAL**

**THE DIGITAL
SPACE PRINCIPLE**

**EVERYONE
CONTRIBUTES**

Main data sources



Text 65%

Objects 18%

Image 13%

Audio 3%

Video 1%

Diversity of
content



Barikādes paliek

Teksts - 1991 Jānis Vilnītis, Andra Pūce (D) Digitāls saturs

Autors:	Jānis Vilnītis, Andra Pūce
Tips:	Raksts
Resursa virstips:	Teksts
Publicēšanas datums:	1991-01-15
Izdevuma numurs:	Nr. 8
Valoda:	latviešu
Ir daļa no:	Diena
Teksta fragmenti:	... Diena, Nr.8 (15.01.1991) "Barikādes paliek Jānis Vilnītis, Andra Pūce Rīga, 14. janv. «Pagaidām tehnikas barikādēm pietiek, koordinācija notiek galvenokārt ar radio palīdzību, jo pa telefonu sazināties ir grūti. Mēs lūgtu organizāciju vadītājus, ja viņi izdomā kādu tehniku aizvērt par to paziņot mums un domāt par tehnikas vai to vadītāju maiņu. Barikādes pagaidām novāktas netiks,» intervijā Dienai teica AP aizsardzības štāba dežurants.... ... Gandrīz puse no Dienas aptaujātajiem barikādēs novietotās






periodika.lv

gramatas.lndb.lv

zudusilatvija.lv

industria.lndb.lv

dziesmusvetki.lndb.lv

others

CULTURAL SYSTEMS

redzidzirdilatviju.lv

Digital archive of audiovisual, photo and audio documents of the Latvian State Archives of Audiovisual Documents

nmkk.lv

Joint catalogue of the national museum collection

filmas.lv

Latvian Film Portal

diva.lv

Portal of digitized video and audio recordings

nematerialakultura.lv

System of Intangible Cultural Heritage

mantojums.lv

System of Cultural Monuments

DIGITAL LIBRARY OF LATVIA

DIGITAL OBJECT MANAGEMENT SYSTEM

REFERENCE DATA SYSTEM

Unified knowledge organization system for describing and structuring digital heritage

COPYRIGHT MANAGEMENT AND LICENSING SYSTEM

DIGITAL CULTURAL HERITAGE PLATFORM

Simple search, advanced search and full-text search

Search using synonyms and reference data entities

Registered users have their own workplace

Information sharing

Service "Digitization on demand"

Collections created by experts

Stories and educational materials

Guidelines and recommendations for professionals

Links to useful resources

Reference data for digital object management

The Reference Data System ensures the availability of **all necessary reference data**, including:

- Authoritative data
- Geospatial reference data
- External registers
- Thesauruses
- Controlled vocabularies and other open datasets

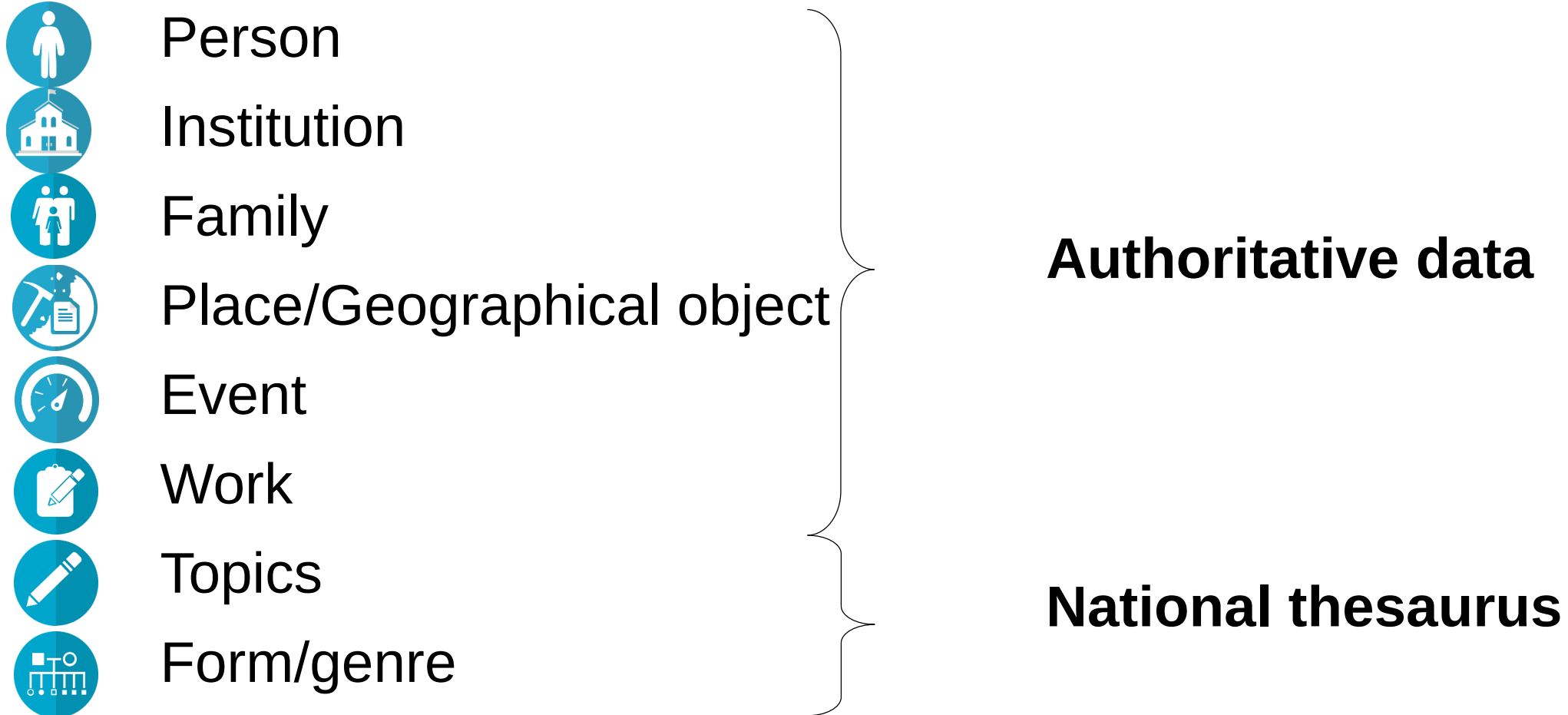
... for unified Digital Object (DO) description, structuring, and user display.

Reference data for digital object management

Decisions:

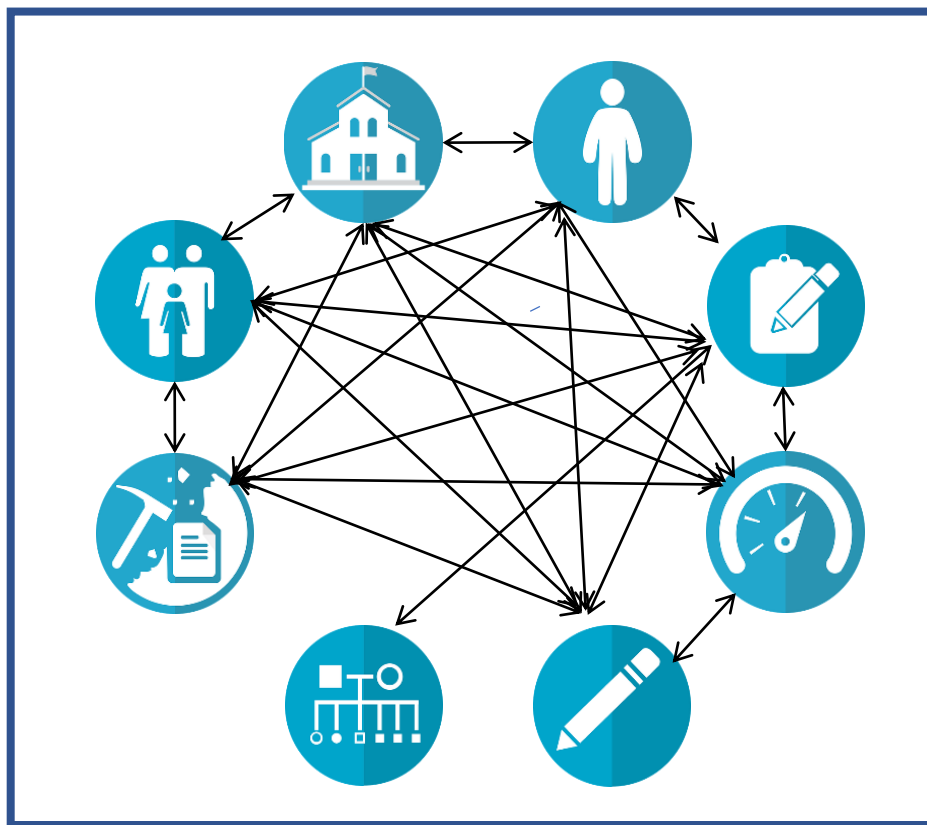
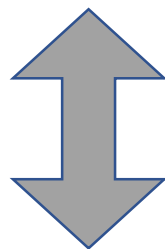
- on the existing reference data of the partner institutions
- agreement on standardized register of cultural heritage entities, using common classifications
- conceptual data models considered:
 - Library Reference Model (LRM – *libraries*)
 - Records in Context (RiC – *archives*)
 - CIDOC CRM (*museums*)
- Reference Data are used both in the Digital Objects Management System and in the cultural core information systems

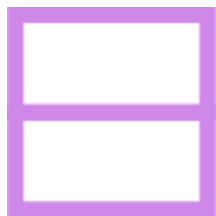
Entities (classes) used in Reference Data solution





VIAF
Virtual International Authority File





Unified copyright management and licensing system

Main functions:

- Determining the copyright status of cultural heritage objects
- Authors, co-authors, other copyright holders - automated calculation of the term of protection
- Initial calculation of the copyright status of cultural heritage objects
- Digital Object (DO) Copyright Management:
 - DO Determining Accessibility by Law
 - DO Determining Availability on a License Basis
- DO Licensing Management
- Collection of data and informing on authors and DO for which the term of copyright protection will expire in the current year January 1



DIGITAL LIBRARY
OF LATVIA

Karīna Bandere

Head of Digital Development Department

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Matīss Bolšteins

Head of Data Management Development

matiss.bolsteins@lnb.lv





LÝSA

Metadata ingest system for legal deposit materials

Kristín Lilja Thorlacius Björnsdóttir

National and University Library of Iceland



Lýsa

- Springboot java platform
- Catalogers upload PDFs or add URLs to PDFs
 - **Possibility of batch loading PDFs from our web archive**
- METEOR and ANNIF software generates metadata from the PDFs
- Catalogers review the metadata and then accept it for import to Alma and Rafhlaðan repository
- In the same platform catalogers can review and accept ONIX metadata from publishers before it is imported to Alma and Rafhlaðan repository



Building of the system

- METEOR made compatible with the Icelandic language
 - **Icelandic language profile for language recognition made with data from the Icelandic Wikipedia as well as some manual translations.**
- ANNIF linked to Icelandic authority data in SKOS format (aprox. 30.000 topical and geographical terms made available)
- Export of Gegnir BIBs made available in TSV format for ANNIF training (aprox. 400.000 records were suitable for training)
- ANNIF algorithms optimized for best results. Not all algorithms were compatible with the Icelandic language.
- ANNIF is trained weekly with a fresh batch of our BIBs and AUTs.



Building of the system

- Lýsa platform connected to Alma via API
 - SRU used to check for matches in existing Gegnir BIBs.
- Mapping from Lýsa metadata to Marc21 for Alma
 - Metadata imported to Alma and from there to Rafhlaðan – PDFs go straight from Lýsa to Rafhlaðan
- Mapping from ONIX to MARC21
 - This is the first time we are able to receive ONIX metadata and use it for creating bibliographic records in our catalog
- Lýsa connected to our Authority file (<https://lykilskra.landsbokasafn.is>)
 - Catalogers are able to select the correct authority heading before the metadata is loaded to Alma



Working in the system

Overview

Type: ALLState: ALLALL

1006 jobs

Title / ID	Author / Publisher (year)	Job created	Files	State
Tæring máлма í andrímslofti á Íslandi láfangaskýrsla 2 b537fca3-07b5-4f82-bea0-68c7cfe08cce	Baldvin Einarsson 1950 EFLA (verkfræðistofa) (2021)	05.05.2025 13:20:17	PDF	
Eru smektit og ættingjar óvinir viðloðunarefna? láfangaskýrsla 2 9d5168a7-998b-4b84-bfe6-e14ad4e8cd62	Hafðís Eygló Jónsdóttir 1965 Vegagerð ríkisins (2021)	05.05.2025 13:20:17	PDF	
Ástand spennikapla í steiptum brúmi láfangaskýrsla 3 - verklýsingar og gátlistar 0cb5c010-f12f-4ba3-bc6e-0f0368976e46	Baldvin Einarsson 1950 EFLA (verkfræðistofa) (2021)	05.05.2025 13:20:17	PDF	
Hægryðgandi stáli láfangaskýrsla 3 eab8a35e-e3a2-4350-a48b-8e6f63caf31a	Baldvin Einarsson 1950 EFLA (verkfræðistofa) (2021)	05.05.2025 13:20:17	PDF	
ÞRÓUN Á ENDAFRÁGANGI BRÚARMANNVIRKJA ce15d100-d439-4cb2-bb75-00de30d13a1b	Ingvar Hjartarson (2021)	05.05.2025 13:20:17	PDF	
46cf7bcf-43e2-4561-98ca-a8a01562fc6c		05.05.2025 13:20:17	PDF	
Slitlög - klæðingar 26f0e877-d6f7-47fd-a760-54b7eb795716	(2021)	05.05.2025 13:20:17	PDF	
Flexible and Adaptive Port Planning 84b8880f-3984-4263-8ebb-23e2354a95af	A. Dastgheib (2021)	05.05.2025 13:20:17	PDF	



Reviewing metadata

- The record is already filled out with metadata extracted by ANNIF and METEOR or ONIX metadata from publishers
- Catalogers review the data, add data that the software was unable to extract, connect authors to authority records, review subject headings and then save and accept.
- Import to Alma happens the following night

Samstarf Landsvirkjunar og Lands og skógar um kolefnisbindingu í skógrækt
c1339b70-3013-4ed2-b05c-11a4a7675d13

cancel

save

save and accept

RhAccess

☒ Open ☐ Inhouse ☐ No access

Title

Samstarf Landsvirkjunar og Lands og skógar um kolefnisbindingu í skógrækt

OtherTitle

Language

ice

Year

2025

Publisher

ISSN

ISBN

Dewey

TitleLevel2

PartNumber

Authors

≡

Trausti Jóhannsson

✕

🔑

≡

Hreinn Óskarsson

✕

🔑

≡

Rúnar Ísleifsson

✕

🔑

add author

Subjects

≡

Skógrækt

✕

🔑

☒ Subject(650) ☐ Geography(651) ANNIF_SCORE 68 %

≡

Kolefnisbinding

✕

🔑

☒ Subject(650) ☐ Geography(651) ANNIF_SCORE 66 %

≡

Skógar í Fnjóskadal

✕

🔑

☒ Subject(650) ☐ Geography(651) ANNIF_SCORE 63 %

≡

Landsveit

✕

🔑

☒ Subject(650) ☐ Geography(651) ANNIF_SCORE 52 %

≡

Samvinna

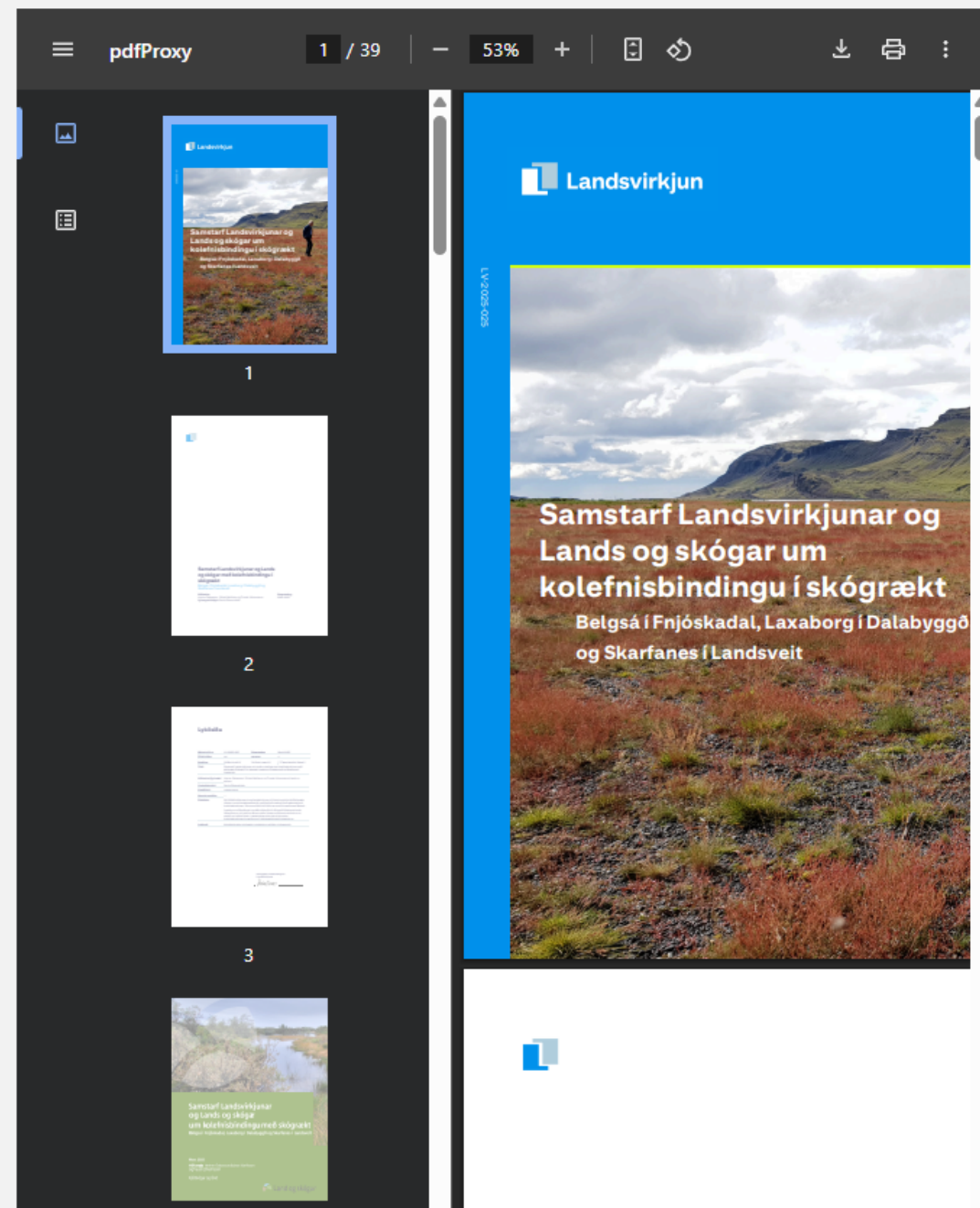
✕

🔑

Trausti Jóhannsson
(2025)

10.04.2025
08:27:39

PDF





Future plans

- Now that we have this platform ready we are hopeful that it can be used for handling and importing metadata from other sources
- We do receive a fair ammount of metadata from publishers in excel/cvs files. Hopefully we can somehow use Lýsa to work with those records as we find that uploading those files through import straight to Alma can be time consuming and those records still need a lot of manual handling in the metadata editor in Alma
- We are also interested in further development of metadata extraction straight from electronic resources as well as further training of ANNIF to get better subjec analyzis results.

Pilot project for automated subject indexing at NLL

Uldis Bojārs
National Library of Latvia

NNG meeting
May 9, 2025



Subject Indexing (1)

- Since 2000, the National Library of Latvia (NLL) has adapted the Library of Congress Subject Headings (LCSH) to develop and maintain the National Library of Latvia Subject Headings (NLLSH) (also called the National Thesaurus of Latvia).
- Initially, almost all NLL subject headings were adapted (according to the Latvian language and terminology) from LCSH as a fundamental dictionary.
- Currently, local headings are also created because the Latvian subject headings differ significantly from the American English language, terminology, and cultural environment.

Subject Indexing (2) – used for various information resources

- Books (monographs; collective monographs; audio books; electronical books, textbooks, etc.)
- Audio-records (e.g., songs; classical music; popular music, etc.)
- Audiovisual materials (e.g., motion pictures; television or radio programs, etc.)
- Cartographic materials
- Dissertations and their summaries
- Rare books and collection of manuscripts
- Papers and proceedings of congress, conference or other meetings
- Periodicals, newspapers; scientific journals; yearbooks, etc.
- Sheet music (printed, electronical and manuscripts)
- Visual works (e.g., photographs; paintings; graphic works, etc.)
- Illustrated works (e.g., greeting cards, posters; etc.)
- Resources of digital collections

Authority Data (1)

NLL has been creating authority data since 2004.

The **NLL Authority Database** maintains two main types of authority data:

RDA Entity Authority data

- 100 Personal or family names **(253 814)**
- 110 Corporate bodies **(25 675)**
- 111 Meetings **(4 144)**
- 130 Unified names (e.g., sacred works, icons, etc.) **(5 065)**

The National Thesaurus Authority Data

- 150 Topical headings (including Events) **(52 272)**
- 151 Geographical names **(11 226)**
- 155 Form/Genre headings **(2 849)**

As of May 2025, the NLL Authority Database held **355 045** authority records.

Authority Data (2)

NLL authority records provide:

- the quality control and maintenance of headings in the Union catalog libraries, in NLL's special collections, including digital collections, and in public libraries in Latvia
- unified **bilingual subject access and retrieval** to various information resources in Latvian and English
- **multilingual subject access and retrieval** for persons, corporate bodies, geographical names and named objects such as churches, manors, monuments, gates, etc.

Authority Data (3) - Linked Data

In 2021, **NLL's Ontology service** was created (using Skosmos) within the project “Latvian Memory Institution Data in the Digital Space: Connecting Cultural Heritage”.

It is designed:

- to ensure the re-use and interoperability of the authority data of the National Thesaurus with the data of other institutions
- to create new forms of access for users
- to publish information in the form of **Linked Open Data**;

The authority data of the National Thesaurus are associated with external dataset identifiers which appear as external links:

- Ontology / thesaurus concepts contain links to LCSH, FAST (Worldcat), VIAF, Wikidata, YSO, etc.

<https://dati.lnb.lv/onto/lv/>

Authority Data (4) - Linked Data

The authority data available from the Ontology service of the National Library of Latvia includes three data sets:

- the ontology of general and individual concepts (**NLL subject authority ontology**)
- the ontology of geographical names (**NLL geo ontology**)
- the form/genre ontology (**NLL genre/form ontology**)

<https://dati.lnb.lv/onto/lv/>

Alphabetical

Hierarchy

New

- ⌵ Aquatic biology
- ⌵ Architecture and biology
- ⌵ Art and biology
- ⌵ Biochemistry
 - ⌵ Acid-base equilibrium
 - ⌵ Analytical biochemistry
 - ⌵ Biochemical engineering
 - ⌵ **Biochemical markers**
 - ⌵ Genetic markers
 - ⌵ Biodegradation
 - ⌵ Bioelectrochemistry
 - ⌵ Bioenergetics
 - ⌵ Biogeochemistry
 - ⌵ Bioinorganic chemistry
 - ⌵ Bioorganic chemistry
 - ⌵ Biophysical chemistry
 - ⌵ Biosynthesis
 - ⌵ Biothermodynamics
 - ⌵ Body composition
 - ⌵ Botanical chemistry
 - ⌵ Cell chemistry
 - ⌵ Clinical biochemistry
 - ⌵ Clinical chemistry
 - ⌵ Histochemistry
 - ⌵ Metabolism
- ⌵ Molecular biology
 - ⌵ Biomolecules
 - ⌵ Biological response modifiers
 - ⌵ Carbohydrates
 - ⌵ Cell adhesion molecules
 - ⌵ Lipids
 - ⌵ Blood lipids
 - ⌵ Fat
 - ⌵ Lipid metabolism

... > Natural history > Physical sciences > Chemistry > Biochemistry > Biochemical

[show all 5 paths]

markers

Science > Life sciences > Biology > Biochemistry > Biochemical markers

Medical sciences > Biochemistry > Biochemical markers

... > Life sciences > Biology > Ecology > Bioindicators > Biochemical markers

PREFERRED TERM

Biochemical markers 

BROADER CONCEPT

Biochemistry

Bioindicators

NARROWER CONCEPTS

Genetic markers

NOTE

Source: Biomedicīna sabiedrības veselībai...-Google, 2011.12.06

IDENTIFIER

LNC10-000168016 => [ALEPH authority record](#)

IN OTHER LANGUAGES

biomarkkerit

Finnish

Bioķīmiskie marķieri

Latvian

Bioloģiskie marķieri

Biomarkķieri

Marķieri, bioķīmiskie

URI

<http://dati.lnb.lv/onto/subject/LNC10-000168016> 

DOWNLOAD THIS CONCEPT:

[RDF/XML](#) [TURTLE](#) [JSON-LD](#)

Created 12/6/11, last modified 12/13/11

CLOSELY MATCHING CONCEPTS

Biochemical markers

id.worldcat.org

Biochemical markers

Library of Congress Subject Headings

biomarkers

ALLFO - Allmän finländsk ontologi

<https://dati.lnb.lv/onto/lv/>

SAISTĪTIE KONCEPTI

[Austrumbaltija](#)
[Baltijas guberņas \(Krievija\)](#)

ALTERNATĪVIE NOSAUKUMI

Baltijas republikas
Baltijas valstis

PIEZĪME

Source: Balodis, A. Baltijas republikas..., 1980:
Source: Baltische Staaten, 2001:
Source: Lielā enciklopēdiskā vārdnīca, 2003:
Source: Железные дороги:атлас..., 2002:
Source: Россия и Балтия, 2002:
Šeit tiek apkopoti darbi par Igauniju, Latviju un Lietuvu kopumā. Darbiem par bijušās Krievijas impērijas Vidzemes, Kurzemes un Igaunijas guberņām piešķir ģeogrāfiskā nosaukuma priekšmetu Baltijas guberņas (Krievija)

IDENTIFIKATORS

LNC10-000050098 => [ALEPH authority record](#)

CITĀS VALODĀS

<i>Baltic States</i>	English
<i>Baltics</i>	
<i>Baltia</i>	Finnish
<i>Baltische Staaten</i>	German
<i>Балтия</i>	Russian
<i>Прибалтика</i>	

URI

<http://dati.lnb.lv/onto/geo/LNC10-000050098> 

LEJUPLĀDĒJIET ŠO KONCEPTU
SKOS FORMĀ:

[RDF/XML](#) [TURTLE](#) [JSON-LD](#) Izveidots 9/14/04, Modificēts 12/9/24

CIEŠI SAISTĪTIE JĒDZIENI

Baltia (fi)	YSO-paikat
Baltic States (en)	Library of Congress Subject Headings

Automated Subject Indexing

A pilot project at NLL (from 2024 to 2026).

Using Annif:

<https://annif.org/>

Approaches:

1. Using the existing Annif.org API
2. Training our own Annif models

Upload PDF File

Experiment: Using Annif web service
api.annif.org

Choose PDF file

digitizers-handbook.pdf

 Loading...

This application lets you upload PDF files and analyze their content using the Annif REST API.

The analysis results include:

- subject heading predictions from Annif machine learning models
- matches between YSO subjects and NLL subject heading

To get started, choose a PDF file and click the "Upload" button. The analysis results will be displayed on the next page.

Results for digitizers-handbook.pdf

[Back to Home](#)

Metadata

Title: Digitizer's Handbook

Experiment: Using Annif web service
api.annif.org

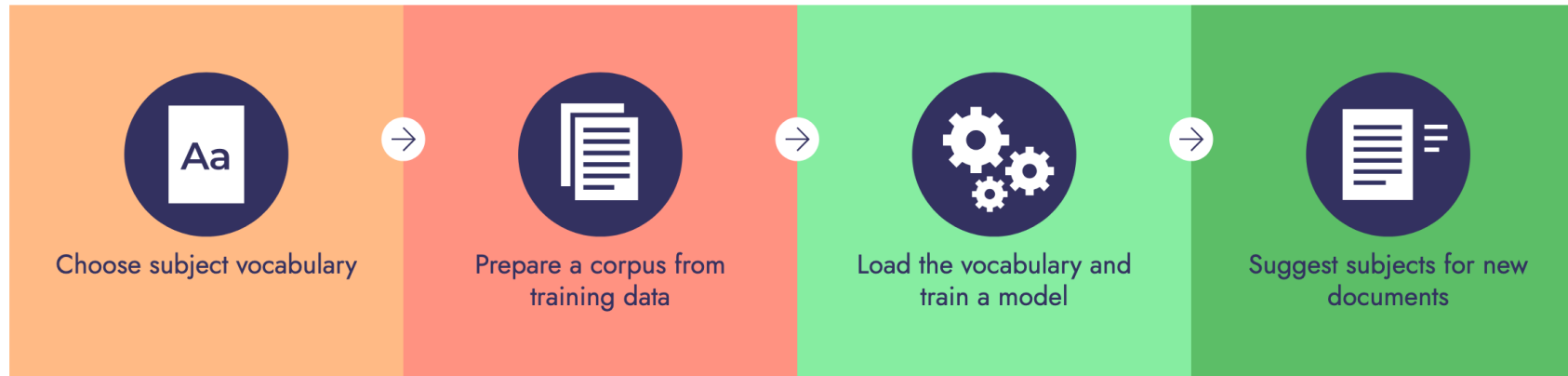
Analysis Results

Model: yso-en

URI	Score	Label	NLL Matches
http://www.yso.fi/onto/yso/p2336	0.39	archives (memory organisations)	LNC10-000053794 (Arhivi)
http://www.yso.fi/onto/yso/p1258	0.15	electronic archiving	
http://www.yso.fi/onto/yso/p1257	0.08	archiving	
http://www.yso.fi/onto/yso/p6449	0.07	image processing	LNC10-000081454 (Attēlu apstrāde)
http://www.yso.fi/onto/yso/p8441	0.06	files	LNC10-000055335 (Datnes)
http://www.yso.fi/onto/yso/p23929	0.05	electronic archives	
http://www.yso.fi/onto/yso/p14716	0.05	facsimiles	
http://www.yso.fi/onto/yso/p8692	0.05	digitalisation	LNC10-000341018 (Digitalizācija)
http://www.yso.fi/onto/yso/p10915	0.03	etching (graphics)	
http://www.yso.fi/onto/yso/p7576	0.03	archival quality	

Choose a controlled subject vocabulary and train Annif on already indexed documents – it can then suggest subjects for new documents!

HOW TO USE ANNIF



<https://annif.org/>

Annif uses a combination of existing **natural language processing** and **machine learning** tools including TensorFlow, [Omikuji](#), [fastText](#) and [Gensim](#). It is **multilingual** and can support **any subject vocabulary** (in SKOS or a simple TSV format). It provides a command-line interface, a simple Web UI and a microservice-style REST API.

Training Annif models (1)

Annif was trained using full-text corpora in Latvian and English consisting of monographs and other text materials.

Training set size (excluding validation and testing datasets):

- English: ~1'000 documents
- Latvian: ~3'000 documents

Training Annif models (2)

Annif backends used for training models for English and Latvian:

- fastText
- MLLM $F1@5$ score (for Latvian) = 0.20
- Omikuji $F1@5 = 0.14$
- Neural network ensemble (using MLLM and Omikuji) $F1@5 = 0.22$

Evaluation:

- quantitative evaluation (precision, recall, $F1@5$ score)
- next: qualitative evaluation

Digital queue on Latvian-Russian border could be in place this spring



The Ministry of Transport had planned to introduce an electronic check-in queue at the Russian border points Grebneva and Terehova by February this year. The Ministry now explains that the introduction of the electronic queue has been postponed until spring, Latvian Radio reports March 3.

On Monday, March 3 morning, 50 trucks were waiting to leave for Russia in Grebneva and 170 in Terehova.

The situation has changed, but at the end of last year, more than a thousand trucks were continuously queuing at the two border crossing points and hauliers had to wait for more than 10 days to cross the border.

Annija Novikova, Director of the Public Transport Services Department at the Ministry of Transport, promised in an interview with Latvian Radio last autumn that the electronic application system would be in place by February this year.

This has not happened yet, Annija Novikova said.

"Initially it was planned to be a bit earlier, but because of the procurement, the deadlines shifted a bit in

Annif v1.2.1

PROJECT (VOCABULARY AND LANGUAGE)

NLLSH MLLM English ▼

► Project information

MAX # OF SUGGESTIONS

10

15

20

Get suggestions →

SUGGESTED SUBJECTS

- ☐ [Border crossing](#)
- ☐ [Transport](#)
- ☐ [Management information systems](#)
- ☐ [Digital electronics](#)
- ☐ [Management](#)
- ☐ [Transportation-Planning](#)
- ☐ [Electronics in transportation](#)
- ☐ [Freight forwarders](#)
- ☐ [Cross Latvia](#)
- ☐ [Trucking](#)

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Annif v1.2.

PROJECT (VOCABULARY AND LANGUAGE)

NLLSH Omikuji Bonsai English ▼

► Project information

MAX # OF SUGGESTIONS

10

15

20

Get suggestions →

SUGGESTED SUBJECTS

- ☐ [Border security](#)
- ☐ [Border crossing](#)
- ☐ [Biometric identification](#)
- ☐ [Signal processing-Digital techniques](#)
- ☐ [Border between Latvia and Belarusia](#)
- ☐ [Border between Latvia and Russia](#)
- ☐ [Ballistic missile defenses](#)
- ☐ [Social networks](#)
- ☐ [Borders of Latvia](#)
- ☐ [Rare earth ions](#)

Latvija un vēl 11 ES valstis pieprasa piemērot izņēmumu aizsardzības izdevumu palielināšanai



Latvija un vēl 11 Eiropas Savienības (ES) dalībvalstis koordinēti pieprasījušas aktivizēt valsts izņēmuma klauzulu aizsardzības izdevumu palielināšanai, paziņojusi Eiropas Komisija (EK).

Latvija, Igaunija, Beļģija, Dānija, Grieķija, Polija, Portugāle, Slovākija, Slovēnija, Somija, Ungārija un Vācija ir iesniegušas EK rakstisku pieprasījumu kā daļu no šogad martā iesniegtā apbruņošanās plāna "ReArm Europe/sagatavotība 2030. gadā" aktivizēt Stabilitātes un izaugsmes paktā paredzēto valsts izņēmuma klauzulu.

EK skaidro, ka valsts izņēmuma klauzulas aktivizēšana

nodrošina dalībvalstīm papildu budžeta telpu, kas ļaus palielināt aizsardzības izdevumus, vienlaikus ievērojot ES fiskālos noteikumus.

Klauzulas aktivizēšana dos valstīm iespēju atkāpties no apstiprinātā neto izdevumu virziena vai korektīvā virziena saskaņā ar pārmērīga budžeta deficīta novēršanas procedūru. Šāda elastība ir paredzēta ārkārtas apstākļiem, kurus dalībvalstis nevar ietekmēt, ja tiem ir būtiska ietekme uz valstu publiskajām finansēm, kā tas ir pašlaik, skaidro EK.

Annif v1.2.1

PROJECT (VOCABULARY AND LANGUAGE)

NLLSH NN ensemble Latvian ▼

► Project information

MAX # OF SUGGESTIONS

10

15

20

Get suggestions



SUGGESTED SUBJECTS

- ☐ [Latvijas militārā politika](#)
- ☐ [Eiropas investīcijas](#)
- ☐ [Projektu menedžments](#)
- ☐ [Baltkrievijas robežas](#)
- ☐ [Valstu savienība](#)
- ☐ [Atbruņošanās-Ekonomiskie aspekti](#)
- ☐ [Vienotība](#)

Lessons learned

- Annif models return useful matches
 - but many matches are still incorrect
 - quantitative evaluation scores are lower than those achieved by the National Library of Finland
- Omikuji and NN ensemble provide the best results
 - But MLLM model is also useful
- Human is needed «in the loop»

Next steps

- Qualitative evaluation of trained models
- Collect larger training datasets – use both full-text and short text content
- Include geographic names in the data used for training Annif
- Explore how the use of different text lemmatization libraries influence the results of automated indexing
- Continue collaboration with creators of Annif (the National Library of Finland)

Automated metadata workflow in the NLF

2024

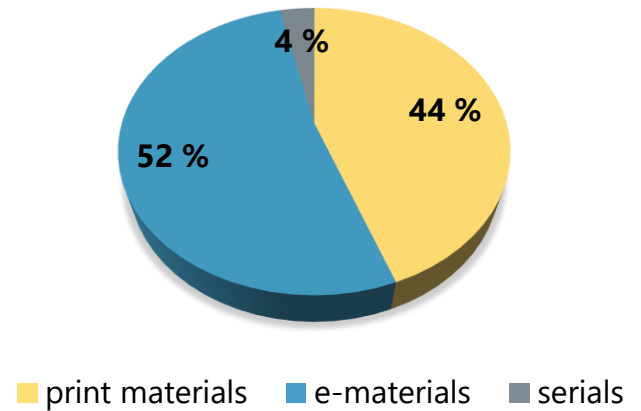
Katri Riiheläinen and Satu Niininen

Statistics

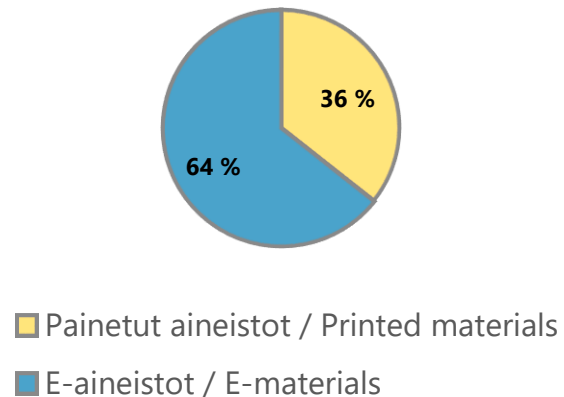
Fennica, catalogued in 2022

- 29 838, of which
 - printed books 12 693
→ manually catalogued 11 748
 - e-books 14 943
→ manually catalogued 4 230

Fennica 2022



Fennica 2024



Cataloguing

- part of the national repository and community
- currently in RDA format and Marc21-environment, heading towards BibFrame

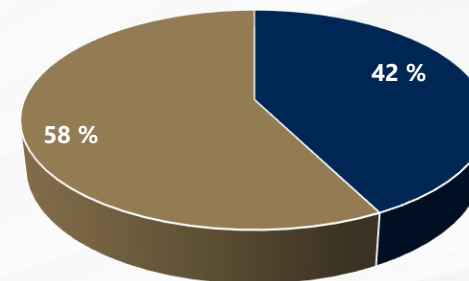
Automated metadata workflow for ONIX

- Increased volume of online publishing has become impossible for the National bibliography to catalog the complete national imprint manually
 - NB is the official agency to compile statistics on publishing in Finland
- As a long-term goal the National Library aims to better utilize metadata produced by publishers
 - Partnership with a major logistics service provider for books allows us to receive high quality prepublication metadata in ONIX format
 - Legal deposits of e-books and audiobooks are legally required to include their metadata
- In-house developed automated workflow was launched in 2023 to handle conversion and record import process on ONIX metadata
 - With regular updates from the publishers to the metadata

Automated workflow: Benefits

- The automation allows us to direct scarce cataloging resources to prioritized tasks (cataloging of print materials, authority control etc.)
 - Manual cataloging only for online publications with no publisher metadata (self-published books, grey literature etc.)
 - The use of AI in cataloguing the digital-born ephemera collection
- Better coverage of online national imprint with little delay (~ 76 000 new records since November 2023)
- Faster processing of legal deposits into long term preservation and customer use.

E-aineisto Fennicassa / E-materials in Fennica 01/2025



■ E-aineisto / E-materials

■ Automaatiolla tuotettu e-aineisto / Automation processed e-materials

Metadata quality

- Overall quality has been good
- Records are imported into a shared metadata repository and from there replicated into the National Bibliography database.
- Discrepancies in quality affect all libraries in the shared environment

→ Regular monitoring of record quality, communication with libraries and ONIX providers

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Automated workflow: Further development

- Expanding the workflow to legal deposits with other metadata formats such as Dublin Core (institutional repositories) and DDEX (online music)
- More robust monitoring system, statistical data on processed items, errors, error types etc.
- At a later phase we are planning to enhance the converted records
 - Harmonization with manually catalogued print equivalent (e.g. subject headings, access points)
 - Look up tools to extract data from outside databases (e.g. identifiers)
- Preparing for shift into linked data

The background image shows the interior of a grand, historic library. The ceiling is a large dome with a repeating pattern of green and gold decorative medallions. A central arched section of the dome features a fresco of three figures. Below the dome, a wooden balcony with a simple railing runs across the width of the room. The ground floor is supported by several tall, white, fluted classical columns with ornate Corinthian capitals. Between the columns are tall, dark wood bookshelves filled with books. The overall atmosphere is one of intellectual heritage and architectural grandeur.

Thank you!

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