Baltic Sea Cooperation for Information Management within the ALM Sector

Contents

Preface

A main objective of this pre-project is to see how one may strengthen the digital cooperation between the Baltic states, to build infrastructure and to promote education and research within digital humanities.

To do so we have analysed the state of the art, defined challenges and used that knowledge to see how strategies might be strengthened and developed. As part of this pre-project, the three National Libraries in the Baltic Sea States have in dialogue with each other and the project managers described the state of the art and defined their challenges. The National Libraries have also presented some expectations and possible ideas on how to go further. So have researchers.

Out from these challenges and ideas, we have discussed and given our recommendations on what we think is most important topics and possibilities for eventually further projects., both library and ALM projects as such and cooperation projects with researchers and research projects.

Tomas Lidman, Gunnar Sahlin, Vigdis Moe Skarstein

Introduction

Aim of the project (see Application to SI, "Samarbete i Österjöregionen: Projektinitiering", Cooperation within the Baltic Sea Region, Project initiation, 2016, http//si.se)

- Strengthen the digital cooperation in the region when it comes to library, archives, museums and other actors that support the infrastructure of culture, education and research.

- Building services and structures that are important and relevant for these purposes.

- Experience shows that to be able to do this efficiently, new ways of working is partly needed: digital management and digital humanities are words that may describe the process.

- This pre-project will address several issues as a preparation for a stronger application: Knowledge transmission, Infrastructure, Networking, Information management in a digital world.

- A well organized cooperation within the Baltic Sea Area will make it easier to integrate the whole Baltic Cultural Heritage in the rest of Europe.

See http://su.se/library/baltic

Participants

Stockholm University Library (project owner): Responsible on behalf of Stockholm University Library: Tomas Lidman, Gunnar Sahlin, Vigdis Moe Skarstein. Secretary Eva Enarson (until January 2017)
National Library of Estonia: Janne Andresoo, Raivo Ruusalepp
National Library of Latvia: Andris Vilks
National Library of Lithuania: Renaldas Gudauskas

Project meetings

Stockholm, September 19–20, 2016
Riga, October 20–21, 2016
Tallinn, December 5–6, 2016
Stockholm, December 19, 2016
Vilnius, March 14–15, 2017
Stockholm, June 1–2, 2017
Vilnius, September 19, 2017
Riga, November 29, 2017

Advisory meetings in each country

Latvia, November 15–16, 2016 (Tomas Lidman)
Lithuania, January 10–11, 2017 (Gunnar Sahlin)
Estonia, January 30–31, 2017 (Vigdis Moe Skarstein)

Bibliotheca Baltica Conference in Riga, October 20, 2016
Tomas Lidman, Gunnar Sahlin and Vigdis Moe Skarstein presented the project and the status of the project as part of the conference.

Bibliotheca Baltica Board meeting in Vilnius, September 18, 2017
Vigdis Moe Skarstein and Gunnar Sahlin presented the Draft Report

Research Conference Tallinn, Estonia, 27th/28th of April 2017

Workshop on research Södertörn University, 13th of November 2017

External Consultations
Consultations with local ALM institutions
Ministries of Culture
Council of the Baltic Sea States (CBSS)
Baltic Development Forum (DVF)
Bibliotheca Baltica
CBEES, University of Södertörn
The Nordic National Libraries
Ayond project "Baltic Ecosystem for Digital Innovation"
Baltic Development Forum, Copenhagen BDF
Nordic Council of Ministers
Researcher group: Anda Baklane, Stefan Gelfgren, Rimvydas Laužikas,
    Annika Öhrner

State of the Art

The presentations of the state of the art are based upon strategic plans, informations from the National Libraries and meetings with the National Librarians.

ESTONIA

The Digital Situation
Strategies

Estonia has an official national strategy for digitization of the cultural heritage (2017–2022). It involves larger memory institutions and the National Library is an important part of this strategy. The National Library does not have its own defined strategy for digitization, but the collection preservation strategy includes plans for digitization for the next three years and is annually updated.

There is an Advisory Council on Digital Cultural Heritage established at the Ministry of Culture that supervises the national strategy. The Council does not decide priorities for digitization of collections, this is up to groups of experts from memory institutions who establish a roadmap of digitization of collections from each type of heritage materials: photo, artefacts, art, film/moving images, records, printed material. The aim is to achieve a critical mass of digitized material through a mass-digitization campaign over the next 6 years. The roadmap focusses on selection, preparation for and actual digitization, as well as establishing a new service architecture for preservation of digitized content. Access to the material continues to be provided through existing channels (both institutional, a national heritage portal, as well as Europeana), but as a condition of funding, access also needs to be provided through open data, preferably linked open data, channels. An important reason for lesser focus on access are the copyright issues. There is at present no collecting society and no tradition for agreements among institutions and copyright holders. The private sector providers are slightly third part in digital archiving but up until now there is no formal cooperation within Private Public Partnership explicitly for digitization.

Digital legal deposit started in Estonia from 2017. The new Legal Deposit Copy Act[1] is vital also for the digitization strategy and there are discussions to find a system for lending e-books. The National Library also co-ordinates service development for other libraries.

Digitization and Organization

The National Library has invested in its own equipment for digitization and is increasingly digitizing the printed material in-house. By the end of 2016 the National Library had digitized about 7 % of items in the national

1. https://www.riigiteataja.ee/en/eli/514092016001/consolide

bibliography. 36 % of periodicals (both newspapers and journals/magazines) are accessible via its digital archive DIGAR.[2]

The National Library and four academic libraries are engaged in digitizing their collections on systematic basis. The National Library, Tartu University, Estonian Literary Museum, Tallinn Technical University and Tallinn University digitize annually on average 2.1 m pages. The libraries have agreed on quality criteria and description of digitization of printed material. There is also collaboration and service provision between the partners, based on scanner types and special requirements of the analogue material and some collaboration on digitizing other media as video, sound and photographs. There are agreements in place on long-term digitization plans as part of the national roadmap for digitization.

Archiving and Preservation

Storage of digital heritage is currently based on distributed architecture – each larger library has its own digital repository based on different systems (Fedora; Dspace, Mediainfo, Bespoke solutions). Born-digital publications (legal deposit) are archived by the NLE in its digital archive Digar. It is an aim to reach an agreement that nationally funded digitized printed works should also be archived in Digar (NLE) for long-term preservation.

Dissemination

Most memory institutions have their own access portals to their repositories. All state museums use a single access portal (MuIS). The national-level shared access portal for cultural heritage, www.e-varamu.ee, is owned by the library consortium ELNET that the NLE is a member of. There is a long-standing collaboration among libraries on some types of publications, e.g. digitizing historical newspapers that are made accessible through a common portal.[3] On international level, collections are made visible on various international platforms: Europeana, OpenDOAR, DART-Europe.

Financing and Projects

Separate funding for implementing digital heritage strategies in institutions is not available from the state budget. Digitization is considered as part of institutions' daily work and within their regular budget. Individual projects can be financed through structural funds from EU and/or via the Ministry of Culture. The current EU budget period expires in 2020, the same period for all three Baltic states. Awarded funding may be used by projects until the end of 2021.

For funding new digitization projects, the National Library can participate in the projects that are part of the national digital heritage strategy; apply for funding from the Ministry of Culture; initiate collaborative projects with other memory institutions, academic institutions or businesses. In the national programme, the main aim is to achieve a

2. http://www.digar.ee/
3. http://dea.digar.ee/

critical mass to enable creative re-use of digital heritage. Various indicators are used to measure the results of projects, most are related to new created use cases and how creatively the objects have been used in services, not just the number of items digitized.

Since the financing comes through the Ministry, it is not natural to have common projects financed by EU for the three countries involved in our project. This will be discussed in our chapter for future projects.

LITHUANIA

The Digital Situation
Strategies
- The Ministry of Culture but also other ministries in Lithuania play an active role to develop the Heritage in digital forms.

- The Government approved 2009 a strategy for digitization, preservation and access for the Cultural Heritage. This was followed up with a digital agenda 2014. Throughout the next years the process for digitization was carried out in accordance with these strategies.

- A program for Digital Cultural Heritage Actualization and Preservation for 2015–2020 was approved in 2015. The same year they decided about a plan for its implementation 2016–18. One of the goals is to standardize the process for digitization, preservation and access.

- The program for Digital Cultural Heritage Actualization and Preservation for 2015–2020, and the plan for its implementation, is impressive. Every memory institutions in the ALM sector have to contribute with their activities, and should yearly submit report to the Ministry of Culture.

By undertaking to encourage sustainable development and education of democratic society as well as following the National Progress Programme intended for the implementation of the National Progress Strategy "Lithuania 2030" for 2017–2020, the National Library of Lithuania raises the aims of developing the information competence of the society, encouraging lifelong learning, knowledge creation, dissemination and use. The development of information resources the fund of the National Library covers the collection and storekeeping of the fund of all documents, created in analogue and digital formats, necessary for the implementation of the mission of the National Library. The development of information resources has to ensure sustainable functioning of information chains: author – publisher – library – user – and Lithuanian cultural heritage, and library – user in changing environment of information, society and technologies.

Digitization and Organization
- Digitization activities in ALM sector is coordinated by competence centres for digitization, which were developed 2013. They build a net-

work to promote the cooperation among the institutions. To establish cooperation among the centres and give service to the institutions is important for the centres. These digitization centres play a central and important role for the ALM-institutions in the digital developing and producing until 2020 in accordance with the approved plan. There are six centres for state organizations and five for regional organizations.

- They should embrace all types of cultural heritage objects. The development of their activities should consolidate the digitization process in the sector.

- The National Library is responsible for libraries and the National Archive for archives. There is also a centre for radio, TV, film, etc.

- Lithuanian Museums' Centre for Information, Digitisation and LIMIS (LM CID LIMIS) was founded in 2009 by the decree of Lithuanian Government as specialized department at the Lithuanian Art Museum. It is set as intermediate hub between the Ministry of Culture of the Republic of Lithuania on one hand and Lithuanian museums on the other. This setting permits both top-down and bottom-up communication for parties involved in cultural heritage digitization activities. 70 of 100 museums are involved in the digitization.

The Role for the National Library
- Staff from National Library has been engaged as experts in forming the national strategies for digitization, preservation and access for the Cultural Heritage and thus the strategy for the National Library has been an important part of this strategy. In the new strategy for development of the National Library 2017–20 digitization is given high priority (see above).

- The National Library launched the development of the national digitization monitoring system which became into operation in 2016.

Dissemination and Collaboration
- The ALM-institutions have to disseminate the digitized material to be used in educational processes, development of the national identity etc. The Ministry of Culture will be co-financing this cultural heritage project.

- In addition to archives and museums also other cultural institutions are coming to be more engaged in the digitization. More than 25 institutions are actually to be partners in the digitization process.

- Media industries – radio and TV – will soon be a partner.

- There are some suggestions to be engage in a Public Private Partnership, but so far nothing has happened.

Financing and Projects
Government

- Each year ALM institutions gets money for implementation of Strategic activity plan, which involves digitization. But it does not fulfill the whole need, basically money covers only human resources. Each institution has a right to manage number of human resources, according to the need.
- Every year national wide contests for ALM institutions (related with e-heritage) are being organized for dissemination and actualization of e-heritage.
- Every year (starting 2014) Government allocates 20.000 Euro straight to the Europeana foundation.

EU-financing

ALM institutions participates in projects related with development of Europeana Thematic Collections. For example – 2017–2019. The National Library is a partner in the project Migration in the Arts and Sciences. It is the cultural movement linked to the creation of a Europeana Thematic Collection about migration. In addition, the project will seek out and digitize new material. The project will also improve current data to comply with the Europeana Publishing Framework (EPF). Total budget – 375.057 EUR, Lithuanian budget – 24.877 EUR.

ALM-institutions in Lithuania are also included in an American project for 5 million dollar together with YIVO Institute.

The results of the projects can be a basis for new applications within the EU.

LATVIA

The Digital Situation
Strategies

The main planning document for digitization of cultural heritage in Latvia is the Cultural Digital Heritage Strategy 2014–2020, which builds upon the Guidelines for Cultural Policy 2014–2020 "Creative Latvia" and outlines the activities in the field of digitization. The goal of the strategy is to make sure the Latvian cultural heritage is digitized, preserved for future, widely accessible and re-used, and it is based on four main principles – principle of effective collaboration between sectors and institutions, principle of re-use in research, education and creative industries, principle of interoperability between systems and use of common standards and guidelines, and principle of integration in European and worldwide digital cultural space. The digitization of cultural heritage is briefly mentioned in the main planning documents of Latvia – the Latvian Sustainable Development Strategy 2030 and the National Development Plan 2014-2020; the Guidelines for Development of Information Society 2014-2020 have a chapter on digitization of cultural heritage as well, however the main

documents informing digitization activities are the "Creative Latvia" and the Cultural Digital Heritage Strategy.

The strategy encompasses all cultural heritage sectors and covers a wide range of activities – from digitization of different types of materials, preservation of digital-born materials, development of a shared infrastructure for digital preservation and creation of a wide range of digital services for different target audiences, including TDM and digital humanities services, to support activities such as creation of a competence network, development of shared guidelines and standards, R&D, strengthening of legal and financial framework, development of licencing framework and machine translation. The main vehicle for implementation of the strategy is a major project funded by European Regional Development Fund (ERDF), coordinated by the National Library. A Digital Cultural Heritage Council, set up by the Ministry of Culture, is the body tasked with guiding and coordinating implementation of the strategy, however its practical mandate is somewhat weak.

The National Library itself has no separate strategy on digitization – digitization activities are included in the overall strategy of the National Library for 2014–2018, and are planned and reported on in the regular framework of planning and reporting.

Digitization and Organization

No institution within the cultural heritage sector has a legal mandate on overall responsibility for digitization, which means that each institution carries out digitization activities according to their own capabilities and priorities, and there is little cooperation on practical level. This fragmentation is further encouraged by three factors:

- There is no dedicated state funding for digitization activities, which means that institutions engage in digitization only when they see this as a priority and if they can either fund digitization internally from existing budgets or find an extra funding from outside.

- The digitization strategy is not supplemented by a shared framework for planning of and reporting on digitization activities – each institution plans and reports on its digitization activities according to practices established in its sector.

- There is no shared infrastructure for digitization and digital preservation; each sector has its own IT platform for managing, preserving and making available of digitized materials, as well as guidelines on digitization; collaboration between institutions takes place on case to case basis.

The most experienced and well equipped institutions in Latvia are the National Library and the National Archive; some of the biggest museums and the University of Latvia also have some experience and infrastructure in place.

National Library mainly focuses on digitization of text materials, especially newspapers, but sizeable collections of photographs and sound

recordings have been digitized as well. As of now National Library has digitized roughly 50 % of national newspapers and journals (more than 4 million pages), in a close collaboration with Academic Library of Latvia; the percentage of materials digitized from other types of materials is considerably smaller (roughly 5 % of books from the national collection). A number of software systems have been developed – digital object management system, web harvesting system, systems for display of newspapers and books, etc., however the integration between systems is not optimal. The public libraries are equipped with some scanning equipment and are mainly developing digital collections on local history, but are not part of the National Digital library developed by the National Library, apart from the collaborative project "In Search of the Lost Latvia", which collects historical photographs.

National Archive has focused on digitization of materials for genealogy research – materials from church archives, national polls etc. Some audio-visual materials have been digitized as well, but the archives lack the equipment necessary for digitization. Some audio-visual materials have been digitized also from the archive of National broadcaster (both radio and TV archives), but there is hardly any regular digitization taking place. National Archive uses a centralized software solution for managing their processes, including digitization, however it has a limited functionality to access the materials.

Museums are obliged by law to keep their records in a centralized management system; so far about 17 % of total holdings (more than 1 million items) are described by digital records. Some of the records are supplemented also with digital objects, however the system is not well suited for digital preservation of objects. Some of biggest state museums have been moderately active in digitization, among them the Museum of Literature and Museum of Art. However the digitization equipment is not widely available, especially in smaller institutions.

Archiving and Preservation

As described above, each sector carries out archiving and preservation of digital and digitized materials separately in its own platform. National Library uses a custom developed system called Digital Object Management (DOM) for management and preservation of digital objects. Most of the digitized objects are already stored in the system, with exception of the digitized newspapers, books, maps and the harvested webpages. The archival storage of data takes place on two clusters of tape storage. National Library owns two data centres, well suited for expanding its preservation capability and potentially becoming the data centre for cultural sector.

The National archives has implemented Preservice system for digital preservation as a part of their information system. Museum information system has a rudimentary capability to store digital objects, however is hardly suited for digital preservation purposes. Both systems are hosted by the state agency Cultural Information Systems Centre, which employs a data centre specifically built for the National Archive, as well

as commercial storage and hosting services. Most of smaller institutions, both museums and libraries, mainly take care of digital preservation via traditional means of making back-ups. As far as we are aware none of the institutions have a coherent digital preservation strategy or plan, and it can be argued, that competence in digital preservation in general is sorely lacking in Latvia.

Dissemination

As described above each sector employs its own platform or separate web pages for dissemination of digital material. For National Library, the main interface is the Latvian National Digital Library portal, essentially a search engine for accessing all of the digital content, although not all of the digital collections have been successfully integrated in it. It serves also a basic viewer for digital objects. There are two content types based on digital interfaces to display content stored in DOM – one for audio recording and another for images. Separate interfaces for full- text access have been developed for newspapers and journals (periodicals) and for books; there are also specific interfaces for using maps and harvested webpages, an open access repository, and many smaller digital collections, the most popular being zudusilatvija.lv for historical photographs.

As the platform used by the National Archive is not well suited for access of digital objects, they have developed some special collections, the most popular being Raduraksti for genealogical materials and Redzi, dzirdi Latviju! for movie materials. A separate web interface diva.lv, operated by the Cultural Information Systems Centre, has been developed for TV and radio archives. The main platform for museums is the Joint Catalogue of Museums, where some records also have digital objects attached; also some stand-alone digital collections have been created by museums, and the Museum of Art is using Google Cultural Institute platform. Public libraries mainly use a module of their integrated library system for local history to display their digitized materials. Some digital collections have also been delivered to Europeana as a part of various projects; the National Library serves as a national aggregator to Europeana, however so far have been delivering mainly their own digital materials due to lack of integration between various systems.

In general dissemination is hindered by copyright considerations (although there is a unique loophole in the Latvian copyright law which allows for all of the copyright protected digital materials to be accessed in all of the public libraries of Latvia), as well as by unwillingness of some institutions (mainly museums) to freely share their digitized materials. So far no Latvian cultural institutions have contributed to Wikimedia and other open platforms.

Financing and Projects

Digitization in Latvia has greatly benefited from availability of European Regional Development Fund funding. In the previous planning period (2008–2014) five separate projects related to digitization have

been completed – two by the National Library (one mainly focusing on digitization of newspapers and books and building up an infrastructure (both hardware and software for management and preservation of digital materials) and the other focusing on digital services – the main search portals and the specific interfaces for different types of content. Cultural Information Systems Centre realized two projects for developing the infrastructure (both hardware and software) for museums and the National Archive –– Joint State Archival Information System and Joint Catalogue for Museums; during the projects, also some digitization was carried out, including of film materials held by the Archive. The third project dealt with digitization of TV and radio archives. Currently National Library is working on an ERDF funding proposal for a joint digitization project for all of the cultural sector, to be carried out in two stages until 2021; the planned budget – 14 million Euro. It includes both digitization activities, and further development of infrastructure and services.

All three sectors have been beneficiaries of some other EU projects, mainly of e-Content+ and CIT-PSP programmes. National Archive took part in APEx project and its follow-ups, museums (represented by the Cultural Information Systems Centre) – in Athena and follow-up projects; National Library has contributed to TEL, and taken part in a number of Europeana-related projects (Europeana Local, Europeana Travel, Europeana Sounds, Europeana Newspapers and others). The main activity of all the projects has been digitization of materials. Other funding sources include Interreg program for cross-border projects and EEA grants, grants from Latvian diaspora organizations, as well as Erasmus and Norden programmes for staff mobility and competence building.

A significant amount of state funding was provided both to National Library of Latvia to develop the first version of the National Digital Library of Latvia (intended to become the joint platform for managing, preserving and making available of digitized cultural heritage for all the cultural sector) and to Cultural Information Systems Centre to build information systems for museums and archives in 2006-2008. However almost all of the funding was cut in 2008, and now only a moderate amount of funds is provided for supporting the infrastructure (but not digitization). During the same period a program for cross-sectoral digitization projects was run by the State Cultural Capital Foundation, but was also closed in 2008, and currently digitization projects have virtually no chance of getting a support of the Foundation. As such there is currently neither a targeted state financing program for digitization, nor any state project framework, which means the institutions have either to seek opportunities to participate in international projects or draw from their existing budgets to run digitization activities.

The situation is unlikely to change in the nearest future. Apart from the EU structural funds project described above it is unlikely that any other major financing sources will become available, with an exception of possible Europeana-related medium scale Horizon 2020 projects. No government funding is expected, at least no sooner than in 2022, when the structural funds project will be finished.

Challenges and Ideas for Further Projects

ESTONIA

Challenges

In the current EU budget period, Estonia has made regional development funds (the so called structural funds – EU funding distributed locally within a member state) available for digitizing cultural heritage. It will be a challenge to find funding source when these funds no longer exist, most likely after 2020. Can the cultural sector keep relying on external funding for digitization as one of its core activities? If not, what changes are needed into the current business models around digitization to keep this activity sustainable for memory institutions?

At present, digitization is seen primarily as a cost issue – if more funding was available, memory institutions could digitize more content. But funding (agencies) also set their own priorities that do not always align with the interests of memory institutions. External funding is often available only for the most popular content types or collections. Collaborative efforts are more often than not hindered by jurisdictional borders (participating institutions are under different government departments or ministries). Engaging private sector partners is of great interest to memory institutions but very hard to make happen since the value proposition from the heritage sector is not attractive for businesses.

Digitization activity also adds to the cost of subsequent digital preservation service. The immediate challenge in Estonia is how to gain extra funding for preservation and manage both storage and active digital preservation services cost-efficiently. Collaboration among memory institutions is essential, but requires national level co-ordination. For storage architecture, it is now possible to rely on government cloud services, for example for creating a shared culture cloud for preservation. A bigger challenge is to co-ordinate the scant professional know-how and skills that a small country has for active digital preservation, to be available to all those with a preservation mandate. A service architecture for preserving different heritage types (document, publication, film, sound, images, 3D models, etc.) is ideally required. An analysis commissioned jointly by the ministries of culture and education will begin exploring these options at the end of 2017. Nevertheless, even in a shared space of services, a model needs to be agreed on how memory institutions (part of public sector) can offer and procure services from each other.

Promotion of digitally available heritage and establishing real e-services based on heritage material.

How to collaborate with other institutions when everyone is keen on promoting their own identity and collection?

How to monetize on access services provided to other libraries and memory institutions?

How could library charge for some services and share the proceeds with the copyright holders in practice?

Is Linked Open Data the answer to most access problems? –Can it make our collections visible everywhere and thus justify the cost of converting our catalogues be?

Will investment into text and data mining tools pay off in the foreseeable future?

How to organize services internally within the National Library – can everything be driven by the patron (access service is driving the digitization and preservation)?

How to organize collaboration for win-win solution with other institutions?

How can one share services with other memory institutions based on their needs?

Infrastructure and Copyright Issues

It is important that the strategies have plans for finding good infrastructure and interface as well as discuss how to go from digitization to preservation in order to enhance access to heritage material. It is even more important to overlook the legislation for copyright, especially when it comes to licensing and agreements to make access possible. EU requires a system like a "collecting society" as we have in the Nordic countries.

Critical Mass of Digitized Heritage Material

A main concern is about how to achieve a critical mass of digital material in the public domain:

How to achieve a critical mass?

How to define criteria for when it is achieved?

How to create interest in digitized heritage, for research and education and in the public domain?

This may influence the priorities decided in Advisory Council upon which type of material should be digitized, and the priorities again will influence the funding, whether it is integrated in budgets or project funding. To balance between the priorities of the Ministry of Culture and the Ministry of Education is also a challenge that institutions in both these jurisdictions face.

Open Data

It is important to discuss open data topics and how this links to the digitized heritage: what exactly should be declared open data (e.g. just the metadata or also contents of OCRed publications, licensing principles, persistent identifiers etc.). This has an impact on deciding what materials should be included in the mass-digitization and how to define criteria for the critical mass.

Digital Humanities, Education and Research

Another vital challenge is education and digital competencies. Since

the digital material still is a relatively new phenomenon, digital competencies and education is needed, both within the library and among library users, among researchers and in education.

It is a challenge to develop good infrastructure and interface to reach all the stakeholders. Research on infrastructure and on the use of the material is needed to get knowledge for creating good solutions and services. Knowledge needs to be improved also among decision-makers, politicians as well as academic institutions for the benefit of digitization.

Digital cultural heritage should be available on mobile devices, but it is difficult to find funding for it since mobile platforms require regular and frequent updates.

Strategies to share cost and for collaboration are needed. To be able to have a common strategy, either among different stakeholders in Estonia or between the three countries in our project, one must agree upon the question what drives these strategies: preservation or access to users. When it comes to cross-border collaboration, the language of texts is a barrier for fruitful collaboration.

Ideas from Estonia
Copyright and Licensing
The collective representation societies for authors are not well developed in Estonia and the issue of copyright and licensing is handled by the Ministry of Culture. Since the EC has proposed to establish a system for negotiation among copyright holders and institutions which give access to digital material, this is already on the political agenda. The Ministry is interested in knowledge about the system with collective representation societies in the Nordic countries and what could be learned from their experience.

Competence Centre
Developing digital competencies in libraries to support the "digital change" within libraries to support e-service development. Such projects could become a common project between the three countries. They have earlier applied for money for a regional "Leadership Academy". This idea could be developed into a joint concept for Competence centre for digital humanities and digital competencies.

Dialogue with Researchers
Discussion with researchers to map their requirements and expectations for text and data mining services from libraries Dialogue with academics as users of digitized materials. See also project ideas at the end of this report.

Study Digital Heritage Impact and Effect upon Research
A research project that studies the impact and effect of digitization of heritage. Knowledge about what is used, why and how it is used is important both for priority discussions and for opinion making, both among decision-makers and users.

Shared Experience on Preservation Services

Examples of Norway, Denmark and Finland in developing shared digital preservation services and infrastructures are encouraging. The benefit these countries have had and how these solutions/models could be imported into the Baltic countries should be studied further.

Study Non-Users of Digital Heritage

Studying non-users of digital heritage to better understand what would make them become users would yield useful models for promoting digital heritage for reuse. What can one library do alone and what can we do collaboratively should be analysed first.

LITHUANIA

Challenges

ALM sector have to improving public and user-friendly access to the entire digitized cultural heritage and promoting its more active use. (The principle of ensuring integral one-stop-shop access to all the cultural heritage material.)

The aims for the EU-projects for the institutions in ALM-sector are to fulfill the Government ambitions which have a clear build in the strategies. Lithuania has efficiently used financing from EU structural funds for digitization initiatives. In the next period to 2020 the institutions have to fulfill the ambitions.

Digitization centres for digitization play a central and important role for the ALM-institutions in the digital developing and producing until 2020 in accordance with the approved plan. They should embrace all types of cultural heritage objects. The development of their activities should consolidate the digitization process in the sector.

ALM institutions have to make the digitized material available for use without restriction and without infringing upon the copyrights of the work.

The ALM-institutions have to disseminate the digitized material to be used in educational processes, development of the national identity, etc. The Ministry of Culture will be co-financing this cultural heritage project.

A goal of the program is also to develop a national system for the long-term preservation of all the digital cultural heritage.

Ideas from Lithuania

Collaboration is better than non-collaboration. It can build bridges between countries as well as organizations (ALM-sector, universities, etc.).

From Lithuania it is a clear interest to broaden the collaboration in Baltic Sea and go on with common projects. The collaboration can be in the ALM-sector, between ALM-sector and universities as well as other research and education organizations, but also between countries.

The collaboration gives extra value for the audience accessibility, and can give additional values and new kind of services.

It would be interesting with a common strategy for cooperation between the three countries – Estonia, Latvia and Lithuania – and it could be a part of a project after this pre-project. Look for the competence and possibilities to integrate the countries activities, and the form of the projects.

For example they have the same history concerning Sovjet/Russia and the period between Second world war and 1990. Also in other issues the three countries have similar history.

Baltic Digitization Brain Centre

Experience and models from other countries is valuable to find new tools for digital material. A combination of good examples from different countries can build up an effective use of the common resources.

For example can a combination of local projects and bigger projects be interesting.

A interesting proposal for a new project could be A joint competence centre for digital cultural heritage (digitization, preservation and access) in the Baltic Sea. Why not call it Baltic brain centre.

Research and Education

The University Libraries can play an important role between ALM sector and universities for the content to be used in research and education. It is important to include them in the ongoing process.

Cultural Heritages can be important for education in schools on different levels – digital learning/distant education. Teachers are today not using much of digital material. It is possible to start collaboration between the countries to provide content to be used in schools.

Other Subjects

Digitized material from Baltic states are in Europeana. Unity content from the region Baltic Sea could be interesting.

Important subjects and system to be included in a future project: Big Data; Copyrights; Digital Humanities; SweClarin and Darihn; Crowd sourcing.

LATVIA

Challenges

The following challenges are the most important ones in Latvia:

Sustainability of the digital library. As it often is the case, even if decision makers can be persuaded to invest into projects, they are usually less then eager to provide funding to sustain the results of pro jects. As described further in this report, Latvian cultural heritage institutions have so far heavily relied on the funding of European structural funds to digitize their materials and build the digital re sources, however this source of funding cannot be used for maintenance purposes, and it must come from state budget. Although the situation has improved now with some additional funding for maintenance of software coming from the

Ministry of Environmental protection and regional development, it does not address the maintenance of hardware and general costs (staff, electricity etc.), which are expected to be covered by existing budgets. While current level of funding is just enough to keep the digital library running, and to implement some minor developments, a serious crisis can be expected in middle term, when both hardware parts and software solutions will come to the end of their useful life and will have to replaced (in next 5 to 10 years).

Funding – it is expected that after 2022 the EU structural funding scheme will be discontinued, which will put the onus on state budget (or private funding, for example, PPP). As discussed earlier, the levels of funding have a major impact on sustainability, and the is- sue of sustainable funding will have to be addressed sooner or later to keep the digital library resources running, implement new technologies as they replace the existing ones, as well as to continue to develop and improve digital services, and digitize more materials.

Legal issues – obviously copyright issues play a major role in digitization. As described above, the Latvian legislation allowing to digitize and make available our collections are reasonably good, the issue of orphan works/out-of-commerce works looms large and is unlikely to be addressed by the upcoming review of copyright legislation in EU, as it leans heavily towards licensing solutions instead of harmonized exceptions and limitations. The situation is further complicated by the soviet legacy (there are hardly any legal bodies to licence materials published from 1940 to 1990 from, and it is impossible to identify the private persons the licences should be acquired from) and the inflexibility of the CMOs, which refuse to provide an extended licencing, covering also the authors they do not represent; moreover, it is highly unlikely that there will be any state financing available for licencing, even if the licencing schemes will appear.

Design of digital services – we are somewhat struggling to design and develop user-oriented digital services of high quality. We realize that it is not enough just to publish the digitized materials out there on the internet and expect them to be widely used and well regarded, as people are used to audience-oriented digital services (Google, Facebook, mobile apps), and are looking for digital "experiences" rather than just content. In order to be more successful, we should get to know our audiences better; the same is also true for developing services for professionals (researchers, educators) – we assume that they should be happy to use our materials, however the uptake and interest in the real life is poor. Now we have realized that each use case and service seems to require a completely different approach, which often requires a repacking of the content, and in some case (for example educators) a serious curation and contextualization of materials, which requires a lot of resources.

Competence – the size of the country and our institutions makes it very complicated to acquire, build and preserve all the necessary expertise, which is very specialized (whether it is technical competence or content competence). We are aware of several gaps in skills (long-term

digital preservation, big data and TDM etc.), and have a hard time of filling them. The situation is expected to improve at least to some degree when we will implement the national competence network model in Latvia as a part of our structural funds project, when the areas of expertise will be formally divided among the cultural heritage institutions and they will be obliged to share the competence and provide services also to other institutions.

Interoperability issues – one of the most challenging tasks of the upcoming structural funds project will be the mapping, transforming and normalization of data coming from different sectors, institutions and systems. While we are reasonably optimistic about this, it will be a challenging process nevertheless, and could become a serious issue for further development of digital library, if not properly addressed. In a wider context this challenge also includes practical implementation of linked data principles and external linking of data; also multilinguality poses a serious challenge, especially in international collaboration scenarios.

Ideas from Latvia

We expect that because of the project we could address at least some of the challenges outlined above. While the issues of long-term financing and sustainability obviously must be tackled on a national level in each of the countries, and the copyright issues will be decided on European level, the project certainly could and should address the issues of competence building and transfer, and design of user-oriented services.

All the Baltic states and their cultural heritage institutions could benefit from sharing competences in digitization; moreover, we believe that not only competence building and transfer (in a form of joint seminars, training, secondments and visitations) would be beneficial, but also some practical shared services for all Baltic region; the project could outline the structure and services of such shared competence network, and work towards identifying and filling the existing knowledge and skill gaps.

Another area of the project could be service design, helping to gain more understanding of our target audiences and their needs and expectations. This should cover both services for general users, and services for specific audiences (researchers, educators), and could possibly also include methodology and technologies necessary for contextualization of digital materials (observing the principle – digitize once, re-use in different contexts for different audiences many times).

Focusing on services for researchers – we would expect to build up our expertise in the field of digital humanities, and build practical services for their needs, including tools for preparing custom data sets and tools for text and data mining. Another area of interest could be use of neural networks for indexing of digital materials, face recognition and other applications.

Focusing on services for educators (mainly in primary education) – we would expect to build up our expertise in development of educational materials, including but not limited to pedagogical methodology of

building digital course materials, lesson plans and tests, classification of curricula, adapting contextual information to different age groups and subjects.

Finally, a useful area for project collaboration would be in establishing a framework for assessment of digitization activities, measuring the output of digitization and evaluating impact of digital services and ma king cultural heritage available online.

Research

The dialogue between researchers and those who are responsible for developing digital repositories, is important for the digital strategies in the ALM sector. Both to enhance research as such for knowledge development, but also as the platform for dissemination and understanding of the cultural heritage in the society.

To get to know more about the research perspective when it comes to use of digital material, we therefore invited researchers from the Baltic States and Sweden to two seminars.

The first was in Tallinn on April 28, 2017. The second one in Stockholm on November 13, 2017. (See topics on the agendas in Appendices.)

The discussions during the seminars confirmed the recommendations for projects that we below have defined as library projects.

As part of the seminars the participants also started to develop some ideas for cooperative research projects. These ideas are examples on how the digitized material might facilitate research and argues as such for the value of having strategies for digitization of the cultural heritage. These ideas might also develop and be realized.

Reference Group

As part of the seminars, we asked the researchers – *Anda Baklane* (National Library of Latvia), *Stefan Gelfgren* (Umeå University, HumLab, Sweden), *Rimvydas Laužikas* (University of Vilnius, Lithuania), and *Annika Öhrner* (Södertörn University, Sweden) to be a reference group to give advice on what kinds of research projects might benefit from an improved digitization and as such be useful as an input to a strategic thinking for Baltic Sea Cooperaion for Information management within the ALM Sector.

They have discussed what kind of projects, both in general, and within the Baltic Sea Region specifically, are on the agenda just now. We have also asked for examples on research topics that might benefit from or even be dependent upon the use of cultural heritage digital material and might function as "best practice", both when it comes to which kind of material and topics should be prioritized and when it comes to develop tools for use of the material.

Considerations and Ideas from the Reference Group

Topics that are of crucial importance to a broad field of researchers within the humanities, are different types of international transfer of cultural heritage, both of actual objects, collections, archives as such, but also of ideas, artistic styles or concepts. Archives and documents that connect to such cultural transfer, are often ehpemere and at the same time, of utter importance to preserve for the research community as well as the society. To study this kind of transfer, use of digital material is crucial.

Use of digital material gives new opportunities not only within the humanities, but within all disciplines, not to mention interdisciplinary.

There are many different research questions that could be addressed through the use of digitized material, whether it is news press, journals or fiction/novels, or others. Questions can be related both to processes stretching over time, or related to a specific and given time in history. One can imagine for example studying themes or network of people, and their transformation over time. One can use both digitized (for example formally printed, or audio-visual) material, or one can also hope libraries can have a role in collecting and to give access to digitally born material.

One interesting case would be to study how minority groups have been perceived and dealt with, over time, in a public discourse. How have groups, such as migrants, Sami, Romani, homosexual and disabled people, been reported and discussed in news media in Sweden throughout history? And in the Baltic Sea Region as well? Are there specific times in history when the discourse takes new directions – and why is that so in that case? How is religion discussed in the public sphere, by who and what actors, and what is religion associated with – different representatives, collective groups, themes, different religious affiliation, etcetera? Is religion discussed differently depending on social and historical context, or in what sphere of society religion is dealt with? Who are discussing, and is there a network between them? Who is referring to who, and are they active in voluntary associations, political parties, etc.?

One can also study a specific theme or concept in for example digitized parliament material – how is the issue of migration or state governed surveillance dealt with in the parliament, and how does that relate to the societal context? Who are the actors in the parliamental debates, what political party do they belong to, and does this change over time?

Here one can also mention the possible use of scholarly journals to study for example specific discussions or concepts – on emerging or vanishing themes. When and how do for example the concept of electro-sensitivity emerge? What does the discussion on amalgam-sensitivity, or the discussion on climate changes look like? If adding a GIS-component it would be possible to see how discussions are distributed, if some discussions are located or associated with specific localities. And so on…

One can imagine, but it has to (and can) be tested with digitized and searchable material, how public discourse changes in relation to major social, political, demographical or economic transformation. Through a qualitative reading of (limited amount of) news media such hypothesis have been studied and tested, but with the digitization of a vast amount of news media there are new opportunities to study such themes quantitatively, on a large scale. The same goes with other source material.

What is really interesting is the combination of quantitative and qualitative methods to study large volumes of text material. The quantitative approach gives you entry points to a qualitative reading and interpretation, and vice versa.

Some more specific examples on topics where the use of digital material has and will be useful, may also be the following:

Cultural myths and stereotypes across times and cultures
Social roles Attitudes towards genders
Attitudes towards neighboring countries and ethnic minorities
Anthropology of food
History of place-names
Family names across cultures
Attitudes towards animals and nature in general
Folk beliefs about health and traditional medicine (both in history and now)
Places in literature (how the space is perceived, how large is the world for some culture in any given time in history)
Research of particular authors, analysis of their style, comparative studies of authors
Cultural and social history in 18.–19. century manuscripts (such as Herrnhuter manuscripts)

All these topics can be explored in various sources – news sources, scientific discourse, cookbooks, statute-books, literary fiction, photography, and others. In the context of digital approaches, most topics benefit from the keyword search – the simple possibility to look for concepts in digital libraries (saves years of reading time).

In cases where places and names are being explored, researchers benefit from the text where named entities are marked (annotated corpora). In several cases georeferencing (applying of GIS) can be used (place names, family names, places in literature). Analysis of style in discourse requires further text mining approaches - analysis of word frequencies, topic modeling, and other.

Research of manuscripts and other archival materials hugely benefit from digitization combined with crowdsourcing initiatives that allow to transcribe them and make machine-readable as a result.

When asked, many researchers mention not the topics but the material they want to explore. Most popular in the wishlists are periodicals (all periodicals, the whole story!) and literary works.

Project Ideas
The Baltic Text Archive
- Created on the base of developed model of The Oxford Text Archive.
- Joint text archive of OCR materials from National libraries and another text collections (e.g. research institutes) around Baltic.
- Further collection and development of text collection.
- Further development of investigative tools.

(Proposed by *Rimvydas Laužikas*, inspired by The Oxford Text Archive, http://ota.ox.ac.uk/)

*Implementation of GIS based technologies in to Libraries
and Archives sectors.*

Main idea. Two methodological models can be employed for the digitization of heritage and scholarly data: the "text oriented" model and the "object oriented" model. The "text oriented" model (popular in the Libraries sector) was created at the early stage of the computerisation of cultural heritage. It is based on a "hierarchical" paradigm and usually describes the world via discrete texts (including hierarchically organised controlled vocabularies). Despite the evident significance of the "text oriented" model for the development of digitization of cultural heritage, it is also necessary to note the essential limitations of this model. The actual world (reality) is continuous and is composed of interconnected objects (not concepts) that (usually) are organised according to a non-hierarchical structure. The "object oriented" model (most popular in archaeology, geography, immovable heritage sector) proposes a different point of view. This model was created during the modern stage of the computerisation of cultural heritage. It is based on a "network" paradigm and usually describes the world via network-organised object's ontology. The ontological "object oriented" model is more connected with reality: real place-time and place-time appellations are described as separate classes of reality. The main aim of the project "Implementation of GIS based technologies in to Libraries and Archives sectors" could be to connect "text oriented" Libraries and "object oriented" GIS approaches. Project goals:

1. To create the conceptual model of implementation of GIS based technologies in to Libraries and Archives sectors.
2. To create the conceptual model based technological decisions.
3. To create the conceptual model based web services.
4. To test this conceptual model, technological tools and services by few cases and to develop the cases based implementations patterns. These patterns must connect (via GIS) the Libraries resources and the researcher's needs. (E.g. GIS possibilities for text mining; GIS and bell letter; GIS and modern art).

(Also proposed by *Rimvydas Laužikas*)

For some ongoing projects that illustrates use of digital material, see:
http://support.locloud.eu/LoCloud%20Historical%20Placenames%20
Microservice: https://lmavb.maps.arcgis.com/home/index.html;
https://kaunokolegija.maps.arcgis.com/apps/StorytellingSwipe/index.
html?appid=a6ce422230a54c15ad2465b3c3be3bcc

Annika Öhrner (Art Historian, Södertörn University)
Works on plan for a research project which concerns transfer of cultural heritage. The title is "Art Exhibitions as Transfer of Cultural Memory", and is meant to gather researchers making critical studies of cultural memory and other aspects studied from art catalogues from the three Baltic Countries 1945–1989. The project is planned be docked into a digitization project, which should digitize the total cohort of exhibition

catalogues from Estonia, Latvia and Lithuania in cooperation between the three National libraries. In a planned workshop, these issues should be discussed by researchers, where including other researchers, the ones from the workshops from this pre-project are meant to participate.

Some general ideas presented by Anda Baklane
- Correlation between political change and lexical landscape of literature.
- Specific periods, regions, genres or authors can be studied. This type of study explores what new concepts were introduced or disappeared after regime change and what other changes in literary vocabularies happened in the backdrop.
- Mapping of novels (georeferencing).
- Specific periods, regions, and data sets can be studied. This type of study allows observing the development of the sense of space and the geographical awareness of various cultures and countries over time.
- Health topics in magazines.
- Specific periods, regions, data sets, and health topics can be studied (for example, women's and men's health in comparison etc.). This type of study provides insights both to the history of healthcare and to the social and cultural history.
- Metaphors in news sources.
- Specific periods, regions, data sets, and concepts can be studied. Metaphor (conveying meaning figuratively; conceptualizing a thing in terms of something else) is not only a stylistic device but also an indicator of how people perceive and evaluate things. Metaphor is a powerful tool that is frequently used in commerce and politics to subtly influence public attitudes towards certain events, individuals, products, or other entities.

CBEES – Centre for Baltic and East European Studies

CBEES at Södertörn University is a main player in Sweden when it comes to research on issues related to the Baltic Sea region. CBEES is also interested in taking part in the strategic development of digitization of the cultural heritage. CBEES has sent the following statement to the pre-project:

> The interest in digitizing archival materials, cultural artefacts and key published materials is generally strong among the researcher community. For this reason, the Centre for Baltic and East European Studies (CBEES) at Södertörn University – a key research environment for Baltic Sea studies in Sweden – is willing to explore the possibilities of hosting a workshop on digitization at CBEES. The aim of the workshop would be to invite Baltic Sea Region area studies specialists and other interested scholars in presenting suggestions and motivations for which materials would be of critical importance to digitize and why.

Summing Up and Recommendations

Common Challenges

All the three Baltic Sea States are up until now dependent upon money from the EU structural funds in addition to the priority that they are able to do within their respective budgets. None of the digital EU-projects are common projects for Estonia, Lithuania and Latvia.

The funding from these structural funds will expire in 2020, and there are still big challenges to be solved to achieve the ambitions within digitization programmes as they are formulated in the national strategies.

In this pre-project we have found that most of the challenges are common for all the three Baltic states, and the countries are concerned about the same issues.

Cooperation projects might therefore help to improve sustainability, quality and competence. Cooperation projects between Estonia, Lithuania and Latvia might also in further projects be extended to the whole Baltic Sea region – both for the benefit of the region, but also to influence the Baltic Sea Regions role in Europe when it comes to aggregation of digital material and the possibility to do research on the Cultural heritage of the region.

In addition to the need for money and to get as much material as possible digitized, the challenges defined by the three countries are about sustainability in technical infrastructure, interoperability and issues about how to cooperate within ALM institutions. Development of competence, both when it comes to IT and design of digital services, both within the libraries and among users are also a challenge. So are legal issues and how to communicate with researchers. (See above the chapters: "Challenges and Ideas for Further Projects" and "Research".)

Some of the issues to some extent also goes for Scandinavian libraries. That might give a common platform for Baltic/Nordic cooperation or exchange of experiences, but we do not go into depth of that here.

It is our valuation that it is important to focus on a few challenges and that most of them might be addressed in developing already existing strategies.

To Sum Up

The aim of the pre-project has been to study strategic management in the digital development. We have therefore not focused upon mass-digitization or technological solutions. It is our observation, however, that all the three countries have come quite far when it comes to repositories for digitized material and technological infrastructures.

It differs among the countries/institutions how much material they have, what kind of material, and who in the ALM sector is responsible for the digitization and preservation.

But – they are all concerned about achieving a critical mass to make it meaningful to give access to digitized material. This is of course a relative valuation, but it is our opinion that all the National Libraries have enough digital material to start focusing as much on giving access, as on preservation.

Although strategies for the whole ALM sector is important, we think it is a good starting point for the time being to concentrate upon the strategies for libraries. This is both because the national libraries are important nodes in the archiving and dissemination of the digital heritage, but also because it is easier to handle one type of institutions at the time, and there might be experiences to gain for others from projects in this field.

All the three National Libraries have a central position in preserving and giving access to the digital cultural heritage in their respective countries. All the three National Libraries have monumental buildings as a symbol of their position. All the three National Libraries have a "critical mass" of digitized material for preservation and partly for dissemination. These "facts" are a good starting point to meet the challenges in the digital development.

Strengthen Strategy

The main challenge now is to strengthen the strategy for giving access to the digitized material. This contains different issues where further projects might help to find solutions.

Out from what is said above, we recommend projects within the following three fields:

1. Strategic Plans for all National Libraries

Most of the issues defined in the challenges we have detected, should be addressed in a strengthened strategy for each National Library (and others as part of a national strategy). This will be commented below.

The issues are however common challenges for most cultural institutions, also the three partners in this pre-project. We should therefore discuss if it would be interesting – and possible – to establish a common project to share experiences while developing strategies for each country, each institution.

The strategic plans are updated yearly. It is the valuation of the pre-project managers that the plans ought to be more sustainable, have a more long-term perspective. A National digital strategy for cultural heritage is required 2020 by EU. The existing strategies should be overlooked and maybe extended to cover more formal collaboration and more stable network within ALM sector – or among libraries – both for cost-sharing and sustainability. All the three countries involved has expressed a need for consultation on this. Estonia, for instance, wants consulting from the pre-project's managers on developing and strengthen a digital library strategy: "Digital first".

This might be:
- Consultations for each National library;
- A common project between the three countries to share experiences while developing the strategies.

2. Copyright Issues and Private Public Partnership

The main strategic challenge, however, is to find the balance between archiving and presentation. To be able to give access to the digitized heritage, one must solve legislation and agreements among partners when it comes to copyright, licensing and transmission. This is both a political issue, a question of legislation, a question of Public Private Partnership and a question of funding – and cooperation.

Digitization of the cultural heritage demands new solution within the field of copyright and access. It is a radical change for libraries, especially for those who benefits legal deposit and has been used to free access of their material. Copyright issues and the legislation upon Legal Deposit should therefore be seen in connection.

The copyright issue is also important for research.

Licensing of the digital material is the most common way of handling the situation. But such solution is dependent on strong organizations on both sides; right holders and users/libraries/museums/archives.

The copyright issue might be approached as:

- projects to test agreements, e.g. within PPP
- develop legislation
- consulting
- seminars

3. Research, Education and Development

Within digital humanities, how can we use and promote the new digital technique to get the most out of it? What is the effect of digitization? Digital competence is needed within large groups of users, researchers, administrators, politicians. Dialogue with those groups is necessary to decide how it can be developed. Is competence centres a possible solution? What is a competence centre? Is it an institution at a University, or a part of another organization, or an independent "agency"? Could they be established on a regional basis, or in cooperation within Baltic region, together with Nordic countries (University of Stockholm, Södertörn University, Umeå, Uppsala, KTH – others? How are public libraries included? We may also follow up how the digital heritage material can be used in education on all educational levels.

We recommend that eventually new projects within the libraries use the project ideas for research in the chapter "Research" as legitimation of – and illustration on – the need for developing digital strategies. These might function as "best cases".

We particularly recommend cooperation projects with researchers

that might study the effect and impact on research when using digital material.

On background on what is said above, we see three kinds of projects:

- Library projects on infrastructure, competence development, copyright and management.

- Research projects where researchers use the digitized material.

- Cooperation between libraries and researchers, e.g. to study digital heritage impact and effect upon research, or when it comes to copyright issues.

Appendices

DIGITAL HUMANITIES AND DIGITAL MATERIAL
ON THE CULTURAL HERITAGE
IN THE BALTIC STATES

Workshop on research
The National Library of Estonia, Cupola Hall, Tallinn,
April 27–28, 2017

The idea of the Workshop is to present and focus on new ideas and make an inventory of ongoing research within the perspective of digital humanities. How to use digital material from the Baltic States to promote research, is a main question. There is also an ambition to look for possibilities to present future projects and we invite the participants to propose new ideas of importance for the Baltic states.

Programme
Thursday, April 27 (Arrival)
19:00 Dinner

Friday, April 28
        (Moderator Tomas Lidman)
09:00 Coffee
09:15 *Welcome* by Janne Andresoo, National librarian of Estonia
09:30 Vigdis Moe Skarstein: *Introduction of the project Baltic Sea Cooperation*
09:45 *Key Note on Digital Humanities* by Stefan Gelfgren, HumLab, Umeå University, Sweden
10:15 Questions
10:30 Rimvydas Laužikas, Vilnius University, Lithuania: *Building the Bridges: Digital Humanities and Digital Heritage*
10:55 Anda Backlane, National Library of Latvia: *Text Mining and Digital Libraries: Simple Solutions for Sophisticated Research*
11:20 Short break
11:35 Jelena Kallas, Institute of the Estonian Language, Estonia: *Language Monitoring and Tools for Lexical Analysis*
12:00 Discussions
12:30 Lunch
        (Moderator Gunnar Sahlin)
13:30 Kadri Vider, Universtity of Tartu, Center of Estonian Language Resources: *CLARIN Network and Language Resources in Estonia*
13:45 Annika Öhrner, University College of Södertörn, Sweden: *Art, Culture, Conflict: Tracing Memory Culture in Museums in and from the Baltic Sea Region after 1989*
        Time for questions is included after each presentation
14:15 Discussions: New ideas for research? Possible projects to apply for financing? Single projects or collaborative ones?
15:30 Summing up
        End of workshop

**Aim of the Project Baltic Sea Cooperation
for Information Management within the ALM Sector**

- Strengthen the digital cooperation in the region when it comes to library, archives, museums and other actors that support the infrastructure of culture, education and research.

- Building services and structures that are important and relevant for these purposes.

- Experience shows that to be able to do this efficiently, new ways of working is partly needed: digital management and digital humanities are words that may describe the process.

- This pre-project will address several issues as a preparation for a stronger application: Knowledge transmission, Infrastructure, Networking, Information management in a digital world.

- A well organized cooperation within the Baltic Sea Area will make it easier to integrate the whole Baltic Cultural Heritage in the rest of Europe.

Workshop on research

Södertörn University, November 13, 2017 (11.00–20.00)

As a part of the pre-project "Baltic Sea Cooperation for Information Management within the ALM Sector", we wanted to focus on the mutual dependency between researchers and ALM institutions when it comes to argue for digitalization of material. In the report of the pre-poject we as project leaders recommend some topics that might be important for the national libraries in the Baltic Sea to go further with.

One of these is to study and get experience and knowledge about how the institutions should have a dialogue with researchers to know how they should give priority to digitize material useful for researchers. The aim of the seminar in Tallinn April 28, 2017 was to see if this might be interesting for some researcher.

Those of you who are invited here came up with ideas either during that workshop or afterwards. As we now are finalizing the pre-project we want to give you the opportunity to develop these ideas as a first preparation to eventually apply for research money. On the agenda we have therefore given priority to the time you need together to discuss among yourselves the ideas that you find interesting. After that we will have a summing up to see how the report of the pre-project might be helpful for further argumentation for cooperation and financing.

Agenda

11:00–12:00 Introduction

12:00–13:00 Lunch and meeting with the library director of Södertörn and member of Bibliotheca Baltica Board, Jonas Gilbert

13:00–15:00 Group discussions among those who have common ideas for projects for cooperation on research

15:00–15:30 Information on, and if possible visit to, CBEES by the director Joakim Ekman

15:30–17:00 Presentation of projects

18:00 Dinner