PUBLIC-PRIVATE PARTNERSHIPS AND COLLABORATIONS IN THE CONTEXT OF LIBRARY TECHNOLOGY (PILOT STUDY)

A LANDSCAPE ANALYSIS IN DENMARK 2023-2024

Danske Fag-, Forsknings- og Uddannelsesbiblioteker

LIBER

ALEXANDRA INSTITUTE

Contents

01 STUDY OBJECTIVE

The interview study focuses on partnerships and collaborations that libraries establish with both commercial and non-commercial suppliers of library technology. DFFU and LIBER hope that an understanding of the formal and informal aspects of current public-private partnerships and collaborations can be used to inform future directions for the members of DFFU and LIBER.

The objective is to analyze partnerships and collaborations between Danish research libraries and technology companies from 2019 until today, focusing on those that involve new and innovative technologies.

Executive summary

The pilot study, conducted for DFFU and LIBER, delves into the dynamics of partnerships and collaboration formed by Danish research libraries with technology providers, both commercial and non-commercial. The primary objective is to glean insights into the formal and informal facets of these collaborations, aiming to inform future directions for the DFFU and LIBER members. The inquiry is structured around these key questions:

- **What are the characteristics of the current partnerships and collaborations?**
- **What is the impact of the partnerships and collaborations on libraries and their services?**

The examination draws from semi-structured qualitative interviews, comprising 10 interviews conducted with representatives from Danish research libraries and an additional 5 interviews with technology providers. The interviews were conducted between October 2023 and January 2024. These interviews have been analysed to find common themes regarding:

- Characteristics of recent years collaborations – in what terms are the collaborations described?
- New tendencies in recent years' collaborations and the role of libraries regarding development of emerging technologies.
- How do the collaborations impact the libraries and their services?
- Experiences, lessons learned and recommendations for best practices based on recent years' collaborations.
- Start-up engagement.
- Views on the technology landscape and frontrunners.
- Level of in-house development competencies.

ABOUT THE COMMISSIONERS DFFU AND LIBER:

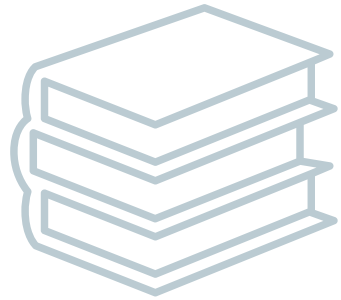
- The Danish Research Library Association DFFU (Danske Fag-, Forsknings- og Uddannelsesbiblioteker) is a joint organisation for research, academic and educational libraries in Denmark and their employees. The association promotes initiatives for the benefit of the academic and research libraries and the collective library system. It is a forum for consideration and discussions on library issues and politics.
- LIBER (Ligue des Bibliothèques Européennes de Recherche) is the voice of Europe's research library community. Its mission is to provide an information infrastructure enabling world-class research at LIBER Institutions. The organisation promotes and advocates for European libraries in all European and national fora where the voice of LIBER needs to be heard.

Summary

A general discrepancy in the conception of what characterises collaborations between providers and libraries

Libraries have shown confusion regarding their recent partnerships with technology providers, viewing them mostly as traditional customer-supplier relationships. Some libraries remember a past of more direct involvement in technology development, indicating a closer relationship with suppliers.

However, providers stress their focus on engagement and building lasting partnerships and user communities, rather than just selling. This reveals a discrepancy in the understanding of what constitutes collaborations between providers and libraries.



Key findings – library interviews

Characteristics of current partnerships and collaborations

- **Perception of partnerships:** Libraries often perceive themselves as ‘customers’ rather than partners with many providers. There is confusion about the definition of ‘partnerships’, with many libraries not considering their relationships with technology providers as ‘real partnerships’.
- **Major suppliers:** Relationships with major commercial suppliers are viewed as contractual rather than partnerships. Libraries feel they buy an ‘off-the-shelf’ product with little opportunity for customisation. Examples of ‘real partnerships’: Libraries consider open-source collaborations, collaborations with comparable institutions, user communities, and certain customer-supplier relationships as ‘real partnerships’.
- **ALMA Consortium:** Eight out of ten libraries are members of the ALMA consortium, which is seen as a new form of collaboration in recent years. The consortium provides a platform for libraries to work together, exchange advice, and engage with ExLibris in a responsive manner.
- **Start-up collaborations:** Libraries are often approached by start-ups but are hesitant due to concerns about economic sustainability and the start-ups’ ability to navigate the complexities of the research library world.

Impact on libraries and their services

- **Joining the ALMA wave:** Most of the libraries are using ALMA as their integrated library system or are in a transitioning process, which has various impacts – for most, it’s beneficial but some also observe a trend towards a narrower technology landscape.
- **ALMA consortium:** The consortium’s collaboration pushes development wishes and is beneficial as several institutions unite for a common cause.
- **In-house development competencies:** Four out of ten libraries have in-house development competencies, allowing them to modify and build on top of existing systems. This flexibility enables them to create specific services and exciting content.
- **Supplier dependency:** Libraries often see their relationships with suppliers as customer relationships. They purchase off-the-shelf products, leading to less customisation and more standardised configurations. This dependence can lead to vendor lock-in, making it challenging to transition to a different vendor. This supplier dependency is also related to:
  - **Access to resources:** The consolidation in the academic publishing industry has led to a few large publishers dominating the market, dictating pricing and licensing terms. This situation often forces libraries to prioritise subscriptions based on their patrons’ needs.
  - **Focus on integrated solutions:** The focus on more integrated solutions is generally seen as beneficial as it streamlines workflows, saves resources, and improves data management. However, it can also reduce the libraries’ influence on specifications.

Key findings – library interviews

Characteristics associated with successful collaborations

- Collaborations with similar libraries sharing a common agenda, both domestically and internationally.
- Mutually beneficial arrangements where both parties gain something from the collaboration.
- Close collaborations with parent institutions to effectively utilise technical resources.
- Enhancements in the quality and experience for library patrons.

Characteristics associated with unsuccessful collaborations

- Difficulties with providers when upgrading tools, leading to a switch based on the library's judgment and preferences.
- Investment in technologies that were discontinued without a replacement, emphasising the need for diversification and contingency planning.
- Caution against collaborations with smaller businesses or students due to sustainability concerns in the long run.
- High costs associated with system changes, leading to the implementation of cost-effective temporary solutions.

Technology landscape

- **AI integration:** Libraries are interested in AI but find it abstract to integrate effectively into their systems.
- **AI strategies:** A university library is focusing on supporting access to AI platforms, testing ScopusAI in collaboration with Elsevier.
- **Competence development:** A university library has introduced controlled tools for employees to gain experience with AI.
- **Role of libraries:** Libraries need to make themselves interesting as information institutions to play a significant role in the development of AI tools.
- **Responsible AI application:** DFFU/LIBER are key actors in advising responsibly on AI.
- **Scientific integrity vs innovation:** the libraries point to the delicate balance between maintaining scientific integrity and fostering innovation in the context of AI.
- **AI use-cases:** General discussions on AI use-cases were unspecific. However, image-to-text transcription for digitisation of materials and efficiency in back-office cataloguing tasks were mentioned.
- **Technological transformation:** Libraries have a history of adapting to new technologies, indicating potential for successful AI integrations.

Key findings – provider interviews

- **Collaborative partnerships:** Libraries are viewed as valued partners, not just clients. This involves engaging closely with development partners and early adopters to understand needs and provide access to new systems for testing and feedback.
- **User communities & innovation:** Leveraging user communities fosters regular interaction and dialogue about products and services. Encouraging collaborative innovation through platforms for idea exchange demonstrates a commitment to meeting the evolving needs of the library community.
- **Collaborative activities:** The providers engage in various activities with libraries, such as workshops, interviews, and sprints, aimed at understanding library needs, receiving feedback, and fostering communication.
- **Tendency for more collaboration:** There is an increasing trend of collaboration among libraries, driven by the recognition that it is more efficient and creates better services.
- **Emerging technologies:** Libraries are increasingly concerned with ethical considerations surrounding AI technologies. There is a growing recognition among libraries that they need to be less conservative and more willing to experiment with AI technologies to meet evolving user demands.
- **Open access readiness:** Libraries' readiness for open access varies significantly, with some regions like Luxembourg and Switzerland being well ahead in the transition.
- **Open-access and open-source providers:** Initiatives such as ChronosHub and OJS represents alternative directions for libraries' role in technology development.
- **Future technology landscape:** The future technology landscape within libraries is characterised by cautious optimism, a readiness to embrace change, and a recognition of the potential for AI to augment library services and operations.

Key findings – provider interviews

Best practice for library collaborations

Rapid feedback: When developing a platform or IT product, it is crucial to receive rapid feedback to ensure its quality. This is part of a continuous learning process.

Patience: Establishing a collaboration takes time.

Interest and curiosity: The interest and curiosity from the libraries' part are important for good collaborations.

Small steps: It is important to take small steps and make it a small investment for the libraries. This approach can prevent libraries from feeling overwhelmed by large capital investments.

Engagement in conferences: Active engagement in talks at conferences, rather than just participation.

Make use of user communities: The use of user communities, work groups, informal agreements, user studies, and interviews can be beneficial. Other industries could learn from this approach.

Common misconceptions/pitfalls in collaborations between providers and libraries

Understanding differences: Libraries need to understand the significant differences between collaborating with a start-up and big providers and adjust their expectations accordingly.

Cultural differences: Providers should be aware of the cultural differences between fast-paced, eager start-ups and libraries, which often lack the resources to move quickly.

Understanding the effects of economies of scale: Libraries may not fully understand the effects and economies of scale, standardisation, and sustainability in a global context. Providers should be upfront about what happens behind the scenes of a given technology.

Balance between standards and customisation: It's important to find a balance between more standards (from the providers' perspective) and more customization (from the libraries' perspective).

Respect libraries' unique focus: Libraries are not typical businesses – they are focused on delivering services for their users rather than making money. New vendors should be aware of these different attitudes.

Recommendations

- **Strategic partnership development:** Libraries should engage smaller suppliers as infrastructure providers, recognise the role of both standardised and open systems, and utilise consortium setups to impose higher demands on the major suppliers.
- **Collaboration assessments:** Collaborations should be assessed based on predefined criteria. Libraries should also consider evaluating various types of suppliers on different criteria. When adopting new technologies, libraries should consider if they're partnering, collaborating, or just acting as customers.
- **Overcoming collaboration barriers:** Libraries should find solutions to overcome barriers associated with start-up collaborations and non-commercial open-access initiatives.
- **Open-source and In-house collaborations:** Libraries should orient towards open-source technologies to avoid vendor lock-in and consider in-house collaborations with parent institutions to simplify processes.
- **Communication of needs:** Libraries should maintain clear communication channels with the technology partner, make risk assessments, and consider collaborations with similar institutions on joined needs before reaching out to a supplier.

Best practises for successful and sustainable partnerships and collaborations

- **Contractual clarity:** Libraries could ensure contractual clarity and transparency by obtaining a complete understanding of the framework conditions when engaging with new suppliers and being meticulous about requirement specifications in new contracts.
- **GDPR compliance:** Libraries should hire a GDPR specialist to ensure compliance with data protection regulations for online platforms and engage in the exchange of insights with other libraries concerning data protection regulations.
- **Maintain ownership over data**
- **Organisational implementation:** Libraries should focus on the organisational implementation of the systems and apply agile methods in development projects to achieve the desired functionality in the system in collaboration with technically skilled people.
- **Role in open-source and open-access collaborations:** Libraries should continue fostering their direct and important role in development collaborations related to open-source and open-access.

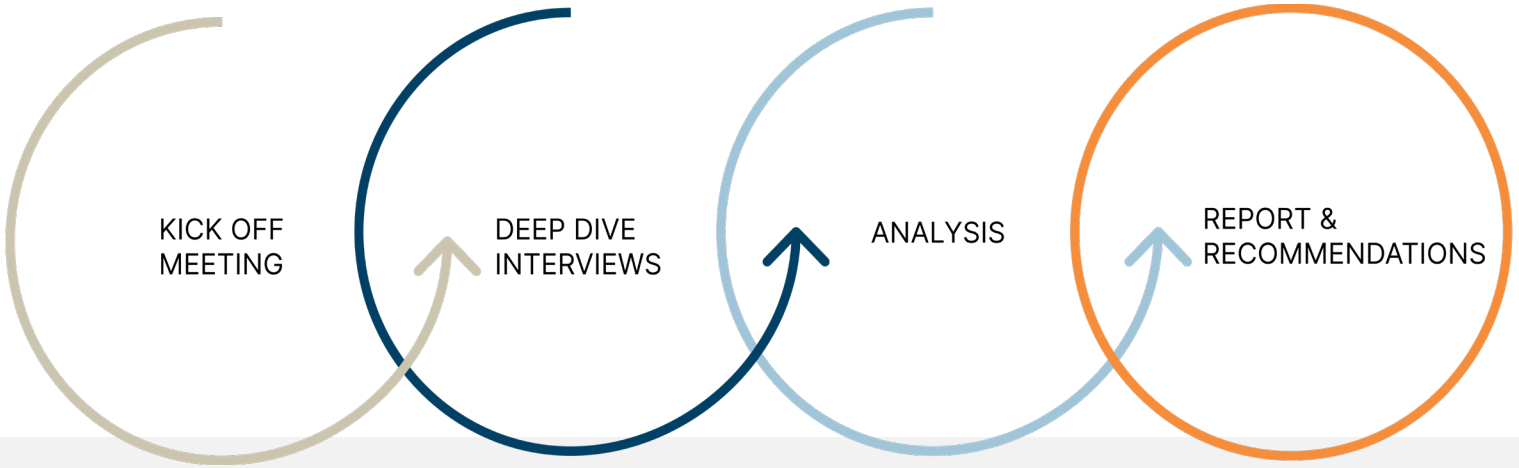
LIBER and DFFU: are important stakeholders in addressing the balance between safeguarding information integrity and fostering library innovation with AI.

02 APPROACH, METHODS AND INTERVIEWEES

This chapter provides an overview of the research methods employed in this study, ensuring alignment with the objectives specified by DFFU and LIBER. This introduction sets the stage for a detailed exploration of our research methods, data collection techniques and analytical procedures.

Method

RESEARCH DESIGN



- **Meeting with project group and steering group**
- **Semi-structured interviews with libraries and technology providers**
- **Audio recording and notes**
- **Identifying patterns and themes**
- **Identifying recommendations**

Approach

The focus of the interview study is on partnerships and the collaborations that libraries build with commercial and non-commercial suppliers of library technology. DFFU and LIBER hope that an understanding of the formal and informal aspects of current public-private partnerships and collaborations can be used to inform future directions for the members of DFFU and LIBER.

The objective is to analyse partnerships and collaborations between Danish research libraries and technology providers from 2019 until today, focusing on those that involve new and innovative technologies (e.g. machine learning, image or natural language processing and other implementations of Artificial Intelligence (AI), as well as robotics, virtual reality / augmented reality (VR/AR) in the context of research libraries and their services).

The study should identify success stories, collect lessons learned from failures, and detect opportunities for improvement.

In this regard DFFU and LIBER wish to gain knowledge on:

- **What are the characteristics of the current partnerships and collaborations?**
- **What is the impact of the partnerships and collaborations on libraries and their services?**

INTERVIEWEES

The interviews were conducted between October 2023 and January 2024.

- 10 library interviews with four types of libraries recruited in close collaboration with DFFU and LIBER
  - University library
  - University College library
  - Smaller research library
  - Educational library

- 5 technology provider interviews. Recruitment of relevant technology providers for interviews is based on knowledge gained from the library interviews in close collaboration with DFFU/LIBER.
  - Elsevier
  - ExLibris
  - ChronosHub
  - Keenious
  - Open Journal Systems

Method, data collection and analysis

The study has applied the same interview guide in all library and technology provider interviews (see appendix). To gain an in-depth understanding of the libraries' different perspectives on partnerships and collaborations with technology providers, the interviews were conducted using a semi-structured approach.

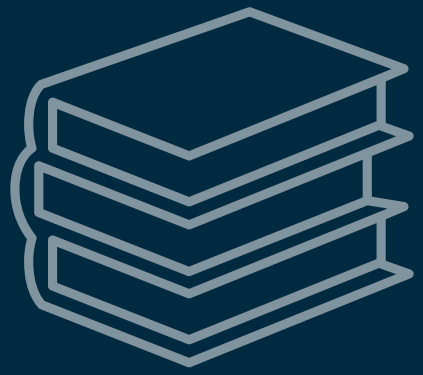
A semi-structured interview is a qualitative research method that combines elements of both structured and unstructured interviews. It provides a flexible framework for conducting interviews, allowing for a certain degree of standardisation while also allowing the interviewee to explore a specific topic in more depth. For this analysis, all interviews were centred around the same set of questions. However, emphasis varied depending on the specific focus that was most relevant to each individual library and technology provider.

DATA COLLECTION

A common feature of all interviews is that they are conducted by two interviewers from the Alexandra Institute. One interviewer facilitates the conversation, ensuring it covers the key questions, while the other is responsible for taking comprehensive notes during the interview. With the participant's consent, the interview has been audio recorded to ensure accurate focus on the key points of the interview.

ANALYSIS APPROACH

After each interview session, a short summary has been created in the form of 'interview downloads' (see the appendix for the download template). These interview downloads have undergone thematic coding, where themes and patterns have been identified for the final report.



03 CHARACTERISTICS OF CURRENT PARTNERSHIPS AND COLLABORATIONS

Based on the 10 interviews, libraries' partnerships and collaborations often relate to the Danish ALMA consortium, as it has significant influence on the present and future. Additionally, libraries also express that they often perceive themselves as ‘customers’, rather than having a partnership relationship with many of the providers. Regarding partnerships / collaborations with startups, libraries are primarily somewhat hesitant.

What do you mean by partnerships?

I don't think that we have that type of collaboration/partnership with technology providers. The relationship we have with these companies, I would describe as a customer relationship. However, if you still think it would make sense for us to participate in the study, I'm certainly willing to attend a Teams meeting.

Partnerships? We don't have that. We see ourselves as customers and subscribers to systems.

SEVERAL OF THE LIBRARIES WERE RELUCTANT TO PARTICIPATE

We experienced hesitancy from the libraries during the recruitment process because several of them did not believe they had any 'real' partnerships with technology providers. Consequently, they didn't think they could make any relevant contributions to the study.

The Commissioners defined partnerships in the following terms:

> *The term refers to a contractual relationship between a library and a library technology provider, who can be a private-sector vendor or a public authority providing similar services. The contract may be an outcome of a procurement process or based on other types of contacts and negotiations.*

This definition of partnerships created confusion among the libraries, who in most cases pointed out that, in their view, such a description of a collaboration between a library and a technology provider cannot be described as a 'real partnership'.

Characteristics of the current partner-ships and collab-orations

We are beginning to feel the impact of their size, which affects how we collaborate. We are not as involved in requirements specifications but rather in expressing development wishes. Currently, the suppliers are setting the standard, and our relationship now resembles the typical interactions with other suppliers, encompassing customer relations and product purchases.
- University library

When it comes to partnerships, from our perspective, it becomes more user communities, where we try to help each other through. What can we do that would make sense for a larger user base? We need to get used to thinking about everyone and not just our own current needs.
- University College library

MAJOR SUPPLIERS SUCH A EXLIBRIS AND ELSEVIER

Partnerships with the major suppliers of library systems and research information management systems are not considered to be actual partnerships. In general, the libraries feel that they buy an ‘off-the-shelf’ product and that the relationship with the providers is solely contractual. Some libraries describe an experience of being ‘at the mercy of the suppliers’ in terms of functionality, which is determined by the suppliers and leaves little opportunity for customisation. The configuration within the framework is set by the supplier. Otherwise, if one's institution desires influence, the libraries recognise the need to unite as a more cohesive community with shared wishes and needs towards the suppliers and rely on influence through that channel.

Examples of 'real partnerships' according to the libraries

- Open-source collaborations more closely resemble partnerships that parties have entered more voluntarily and where they share common interests.
- When comparable institutions work together to address common challenges and then approach a supplier with them.
- User communities instead of direct partnerships with vendors.
- A university library mentions their partnership with Elsevier on ScopusAI and deems it “an interesting customer-supplier-relationship”. The institution act as test subjects for the AI solution Scopus. The institution provides feedback on how the user interface is experienced. They find it to be very fascinating and of great organisational value to be in this collaboration.
- One library operates independently in Denmark and develops library systems and technologies of their own due to the special needs of their patrons. “We have lived in a bubble with ourselves and as the only ones in Denmark, we have to look outside the country’s borders.” Mentions collaborations with Sweden, Norway, Switzerland, and the Netherlands with a focus on advancing a common agenda in terms of developing services for the visually impaired community that these types of libraries serve.

"Joining the ALMA wave"

All of us who are part of the consortium work together; some have more resources than others and we help each other, giving good advice. We have direct customer contact with, for example, ExLibris, which works very well. Things move faster when starting a case. And then we, together with the rest of the consortium, meet with someone from ExLibris where we go through the cases that need to be pushed, which is important. They are relatively responsive.
- University library

I view it as a natural progression to be part of a large library, for the benefit of the users. It has been an incredibly rewarding collaboration. It involves joint competency development, exchange of ideas, etc.
- Smaller research library

EIGHT OUT OF THE TEN INTERVIEWED LIBRARIES ARE MEMBERS OF THE ALMA CONSORTIUM, WHICH IS DRIVEN BY THE THE ROYAL DANISH LIBRARY

In relation to ExLibris ALMA the licensing consortium was mentioned frequently in the interviews as an example of a new collaboration.

Strengths associated with this collaboration

- Within the consortium, there is a well-established collaboration. Libraries of varying sizes and resources work together within the consortium, exchanging advice and supporting one another. Regular meetings with ExLibris personnel address important cases and ensure responsiveness.
- The consortium collaboration seeks to provide the necessary authority to engage with ExLibris in a responsive manner.
- Benefits of shared supplier – libraries share the same supplier, push the agenda for modifications when mutual needs arise.
- Avoiding running a demanding tender process.

"Joining the ALMA wave"

We have avoided a tender process by joining the ALMA consortium.
- University library

This is in line with our digitalization strategy, aiming to collaborate and use the same systems as other libraries. There are also some financial benefits to participating in this collaboration.
- University library

Weakness – "vendor lock-in"

Although a majority of the libraries describe the national tendency to implement ALMA as a positive development in recent years, a few also mentions a weakness in terms of how it affects collaboration dynamics between the major suppliers and the libraries. This is characterised as a 'dependency relationship', where the libraries find themselves to be 'vendor locked-in'. Some also point to the effect of a narrowing technology landscape in Denmark, as many institutions tend to choose a single supplier to cover all their needs.

Not on the ALMA wave

- One smaller research library couldn't join the consortium due to insufficient financial resources when they recently had to change their integrated library system.
- One university library switched their integrated library system from ExLibris Aleph to an open-source back in 2017: "We try to avoid vendor lock-in so that systems can interact with our own systems".

Start-up collaborations?

We are sorry for how dismissive we have to be towards start-ups because they don't fully grasp the complexity of it all.
- University College library

At one point, I received an inquiry from a new company regarding media monitoring, but we chose not to pursue it further due to resource constraints.

RESERVED APPROACH TO START-UP COLLABORATIONS

Almost all the libraries mention that they are relatively often approached by start-ups, particularly in relation to content management. However, several of the libraries have a number of concerns that prevent them from actively pursuing start-up collaborations. These concerns are related to economic sustainability and the start-ups' ability to navigate the complexities within the research library world.

One example

Collaboration between The Royal Danish Library and the Danish tech start-up MediaCatch (MediaCatch uses AI for media monitoring).

The collaboration is focused on making the archives of the Danish Broadcasting Corporation accessible online for library patrons.

It would be interesting if...

The libraries are well aware of the fact that they possess a wealth of interesting materials that could serve as data for machine learning models.

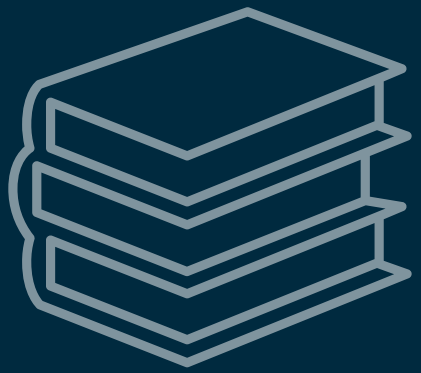
In this regard some of the libraries point out that a type of start-up collaboration that could be of great interest for them would be if they could establish a partnership with a technology provider, allowing the provider to access and train machine learning models on their data, and in turn, the institution can acquire the developed solution at a discounted price.

One library points to the same but also notes that the impression they get from some AI start-ups is not one that is deeply concerned with becoming experts within the research and library world with integrity.

Start-up collaborations?

Libraries emphasise that their technology strategy is centred on turnkey systems, leading them to rarely engage in partnerships with smaller suppliers.

We often come across small start-ups that want to do something for us. Our experience is that it doesn't last long, and we put a lot of work into it and then they soon finish. It might sound a bit boring, but we are cautious about entering into partnerships with smaller companies; it's not always sustainable with small suppliers that are on an uncertain foundation regarding staffing in case of illness, etc. We have a technology strategy that focuses on turnkey systems, which suggests that large suppliers have it easier, and we now rarely enter into partnerships with small suppliers.
- University library



04 IMPACT ON LIBRARIES AND THEIR SERVICES

This chapter unravels the implications of the ALMA consortium on library operations, shedding light on the in-house development competences that some libraries possess, which make them capable of modifying and building software for themselves, thus positioning them as technology providers and avoiding 'vendor lock-in'. Moreover, the chapter examines the impact of large companies on the library landscape, analyzing the implications of their presence on market dynamics.

ALMA Impact

We are dependent on following trends in the KB (Royal Danish Library). Because we are small, we could also implement new things faster.
- Smaller research library

We will be working within the national communities and exploring how they have dealt with it. When it comes to partnerships, from my perspective, it becomes more user communities, where we try to help each other through. What can we do that would make sense for a larger user base? We need to get used to thinking about everyone and not just our own current needs.
- University College Library

Several libraries are either already transitioning to or in the process of transitioning to ALMA. This has proven to have different impacts on the libraries.

Library Community

"The consortium's collaboration facilitates the development of solutions. It is easier to push something through development when multiple parties come together for it".

Alignment and Cost savings

For many libraries, it's not just about 'aligning direction'. It can reduce the costs associated with licensing, maintenance and development

"This is in line with our digitalization strategy, aiming to collaborate and use the same systems as other libraries. There are also some financial benefits to participating in this collaboration." (University Library).

A smaller research library points out that they do not have as many resources as the larger ones in Denmark, so they are feeling dependent on following the technological trends set by the Royal Danish Library.

Overall, the transitioning to ALMA represents a significant shift for the libraries' internal organisations, but it's not all libraries who see ALMA as beneficial to their organisations:

"The technology landscape has become narrower and narrower; everyone uses ALMA (library system), it's becoming uniform. We don't benefit from that." (University Library).

In-house development competencies

The fact that we function as a technology partner in-house makes us very agile and enables us to do some exciting things. We have digitised a lot of literature and created a technical cultural heritage. It is also interesting for our employees to do something different, and then it is also super fun content for the patrons.
- University library

In connection with the Corona lockdown, we were able to quickly pivot, shutting down physical services, managing payroll, etc. This was something we could handle internally.
- University library

LIBRARIES WITH IN-HOUSE DEVELOPMENT

- 4 out of the 10 libraries have in-house development competencies in terms of making use of open-source – e.g. modifying and building on top of existing systems.
- The libraries that have skilled in-house development consider it to be a strength in terms of creating good solutions for their patrons. It gives them flexibility in terms of making specific services and exciting content with their materials.
- 1 of the university libraries have developed their own open source-based integrated search platform supporting open science available to all staff and students (as well as library visitors) in its premium version and to other patrons in its public version. They have also developed a data platform for discovering university research, utilising a data repository through FigShare. When they choose to collaborate with external providers, they do so with the primary purpose of enhancing their own capabilities and ensuring that the outcome can be integrated into their own open-source solutions.
- Another smaller national library handles a substantial portion of development internally, with active use of open source to develop services. They also serve as a software provider for other libraries who serve patrons with special needs.

Our area is special; our materials are special, and therefore there are not many standard systems out there.
- National Library

We don't have a large IT department like the big libraries, so it can be difficult to collaborate with others on IT solutions. The big libraries find it easier to sit down and develop something because they have it internally.
- University College library

At the mercy of the suppliers

Many of the partnerships described by the libraries are seen as customer relationships. They purchase off-the-shelf products. Reflecting on the past, some libraries recall a time when they had a more direct involvement in technology development, suggesting a closer and more collaborative relationship with suppliers. Customized elements are being reduced in favor of more standardized configurations.This affects the libraries in terms of:

Access to resources

The academic publishing industry has seen significant consolidation over the years, with a few large publishers dominating the market which means that the publishers have a greater leverage to dictate pricing and licensing terms. This means that some of the libraries often have to prioritize subscriptions based on the needs of their patrons.

The open access movement aims to make academic research freely accessible to everyone, but this also impact the libraries in others way because they have to navigate in a market of copyright laws.

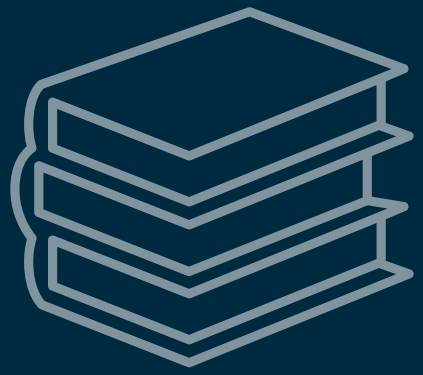
Vendor lock-in

Libraries can be heavily depended on a vendor's products because the systems is heavily integrated into the library. It can be challenging to transition to a different vendor because it takes up valuable resources. Which both affects the libraries internally but potentially also the users.

"Where development becomes frustrating is when bills increase for us without us having requested that 'improvement', which is justified by development work."

Focus on more integrated solutions

The focus on more integrated solutions is mostly seen as beneficial because it streamlines workflows, saves resource, gives better data management etc. But in some cases, it gives the libraries less influence on the specifications: “Currently, the suppliers are setting the standard, and our relationship now resembles the typical interactions with other suppliers, encompassing customer relations and product purchases.”



05 SUCCESS STORIES AND LESSONS LEARNED

Even though many libraries may not feel they have had the most interesting partnerships recently, there are still some positive experiences that stand out from the interviews.

Here, some of the success stories are highlighted, along with what characterizes them.

SUCCESS STORIES

Doing something together makes a difference; we could divide the tasks and focus on different elements […] We align internally (university college libraries) before they (the providers) hear from us – that's an important point.
- University College library

CHARACTERISTICS OF SUCCESSFUL COLLABORATIONS AND PARTNERSHIPS FOR LIBRARIES

- Collaboration with similar libraries that share a common agenda both within and outside Denmark's borders.
- Mutually beneficial arrangements where both parties gain something from the collaboration. For example, the library provides access to data, and the provider uses the data to benefit the library (with the library receiving the solution at a negotiated price).
- Close collaborations with the libraries' parent institutions allow the libraries to make good use of their technical resources.
- When it enhances the quality and experience for their patrons.

Success stories

STORY 1 · "Workzone" (EDRMS) collaboration with KMD (major software provider in DK) and another university library

By joining forces with another university library, they became a more substantial user group and could articulate early needs for adjustments.

STORY 2 · Infomedia (Danish media monitoring company)

The Royal Danish Library has collaborated with Infomedia for many years on press clippings and media monitoring. Infomedia has customised their solution to meet the needs of the institution, and therefore the institution experiences that they can deliver a better solution to the users.

STORY 3 · MediaCatch collaboration (Danish start-up who offers tailored AI solutions for media monitoring)

The Royal Danish Library describes this collaboration as an example of a highly specialised partnership, given their national library obligations to preserve cultural heritage. It's the kind of project where they either must handle it internally or seek out very specialised providers, as in this case.

STORY 4 · 'Freemium-model' collaboration with Scopus AI

"A challenge for the suppliers is to get customers on board, and here, institutions utilise so-called 'freemium' models, where suppliers provide something for free […] We are currently testing Scopus AI, and its highly interesting to explore it from an organisational perspective. For us, it is an investment in gaining insight into how this product can function, but without any secure guarantees of the value it will create for users in practice" – University library.

STORY 5 · Possible open-source collaboration with Cambridge Digital Library

"Some employees attended a conference where they received a presentation on it (Cambridge Digital Library), and we had previously attempted to implement something similar for several years. After the conference, they returned home with knowledge about it, and some employees visited Cambridge, resulting in the preparation of a project application."
– University library

(Note: Even though a project application was submitted to the institution's IT department, the institution is considering to opt for ALMA digital instead of pursuing this collaboration further).

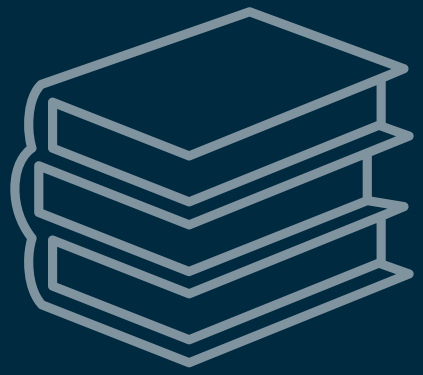
Lessons learned

We opted to utilise Google Nest (smart speakers) to create voice access to our collections, as their users struggle with reading text in one way or another. It worked really well; we conducted a pilot project that yielded fantastic results. Then, Google abruptly discontinued the entire framework called 'Voice Actions' without providing any replacement. So, relying on a major technology provider proved risky.
- NOTA

I have been involved in getting a new reference tool. We struggled with it; they made a new version of their program, and it didn't work well for us. And that's not useful for us, so we switched to something else. And thus, we had to look for ourselves and chose based on our own preference.
- University college library

In addition to success stories, several libraries also highlighted collaborations that unfortunately did not end well:

- When asked to reflect on lessons learned from collaborations, one of the university college libraries tell this story: The library has been in the process of selecting a new reference tool. They encountered difficulties with their old provider when a new version of the program was released that failed to meet their needs. Consequently, they opted to switch to a different tool, relying on their own judgment and preferences to make the choice.
- Another library had invested in the Google Framework Voice Actions to create voice access to their collections, enabling them to be read aloud, among other functions. The pilot study went well with positive results. However, suddenly Google chose to discontinue it - without mentioning a possible replacement. This decision significantly impacted the library, highlighting the need for diversification and contingency planning in partnerships with large entities.
- At a university library, smaller businesses or students may approach with an idea, but they caution that one must be careful as it may not always be sustainable in the long run, and the library itself invests many resources into it. They now have a process that supports the purchase of systems from larger suppliers, as it often can be more reliable and sustainable in the long run. It is important to undergo a careful process to avoid investing resources in projects that are not viable in the long term.
- A smaller research library wanted to change the default display of these codes in their system from DK5 to NLM but was met with an offer from the vendor, which would cost a lot of money. The library was told they could join forces with other libraries that also wanted the change and pay half the price. As a small library that found a workaround which cost nothing. Sometimes it is more cost-effective or practical to implement temporary solutions, even if they are not ideal.



06 TECHNOLOGY LANDSCAPE

In the interviews, we asked the participants to describe how they have perceived the technology landscape in recent years, focusing on its effects on their work, as well as the challenges and new opportunities it presents.

Additionally, we asked the libraries to identify technological frontrunners, both among other libraries and providers.

An eye on AI

All the libraries have their eyes on AI. However, several libraries still find it too abstract to effectively integrate it into their systems.

It will be crucial for us to explain our competencies as a library. Our information competencies have never been more relevant.

Strategies for navigating the threshold into an AI future

- One university library already focuses on how to support access to AI platforms with their collaboration with Elsevier on testing ScopusAI.
- Competence development: One university library has opened up for some controlled tools that their employees can try out in order to gain experience.
- The libraries are curious and perceived as ready, but it is important that they make themselves interesting enough so that they will play a big part in the development.
- DFFU/LIBER are mentioned as important actors in relation to how to apply AI in a responsible fashion:
  - There is a delicate balance between scientific integrity and innovation – how should library institutions address this concerning AI?

Use-cases mentioned in interviews

In general, the discussions on AI were at a very general level, and use cases were quite unspecific, but a few were mentioned:

- Image-to-text transcription technology in relation to e.g. digitisation of materials.
- Back-office tasks related to cataloguing in general can be done more efficiently.

Libraries have always been in a state of technological transformation

- Even though the specific use cases might not be elaborate, some of the libraries point to the fact that, historically, libraries have always been adept at adapting to new technologies: "We have been working with transformation forever".

An eye on AI

There is the challenge of new technologies such as chatbots, ChatGPT, and speech-to-text. All these new possibilities raise the question: How can we work with them? We not only experience the impact of the technology but also the ability to apply it in certain areas. These new technologies impose new demands on employee competencies. Simultaneously, we encounter situations where students inquire about non-existing articles generated by ChatGPT. This also raises questions about legality and whether we should wait for systems that allow more control of data, like Microsoft Azure. These considerations constitute a broad aspect of our challenges.
- Royal Danish Library

We have only seen the tip of the iceberg. In the first phase, it is competence development. What we have done ourselves is to open up some controlled tools, which will redefine our tasks, and where does it make sense to make use of them.
- University library

Right now, we are looking into image description with AI. For our users, there are so many possibilities that open up, especially image descriptions that take hundreds of hours, which can be done better, faster and cheaper.
- NOTA

How to ensure a responsible look at AI suppliers from a library perspective?

In relation to the wave of artificial intelligence, we observe two types of suppliers:

Some of them wish to participate alongside the community to establish the framework for good scientific practices. These suppliers take an active stance and become engaged actors in the scientific environment, contributing to defining these frameworks.

Other suppliers are more indifferent, resulting in those who adhere to the rules appearing somewhat dull, as things slow down, and it becomes a matter of risk tolerance. This raises questions about the responsibility we assume for the products we deliver. Organizations like LIBER can collaborate with suppliers to qualify who the good suppliers in the market are.
- University Library

Different views on the need for in-house development

- There is an ideological element at play for some libraries in their attitudes towards technology providers: How much should we contribute to open-source in commercial solutions? However, one institution believes that one should be cautious with this stance – instead, the focus should be on "finding the right business model to coexist with these technologies."
- One university library describes that they decided to switch to ExLibris ALMA about 5 years ago, partly because they weren't satisfied with their own in-house development competencies and found the Royal Danish Library to be more capable.
- One university library that has abandoned having an internal development department mentions another university library as a technological frontrunner in terms of the in-house developed systems and the strengths associated with that, but they also find this strategy to be 'bold': "I don't know how wise it is... We are no longer there in any case."

We try to avoid vendor lock-in so that they (systems) can interact with our own systems. It should be a given that it (a system) can interact with our own system. When we collaborate with others the systems must play into our own open-source development. We have insourced quite a bit while others have outsourced.
- University library

Open source is a way for us to avoid vendor lock-in, being agile, and fostering innovation. It means we are able to tailor services to user and university management needs, and develop solutions required by the university, such as delivering research analytics to university management. We can integrate between systems instead of opting for a single commercial mega-store and a supplier-customer relationship without influence, as we have experienced with Elsevier on Pure.
- University library

To engage in open-source collaboration or opt for commercial supplier?

ON THE POSSIBILITY OF ENGAGING IN A COLLABORATION WITH CAMBRIDGE DIGITAL LIBRARY

One university library has established an open-source collaboration with Cambridge Digital Library. However, due to a recent decision to implement ALMA as their integrated library system, they are now hesitant about whether to continue that development collaboration or opt for the ALMA Digital solution instead.

Some employees attended a conference where they received a presentation on it, and we had previously attempted to implement something similar for several years. After the conference, they returned home with knowledge about it, and some employees visited Cambridge, resulting in the preparation of a project application.
- University library

We lacked a system to store image files, PDFs, audio files, and valuable Herlufsholm books (name of prestigious boarding school). *ALMA also has something similar, ALMA Digital, and now we need to assess what to go for.*
- University library

International community for university libraries on open access

One of the university libraries point to the fact that in their opinion, DFFU and LIBER should take the lead in assembling an international community of university libraries to spearhead a technological track for new opportunities with open-access publishing.

Otherwise, research libraries risk becoming one diesel car in the oil industry.

Frontrunners*

Libraries considered to be technological frontrunners (mentioned during interviews)	•University libraries capable of in-house development, such as DTU, SDU and The Danish royal library •KEA because of their technical skills e.g. developing an app for their patrons
Providers and technological innovations to look out for (mentioned during interviews)	•Elsevier Scopus AI •Clarivate Web of Science Platform •FOLIO (Future of Libraries is Open): A collaboration of libraries, developers, and vendors building an open-source library services platform. •ExLibris provides significant development efforts, striving to be attractive
Some libraries look internationally	•The Netherlands because of their advancement of their university libraries •The Netherlands and Germany are considered to be leading countries in terms of operating their library services on open-source platforms. TU Delft •Norway when it comes to AI •Major IT companies such as OpenAI, Google and Github.

**In general, the libraries seemed to struggle a bit when they were asked to mention frontrunners. They often look to bigger libraries with in-house development, the major suppliers of library systems, and in some cases European library institutions.*

The future technology landscape

EMERGING TECHNOLOGIES' IMPACT ON LIBRARIES

What is going to happen to cataloguing? AI is very good at cataloguing.

AI can help us see if material comes from a bot or a paper mill.

AI might save the libraries if we use it right.

The libraries have to stay on top of new technologies with a focus on how to help improve the educational level with these.

We observe a trend among end users; they require different experiences. They want to understand the connections between things. They want discovery tools that can offer rich connections.

'Prompt librarians'.

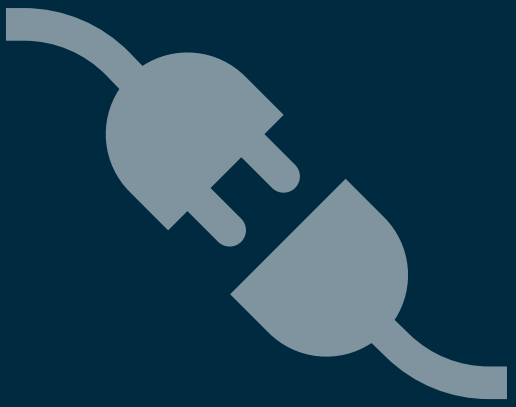
Libraries are starting to realize that they won't build the LLMs or AIs themselves, but rather collaborate with vendors [...] Libraries are eager for these collaborations.

How to use AI with scholarly integrity?

It will be crucial for us to explain our competencies as a library. Our information competencies have never been more relevant.

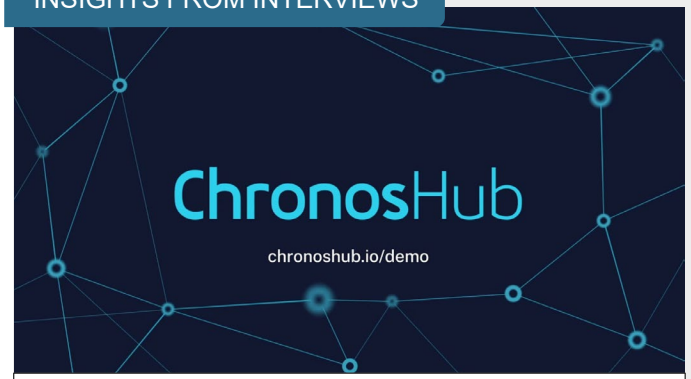
*This page presents both library and provider viewpoints

07 INSIGHTS FROM TECHNOLOGY PROVIDER INTERVIEWS



The providers recruited for interviews have been selected based on various characteristics representing big global commercial providers, tech start-ups and non-commercial open-source providers. With the focus on how they currently work with libraries, what trends they're seeing, and where they see the future landscape.

INSIGHTS FROM INTERVIEWS



About:
ChronosHub is a leading platform for streamlining the publishing workflow, focusing on unburdening the researchers. ChronosHub serves all aspects of Open Access, including effective management of publication fees, open access agreements, funder policy compliance, data integrations, and reporting for publishers, funders, and institutions. ChronosHub also supports authors in selecting suitable journals for their manuscript submissions by making funding policies and institutional agreements transparent and easily accessible

It will be exciting to see how it will be in the future. We are becoming more and more who collaborate on it (open access).

The ChronosHub collaboration approach

"On our mission to unburden the researchers from administrative work, we want the information in the research ecosystem to flow more seamlessly between the different stakeholders. We do therefore work closely together with institutions, funders, publishers and technology partners to provide a Hub that can automate the exchange of research information for each customer."

How they collaborate with libraries

Collaborations with libraries start with one or a few sessions to better understand the institution's current situation and challenges seen to its publishing processes. As each institution has somewhat different needs, they have made the ChronosHub platform modular, each with a certain degree of configurability seen to the workflow. This year (2024) they have started to work together with Copenhagen University library on Chronos Hub's Journal Finder.

The onboarding process with libraries does therefore often include data imports, integrations with login servers and CRIS systems, configuration and training.

Furthermore, to ChronosHub it's important to ensure the platform stays on top of evolving trends and needs, and do therefore continuously seek input from its customers, e.g. through debriefs and analyzing the Net Promoter Score (NPS)

"Libraries readiness for open access varies tremendously"

"The transition to open access (OA) and open science (OS) is slow, with varying progress among countries. This is often due to libraries facing significant challenges seen to financial and staff ressources. Consequently, many haven't developed a clear OA/OS strategy. ChronosHub therefore start collaborations with institutions early on, helping them manage their limited resources. Even with a few OA agreements, the ChronosHub Journal Guide simplifies communication with researchers and reduces time spent on individual guidance. As the institution matures, they expand their use of the Hub to monitor agreements, manage APCs, and automate full-text deposits"

INSIGHTS FROM INTERVIEWS

About:
Open Journal Systems (OJS) by PKP (Public Knowledge Project) offers a software that is open source, non-commercial and driven by the community of researches and publishers. This platform offers comprehensive management of the entire scholarly publishing process, from submission to peer review and production, all within one centralised system. It streamlines the workflow for authors, editors, and reviewers. Once articles and issues are published on the platform, they are automatically indexed in major global discovery services such as Google Scholar and Crossref.

We share this bold vision of open access with the libraries as partners.

We can't make a donation (libraries) *– it's not a donation but a membership. A lot of the libraries are in a 'vendor mindset' and are still coming to an understanding of what this non-commercial relationship is.*

On library collaborations – "we see libraries as partners, friends and community members."

"We see libraries as partners in a shared vision on open access. Many of us are librarians ourselves."

"In Canada we have 40 college libraries that use OJS to provide access for the students and faculties. They don't need to talk to us or anything. It's free of charge, and they can fit it to their needs, modify the code for their needs. That's part of our vision, to make open access a standard for publishing".

Some of their partnering institutions do not have the necessary in-house competencies to work with open-source but in these cases, they can buy OJS as a service: "In these cases its more of a 'traditional vendor' partnership".

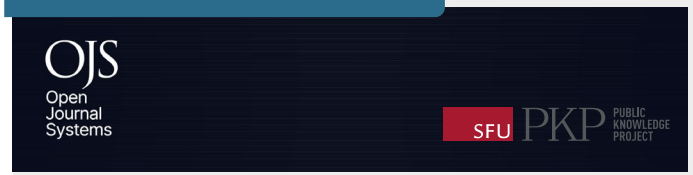
They facilitate collaboration sprints with libraries around the world: "Last year, we did a two days sprint in Copenhagen".

The Royal Danish Library has evaluated a lot and are leading the collaboration with OJS through the licensing consortium.

What does it entail to collaborate with a non-commercial open access infrastructure provider?

A common struggle that OJS meet in their relationships with libraries involves the different departments within their partnering institutions. While development departments may embrace open source and open access principles, the acquisitions departments may be more accustomed to working with traditional vendors. Acquisitions departments may struggle to comprehend these new types of relationships and how to sustain them.

Another common struggle is that some libraries have a 'vendor mindset' and are in the process of understanding this non-commercial relationship from a financial perspective.



The future technology landscape

Asides from continuation of the open access agenda, OJS points to AI within these use-cases:

- To detect fake papers.
- Copy editing.
- Assist in rewriting scholarly papers into HTML and/or JATS XML.

“I’m optimistic about our ability to leverage this technology within journals but we need to pose a set of heavy questions first”.

In terms of libraries’ readiness to adopt and integrate AI, OJS believes that the larger libraries will have the competencies and should take on a leading role and assist the smaller libraries.

OJS AI strategy

“We are trying to look ahead. Where are the possibilities? We are a research institution, so we have a research team looking into that, and we are trying to have collaborations on that”.

Recommendation for non-commercial open access start-ups

“Just being able to have conversations with the libraries can be hard because they get approached by so many vendors. Libraries should follow the SCOSS recommendations when navigating the market for open access infrastructure”.

Start-ups within this field should follow the best practices for open infrastructure and open standards and follow these. This can be achieved by being POSI compliant (Principles of Open Scholarly Infrastructure).

INSIGHTS FROM INTERVIEWS

About:
Keenious is a Norwegian start-up. They offer a research tool that uses AI to analyze research documents and recommend relevant scholarly articles. Keenious integrates with popular word processors like Google Docs and Microsoft Word, making it convenient for researchers to use.

It's refreshing to be a provider of AI to libraries.

The libraries have to stay on top of new technologies with a focus on how to help improve the educational level with these.

On collaborations with libraries

Currently they have no commercial collaborations with Danish libraries but find the Danish market to be of great interest for them. They have great success with library collaborations in Sweden, Norway and Finland but also have their eyes on Europe in general, USA and New Zealand. Around 30 customers around the world (10 in their home country Norway).

They describe different levels of collaboration with libraries: "Everything from very light touch collaborations to really deep research collaborations".

They engage with Danish libraries through DFFU conferences and events.

On new tendencies in library collaborations on emerging technologies

They find that the libraries are very much concerned with ethical AI and perceive Keenious as a representative of that. However, they do also experience that many potential partners are more interested in the subject of AI more so than doing actual business.

They find that the libraries are open to learn and are very curiosity-driven. Given that AI technologies are being more widely utilised by students and researchers, libraries feel compelled to engage with them.

What they can offer as a start-up in collaborations

Co-development with the libraries and;

- "We can be much more personal. We are not just sales representatives".
- "We can be quick on our feet and implement requested features very quickly."
- "We can offer a lower-effort collaboration than the big providers can".

INSIGHTS FROM INTERVIEWS

keenious

A request and recommendation for DFFU/LIBER and university libraries

- DFFU/LIBER should offer a discount for start-ups who wish to attend their events and conferences. It can be difficult to afford for investor companies.
- The university libraries could reach out to the start-ups as a group (inviting to workshops, seminars, conferences) rather than talk to them individually if they don’t have enough resources.

INSIGHTS FROM INTERVIEWS

ELSEVIER

About Elsevier Scopus AI

Scopus AI is an intuitive and intelligent search tool powered by generative AI that enhances your understanding and enriches your insights with unprecedented speed and clarity. Built in close collaboration with the academic community, it serves as your trusted guide through the vast expanse of human knowledge found on Scopus, the world's largest multidisciplinary and trusted abstract and citation database.

The need for close collaboration is more relevant than ever. This goes beyond mere product development; it's a ground-breaking shift.

Generative AI - Friend or Foe? […] Now there is an emerging understanding in the library community that it might save the libraries IF they use it right.

The statements and views expressed in this interview are the interviewees own and do not necessarily reflect the official positions of Elsevier. They represent the perspective as a librarian, with the focus on enhancing and building the relationship between European academic library community and Elsevier's as a collaborative provider.

On new tendencies in library collaborations on emerging technologies

A collaborative paradigm shift: "There has been some tensions in the past. Now we are in the midst of a shift of paradigm where we are gradually moving from a more hostile environment (between libraries and the large publishers) towards a more curious and cooperative environment […] Now there is a climate of curiosity".

Focus for Elsevier in their strategy towards the libraries in relation to ScopusAI: "Can we move away from just a transactional relationship towards a more trust-based collaboration?"

The role of libraries when it comes to engagement and development of emerging technologies

"There is an emerging understanding that GenAI can work wonders in the world of libraries". They experience great positive curiosity and readiness around the world.

"Libraries/institutions are starting to realise that they won't build the LLMs or AIs themselves, but rather collaborate with vendors [...] Libraries are eager for these collaborations".

We still need the classical tools, and we still need the librarian's skills: "The description of AI is very close to the description of a 'prompt librarian': You ask this, but I think you mean this…"

Building bridges of communication is key

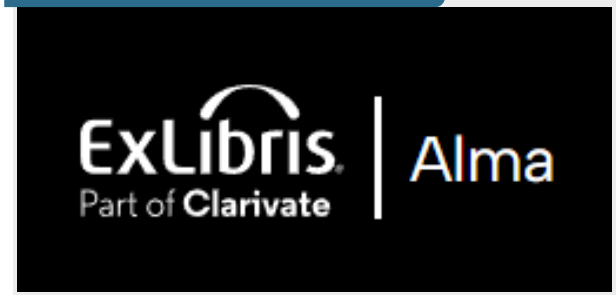
They host workshops for librarians on the subject of publishing and ScopusAI.

Workshops on publishing:

- "We want to bring the researchers back into the libraries"
- With the purpose of communication on what publishers do, for many it is now a 'big black box'.

Workshops on Boolean query vs. ScopusAI:

- Librarians' reactions: "We need something like this! This is amazing it can save us some time!"



This level of collaborative development is not seen in other industries. We are the vendors here and the libraries are not competing and therefore they can collaborate…It's their job to be very collaborative.

AI is transforming teaching, learning and research. We are dancing with the customers, encouraging them to explore the potential of AI with us as we partner them to implement responsible AI.

The interview were conducted with Asaf Kline (VP Library Solutions), Guy Ben-Porat (VP of Academic AI) and Etti Dekel Laor (Director Product Marketing).

"The level of collaboration between vendors and customers is unique to the library industry"

ExLibris describes their collaboration with libraries as "deep, ongoing and key to what we do". They employ a structured approach involving development partners and early adopters.

They conduct customer interviews early in the development phase to understand needs thoroughly. Early access to new systems enables testing and feedback, facilitating effective system fine-tuning.

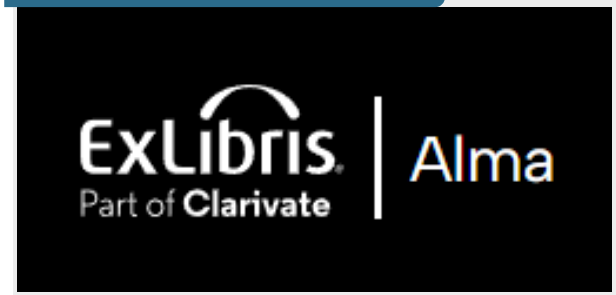
Key to their involvement strategy is leveraging user communities, like ELUNA and IGeLU, facilitating regular interaction through meetings and workgroups. These platforms foster dialogue about ExLibris products and services.

Furthermore, ExLibris provides a dedicated idea exchange platform for users to propose enhancements, encouraging collaborative innovation where users can comment on ideas through a voting mechanism.

ExLibris observe a tendency for more collaborations between libraries

"We see a trend towards more and more collaboration between the libraries. They know that they need to collaborate; it's more efficient and they can create better services, enhancing their capabilities. The libraries acknowledge that it is easier to collaborate if they use the same platforms". In this regard they mention the consortium run by the Royal Danish Library as an example of this tendency.

ExLibris highlights that libraries are 'standard-centric', fostering high-level interoperability combined with a library culture that focuses on collaboration over competitiveness.



The role of libraries and their readiness to adopt new AI technologies – unlock the potential of responsible AI

ExLibris highlights that, in their view, libraries are increasingly willing to experiment with AI to accommodate their users, who are starting to require different experiences: “They want to understand the connections between things. They want discovery tools that can offer rich connections”.

“Can AI replace me as a librarian? I think they are now coming to an understanding that AI will not replace them as librarians, but librarians that will be using AI will bring an advantage.”

On the management side, ExLibris observes that libraries are very interested in description and cataloguing and how they can use AI to enrich metadata.

Discrepancies in the conception of partnerships

What do you mean by partnerships? It's all commercial relationships.

VS

We do not sell – we engage and build relations.

We see libraries as partners, friends and community members.

As mentioned earlier, the libraries expressed confusion when asked to reflect on their partnerships with technology providers in recent years. Their perception of these partnerships were in most cases rooted in traditional customer-supplier relationships.

Reflecting on the past, some libraries recall a time when they had a more direct involvement in technology development, suggesting a closer relationship with suppliers.

On the other side of the equation, providers emphasize that their approach transcends mere selling; they prioritise engagement, striving to build enduring partnerships and user communities.

This duality points to a general discrepancy in the conception of what characterises collaborations between providers and libraries.

Lessons learned from library collaborations that could serve as best practices for other providers

When developing a platform or IT product, it is crucial to receive rapid feedback to ensure its quality – that's the ideal scenario. It's a continuous learning process.

Be patient – establishing a collaboration takes time. It has taken us 2-3 years.

Interest and curiosity from the libraries' part is important for good collaborations.

It is important that we can take it in small steps and make it a small investment for the libraries. It can be overwhelming when they have to make big investments to start with, therefore it is important to do it the other way around.

It works very well to not just participate in conferences but to actually engage in talks.

The way we make use of user communities, work groups, informal agreements, user studies and interviews – other industries could really benefit from this approach.

Common pitfalls or misconceptions that providers and libraries should be aware of when engaging in collaborations

We do not sell – we engage and build relations with the libraries, e.g. through workshop activities.

It is important that the libraries understand the huge difference between collaboration with a start-up and the big providers and adjust their expectations accordingly.

Have in mind the cultural difference between fast paced and eager start-ups and libraries who often don't have the resources to move very fast.

Libraries do not always fully understand the effects and economies of scale, standardisation, and what's going to be sustainable in a global context. Therefore, providers should be very upfront about what happens behind the scenes of a given technology.

We have to find the balance between more standards (providers) and more customization (libraries).

Libraries are not typical businesses – they don't want to make money but are focused on delivering services for their users. I think that new vendors should be aware of these different attitudes.

08 RECOMMENDATIONS

The recommendations should address the following themes:

A relevant role for libraries in future partnerships and collaborations with technology providers. The aim is to identify preferable modes of partnership and collaboration rather than recommend individual technology providers or contract types.

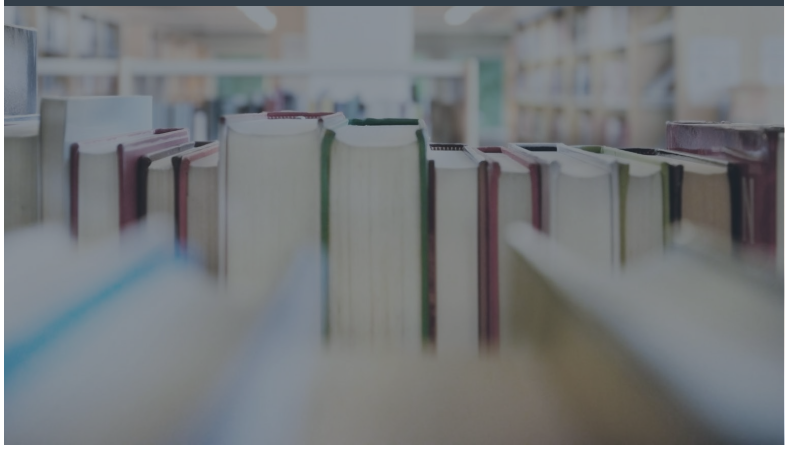
Indicators of successful and sustainable partnerships and collaborations. The aim is to develop a set of criteria for evaluating potential partnerships and collaborations, considering factors such as compatibility, resources, and goals, as well as the potential for leveraging new and innovative technologies and the transformative potential for the community.

The recommendations have been developed in collaboration with the project group from DFFU & LIBER.

How can libraries best partner with technology providers to maintain relevance in future collaborations, without endorsing particular providers or contract types…?

RECOMMENDATION

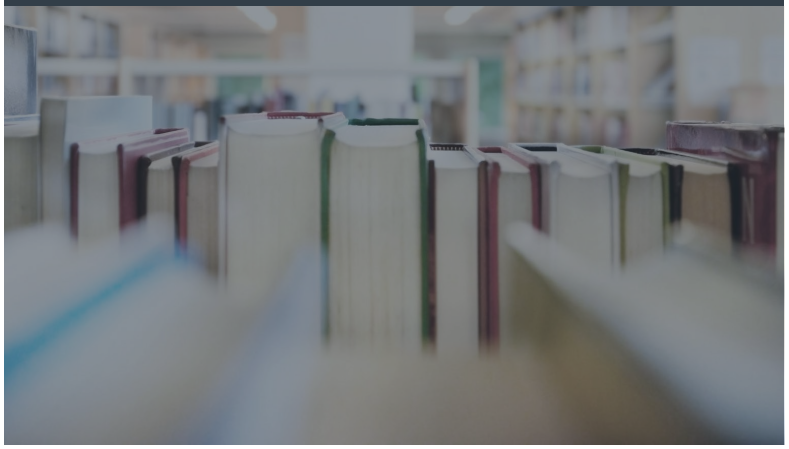
Strategic partnership development



- Libraries should consider engaging smaller suppliers as providers of infrastructure rather than content providers.
- When utilizing new technologies, libraries should be mindful of whether they are entering into a partnership or collaboration or simply acting as a customer. Open-source collaborations bear a closer resemblance to partnerships.
- Libraries should recognise that the matter concerning standardized systems is not binary – it involves both standardised systems and smaller open systems, each serving different purposes.
- Libraries should continue utilising the advantages of the consortium setup by imposing even higher demands on major suppliers such as e.g., ExLibris.

RECOMMENDATION

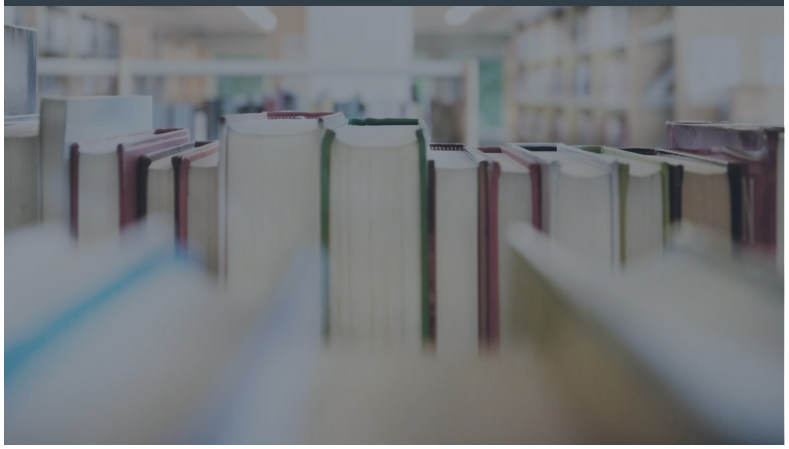
Collaboration assessments



- All collaborations could be assessed based on a set of predefined criteria. Evaluate small and large IT suppliers based on different criteria (e.g., comparing Keenious with ExLibris)
- Budget allocations for start-ups that may potentially scale-up should be considered.
- Libraries should consider collaboration and partnerships more broadly, thus avoiding making agreements due to overly loose preliminary arrangements.
- Libraries should be encouraged to forming cohesive community alliances to exert collective influence and negotiate with major suppliers from a position of strength.

RECOMMENDATION

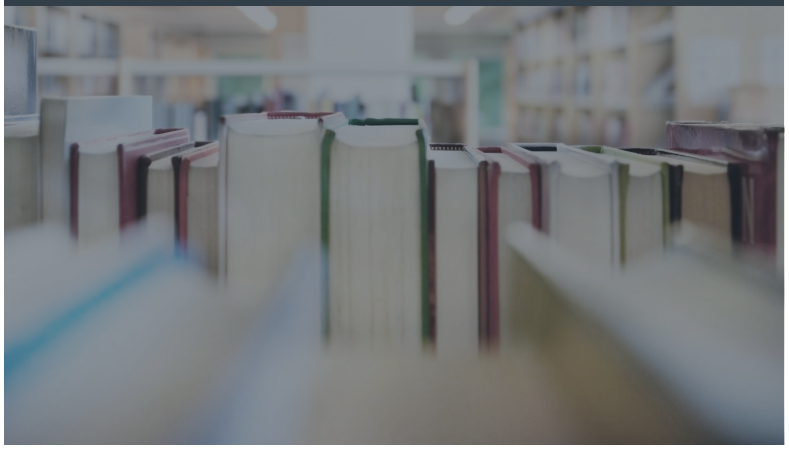
Overcoming collaboration barriers



- Find solutions to overcome some of the barriers associated with start-up collaborations, ensuring libraries maintain a relevant role in the development of new innovative solutions.
- In general, libraries could consider being a bit more experimental in terms of integrating different systems that can be tailored to their needs, instead of defaulting to a few major suppliers hoping that they can fulfil all requirements. By doing so, they might risk losing control of development with limited options for navigating the technology landscape.
- Libraries wish to be highly engaged in the development of systems and solutions testing out new functionalities and providing valuable feedback to the providers such as the partnership between Elsevier and one of the university libraries that are currently testing ScopusAI. These types of partnerships with commercial providers could be made even more attractive for the libraries if the providers in return offer the finished solution at a discounted price.

RECOMMENDATION

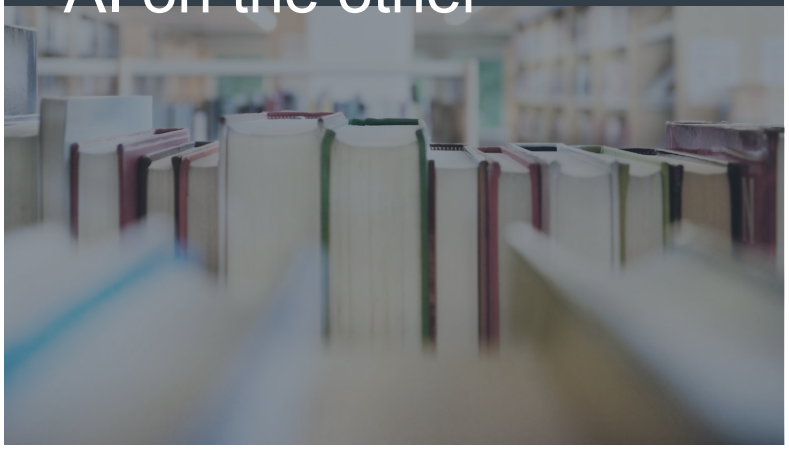
Continue fostering libraries' direct and important role in development collaborations related to open-source and open-access



- Genuine partnerships should resemble open-source collaborations, where parties enter voluntarily and share common interests, rather than traditional customer-supplier relationships.
- Use open-source technologies and innovation hubs as an alternative to commercial major suppliers.
- Initiatives such as ChronosHub and OJS represent alternative directions beyond the role of major suppliers for libraries in technology development.
- Recommendation for DFFU and LIBER from one library: They should take the lead in assembling an international community of university libraries to spearhead a technological track for new opportunities with open-access publishing: “Otherwise, research libraries risk becoming one diesel car in the oil industry”.

RECOMMENDATION

LIBER and DFFU are important stakeholders in addressing the delicate balance between safeguarding information integrity on one hand and fostering library innovation with AI on the other

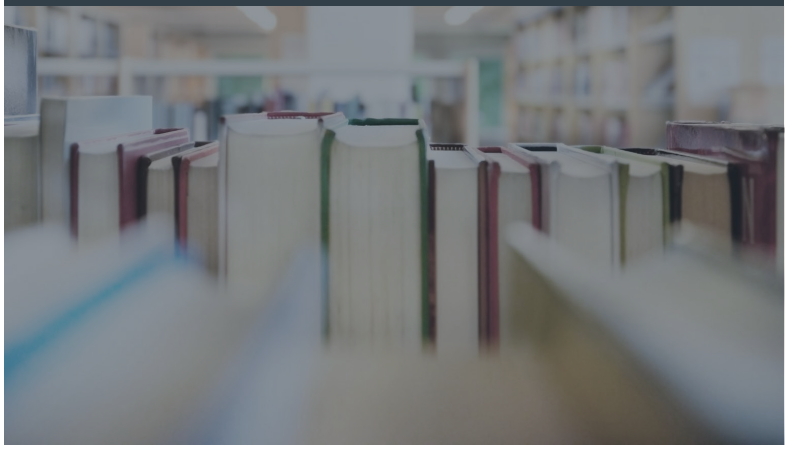


- The complexity of AI possibilities in relation to the libraries' obligations as information-seeking institutions is evident. It's crucial that libraries strategies on how to effectively integrate these tools into their systems without compromising information integrity.
- Libraries' information competencies are highly relevant in this regard, and they need to leverage these with AI tools to accommodate new expectations and behaviours from their patrons. This also entails an emphasis on developing necessary competencies for library employees to leverage these tools optimally, so they can offer guidance to their patrons on how to use them.

Criteria to consider when assessing potential partnerships and collaborations, incl. compatibility, resources, goals, and innovative technologies.

RECOMMENDATION

Indicators for successful and sustainable partnerships and collaborations



The aim is to develop a set of criteria for evaluating potential partnerships and collaborations, considering factors such as compatibility, resources, and goals, as well as the potential for leveraging new and innovative technologies and the transformative potential for the community.

Contractual clarity

- Obtain a complete understanding of the framework conditions when engaging with new suppliers.
- Demonstrate diligence by ensuring that written and detailed agreements are established with small businesses to ensure contractual clarity and transparency.
- Be meticulous about requirement specifications in new contracts.

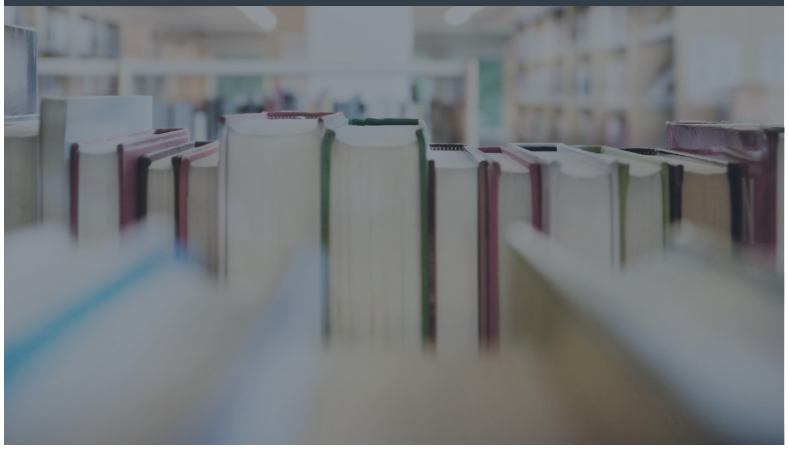
GDPR

It is recommended to hire a GDPR-specialist to review cases and ensure compliance with data protection regulations for online platforms.

It is beneficial to engage in the exchange of insights with other libraries concerning data protection regulations.

RECOMMENDATION

Indicators for successful and sustainable partnerships and collaborations *(continued)*



Open-source and in-house collaborations

- Orientation towards to open-source technologies with the aim of avoiding dependence on a single vendor (‘vendor lock-in’).
- It can be advantageous to use in-house collaboration with parent institution and thereby skip numerous layers of the process with larger companies.

Maintain ownership over data

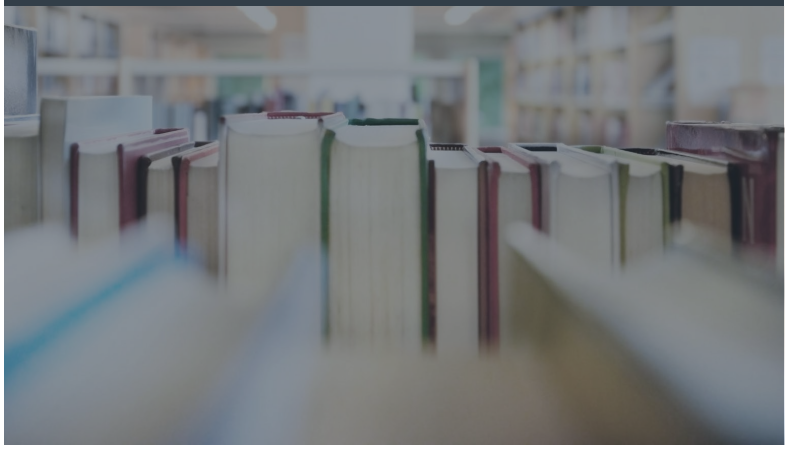
- E.g. attaining data ownership through a hybrid model comprising cloud solutions and local servers. This is exemplified by DTU-Data (university library), where the emphasis is on maintaining datasets locally while also enabling their extraction from the system.

Communication

- Maintain clear communication channels with the technology partner.
- Make a risk assessment.

RECOMMENDATION

Indicators for successful and sustainable partnerships and collaborations *(continued)*



- Consider establishing a collaboration with a similar institution on joined needs before reaching out to a supplier: “Doing something together makes a difference [...] We align internally (similar library institutions) before they (providers) hear from us – that's an important point”.
- “Sometimes, it’s not always about the price; quality takes precedence over cost. However, it is a delicate balance when you are a public organization”.
- Focus on the organizational implementation of the systems.
- Apply agile methods in development projects.
- Put emphasis on getting to know the exact functionality one wishes to achieve with the system in collaboration with technically skilled people.

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