Koha as a local circulation system?
- Project Summary

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KOHA AS A LOCAL CIRCULATION SYSTEM?

Projekt Summary, January 2015
Stockholm University Library

Project Team
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Table of Contents
Project Summary 3
   Background & Preconditions 3
   Project Description 3
   System Architecture & Functionality 3
   Open Source 4
   Conclusions 5
Literature 6
   Further Reading 6

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**PROJECT SUMMARY**

**Background & Preconditions**
In February 2014 the library management at Stockholm University Library took a strategic decision to leave Ex Libris’ Voyager library system. In 2014, various alternatives were evaluated, focusing on two possible ways forward: to tender a new circulation system or to implement an open source solution. Since it appeared that there was no separate circulation system to acquire, instead requiring the library to tender a complete integrated system (ILS), the focus turned to the open source trail, where Koha emerged as the favored option.

That Koha was only evaluated as a circulation system must be emphasized. This is related to an earlier strategic decision on how the library supports users’ information retrieval, where the focus is on providing and delivering content no matter where users find them, not on building search services of our own.

As a result, Stockholm University Library aim to use the national system LIBRIS as our OPAC, and do not attempt to use any discovery service as a way to gather “all the material the library provides.” EBSCO Discovery Service is currently used as a broad search for articles and e-books, but lack the library catalog and printed materials. It is mostly used as an article database, among others. This decision also mean that we at an abstract level separate the circulation from both cataloging and search services, both instead provided by LIBRIS. Furthermore, we separate flows relating to circulation and printed works from electronic resources - by extension separating circulation and link resolver/ERM. Flows relating to acquisitions and above all the electronic resources have not been taken into account unless they affect the circulation system.

**Project Description**
During the fall of 2014 Koha was investigated more thoroughly. The project’s mission was roughly divided into three phases: (A) to examine and analyze whether Koha supports the library’s needs, (B) locate possible problem- and development areas involved and (C) provide decision support to the library management. We were fortunate to have help and support provided by Viktor Sarge and Regionbibliotek Halland, whom we also visited to see and talk about their implementation of Koha. A test migration of our data from Voyager to Koha was later performed by the French company BibLibre. During our evaluation, and especially after the test migration, we got a better view of issues involved as well as the quality of our data. Three larger problem, or development, areas was identified:

- Call slip functionality
- Integration with LIBRIS
- The layer of data built around Voyager

All of these need to be addressed, and in most cases functionality developed, for an implementation of Koha to be successful at Stockholm University Library.

**System Architecture & Functionality**
The user database SUKAT, self-service via “My Pages”, and the book logistics system Viola, are the most important local systems with direct integration to the circulation system. Viola, an internally developed (open source) system that handles both pick-ups from the closed stacks, missing books, interlibrary loans, etc. is closely integrated with Voyager and need to communicate with Koha. In addition to the local systems LIBRIS is clearly the most important part of the system architecture. Cataloguing takes place in LIBRIS today and we hope to be able to use LIBRIS as our local OPAC soon. In addition, there’s an ongoing development with LIBRIS XL, which moves away from the MARC format and instead uses Linked Open Data in JSON-LD format. That we in the future will have LIBRIS both “in front of and behind” the circulation system will obviously be influential, but currently, it is difficult to predict how and in what way. But a key point is that established workflows to and from LIBRIS must work with Koha – in the short term both single items as well as batch imports, but looking further ahead more direct import via for example OAI-PMH will most likely be used.
There is a multitude of reports and articles that have evaluated the functionality of Koha, and during our own testing we have found the basic circulation functionality to work satisfyingly, if not always the way we have worked with Voyager. Many of these changed are seen as promising however, as many workflows have been affected by limitation of the previous system. What Koha does not provide is modules for mainly interlibrary loans and functionality for closed stacks pick-up (call slips). Both of these functions are however handled by Viola – what we need to build is a good integration between Koha and Viola.

Technology-wise, Koha is built with Perl, and there is built-in support for Z39.50, SIP2, OAI-PMH, etc. In contrast, there is no support for NCIP (a further development of the SIP protocol) and the Solr indexing tool. Instead, Koha uses Zebra, which like Solr is open source but doesn't have the impact or the community support the former has. This is probably not a major problem however, as we intend to move away from our custom built OPAC solution, which will lead to Solr being phased out.

**Open Source**

One of the major strengths of Koha, as well as one of its limitations, is that it is an open source system. With open source software the library’s dependence on a proprietary provider for a business-critical system is reduced, and allows greater control over data and software. It will bring development closer to the users - library as well as patrons - who have a greater ability to influence improvements of the system. Koha has a strong community with a number of users, libraries and
businesses that contribute to its development, which is one of the system’s greatest strengths.

But community-based development can also be a limitation. It requires increased cooperation and interaction with the community, with almost a political aspect, to get the development that the library wants accepted and included in future updates. For libraries who instead opt to develop themselves, regardless of the needs of the community, they risk forking of the system. This seems counterproductive, and highlights the importance of developing Koha within the community although it may cause some delays in own development.

From Stockholm University Library’s viewpoint, the benefits of a more open development model far exceed its limitations. There is already a tradition of interacting with other libraries and organizations in the context of the development previously built around Voyager and other systems, but the social aspect within the community becomes more important. The ability to use support companies and other interested parties for system development also places increased demands on the library’s procurement competence.

Although economic benefits has not been the main focus in the decision to replace Voyager, but rather the fact that it is an old system that is barely developed anymore, it is obvious that open source solutions in most cases is economically advantageous compared to a proprietary systems. However, even though the system itself is free, there are development and hosting costs to consider. Also, according to the literature open source library systems takes up more of staff time in the form of development and adaptations (e.g. Singh 2013b).

What the annual development cost for Koha will be is difficult to predict, but that it will be substantially lower than the cost for Voyager is reasonable to assume. Although costs will in the future be reduced, during a transitional stage they will instead double. For a period of time, there is both the cost of the previous proprietary system, as well as the cost of migrating to the new system. The library therefor need to spend more first in order to save at a later stage.

Conclusions
Choosing a new circulation system is hard. To implement open-source software represents a risk and to change a business-critical systems is often a difficult process. But there are benefits. Above all it’s about increasing control over such a central system, providing greater flexibility to adapt and develop the system. Or, in the words of an article from 2011 regarding open source systems in the library world: “Perhaps most importantly, the library makes fewer apologies for what its systems cannot do” (Morton-Owens, Hanson & Walls 2011).

It’s easy to get excited when an interesting new system is to be evaluated, especially because the library has been locked in a sometimes unwieldy system for almost 20 years, but we shouldn’t delude ourselves. Koha is not a perfect system. It has an old code base written in what is becoming a languishing programming language, but primarily it is built around the equally old MARC format. But Koha is a good alternative, with a strong foundation that allows several different workflows and should fit different types of libraries. Moreover, it has the potential to develop further. The evaluation carried out within the framework of this project suggest that Koha respond to the needs Stockholm University Library has of a circulation system.

Advantages of implementing Koha at Stockholm University Library include:
- Increased control of a business-critical system
- Increased development and customization possibilities
- Vendor independence
- Lower costs
- Cooperation opportunities

Disadvantages are:
- Risk-taking
- Uncertainty regarding missing functionality
- Might require large internal development in the future

Under the conditions highlighted in the report (summarized here), we describe a number of weaknesses and problem areas to consider with Koha, but we believe that the advantages of open source alternative in general and Koha specifically outweighs these by far. Therefore, the project group chose to recommend that Koha be implemented as the local circulation system at Stockholm University Library, which was subsequently decided by the library management. The goal is to implement Koha at the library late 2015.
LITERATURE


Further Reading


*Librisbloggen*. [http://librisbloggen.kb.se/](http://librisbloggen.kb.se/) (In Swedish)