



Strategies for Managing Risks Associated with Open Source Softwares in Libraries

KEYWORDS

Open Source, Risk Management, Library management, Digital Library

Pratap Sethy

Assistant Librarian, Trident Academy of Technology, Bhubaneswar-India

Santosh A Navalur

Research Scholar, Department of Library and Information Science, Bharathidasan University, Tiruchirappalli- India

Ashok Kumar P

Research Scholar, Department of Library and Information Science, Bharathidasan University, Tiruchirappalli- India

ABSTRACT Libraries being the key players of the knowledge society challenged to provide greater knowledge access with improved quality with cost effectiveness. Improved quality service with cost effectiveness became a bigger challenge for libraries which are bound to provide quality service with limited financial support. As there is solution for every problem open source softwares provided the platform for aspirant and willing professionals to meet the changing needs with a cost effective approach. Though open source provided a cost effective platform to use ICT in library service it posed many problems. In this paper we identified the major risks associated with the open source software and discussed about various feasible strategies to manage those risks in way to help the LIS professionals who are willing to use the Open Source Softwares in their libraries.

Introduction

Open source softwares like automation, digital library, content management, learning management and many other open source softwares have altered representation of LIS profession with huge optimistic impact on user community. Though there is optimistic impact still there is a cause of concern in LIS professionals on the way of travelling on open source platform due to some risks associated with these tools. To travel on open source software librarian need to comprehend some risk management skills which are the need for the day to utilize open source softwares for effective and efficient utilization for library services.

Open Source

Open Source is a software development model as well as a software distribution model. In this model the source code of programs is made freely available with the software itself so that anyone can view, alter, and issue it provided they stand for the accompanying license.

Open Source for Libraries

In today's competitive knowledge economy libraries of every type are challenged to offer greater, cost effective and improved level of information access to meet the challenge in an intelligent way with ever changing technology and ever-increasing budget pressure. Implementing new technologies into libraries to meet the challenges itself is a highly challenging task with limited resources and inadequate infrastructures. In this critical juncture Open Source Software came to empower less-privileged libraries to deal with the increasing demands for use of technology to meet the test of efficiency in their services.

Need of Open Source Softwares in Libraries

According to Eric Lease Morgan (2002), author of My Library portal software:

"In many ways I believe OSS development, as articulated by Raymond, is very similar to the principles of librarianship. First and foremost with the idea of sharing information both camps put a premium on open access. Both camps are gift cultures and gain reputation by the amount of "stuff" they give away. What people do with the information, whether it is source code or journal articles, is up to them. Both camps hope the shared information will be used to improve our place in the world. Just as Jefferson's informed public is a necessity for democracy, OSS is necessary for the improvement of computer applications."

Some important aspects which justify the need of OSS in libraries are:

- Open source software is characteristically created and maintained by developers crossing institutional and geographical boundaries, collaborating by using internet-based communications and development tools;
- Products are typically a certain kind of "free", often through a license that specifies that applications and source code are free to use, modify, and redistribute as long as all uses, modifications, and redistributions are similarly licensed, which is an added advantages for less privileged libraries;
- Successful applications tend to be developed more quickly and with better responsiveness to the needs of users who can readily use and evaluate open source applications because they are free;
- Quality, not profit, drives open source developers who take personal pride in seeing their working solutions adopted which is more relevant for the library which are almost nonprofit entities;
- Intellectual property rights to open source software belong to everyone who helps build it or simply uses it, not just the vendor or institution that created or sold the software which provides a way for application of technology in library without much budget pressure.

Open Source Softwares in LIS

1. Library Automation Koha, NewGenlib, PMB, OpenBiblio, Evergreen, VuFind, GNUTECA, e-Granthalaya.	2. Digital Library Greenstone, PYTHEAS, Ganesha, Kete,	3. Institutional Repository DSpace, Fedora, Eprints	4. Content Management Drupal, Joomla, OpenCms
5. Learning Management Moodle, OLAT, Atutor, ILIAS, SAKAI, eFRONT, Decebo, Hot Lava	6. Weblog Blogger, Wordpress, LiveJournal, B2evolution	7. Federated Search Dbwiz, LibraryFind	8. Reference Management Mendeley, Connotea, Zotero

Risks associated with Open Source Software

Benefits of the Open Source Software notwithstanding there are a number of barriers to the use of OSS in libraries. Library administrators are often reluctant to adopt OSS due to number of factors.

Lack formal support

- OSS lacks formal support making it difficult for libraries without significant capacity in their systems department to participate in OSS development or to use OSS. It re-

quires greater involvement and technical skill set which is a complexity for library.

Not always easy to use

- OSS is not always easy to use. It is therefore largely inaccessible to the many libraries and library system departments that require plug-and-play software that is well documented and supported and can be easily installed

Needs to develop a participatory organizational model

- OSS needs to develop a participatory organizational model that allows many to contribute perhaps in different ways to OSS development. This approach demands fair technical and programming skills from operation level staff which is a big concern for libraries.

Expensive support

- OSS Requires training, technical support and frequent service which may cost more than the cost of a commercial software. As library staff is generally not technicians the situation force them to go for expensive support.

Lack of professional involvement

- Successful implementation and application of technology needs active involvement of professionals who are operating the system then it will be more compatible and useful. But most of the open source library softwares are developed by some software company where there is very less professional involvement this creates operational complexity.

Less Accountability

- Mitigated by access to prior source code, but that may impose additional in house development and support requirement. It can force to have commercial alternatives to buffer the organizational requirements.

Lack of Documentation

- Many established OSS lacks the extensive documentation and user-friendliness which found in commercial software. The primary focus of early OSS developers was functionality. Creating a program that worked well was far more important than ease of use. So they were less focused on systematic documentation which is more important for ease of use and user friendliness

Developer Contamination

- Developer reviews an existing open source project and sees an elegant solution then implement a similar function in closed source project.

No commitment

- Unlike paid software, open source has no commitment to provide updates, of patch vulnerabilities or issues. If you intend to run a library using open source software, you need to be mindful that installing the latest version of the software may stop certain aspects of existing system.

Licensing

- In general, FOSS licenses permit copying, distribution, and modification of the software, but do not contain any warranty or indemnification.

Open Source and Risk Management

Initially the libraries believe that the use of OSS does not pose but in reality there are many risks in using OSS if OSS used without proper knowledge and strategies. Therefore acquisition and use of OSS necessitates implementation of unique risk management practices. The following can be considered worth to manage the risks posing in the way of utilizing OSS for libraries:

Planning for OSS

- Before going to use OSS in library, library management should sit with other managerial, operational and technical staff to plan the implementation of OSS after considering the issues, concerns and suggestions.

Identify Key areas of Risks

- Before using the OSS for any operation in library staff should try to analyze the system and identify the possible risks by which library staff can plan for risk management.

Decide on Support

- Lack of support is the major concern in using free softwares before going for any OSS library software we should study on its support. There are many softwares like GSDL, KOHA and DSpace which have supporting community so libraries must go for such softwares.

Professional Involvement

- Professional involvement enhances the feasibility and user friendliness of softwares. There is a strong need of professional involvement in development of OSS for libraries otherwise they will not be more comfortable

Cost-Benefit analysis

- Compare the cost of paid software and maintenance and support cost of OSS if the cost of support and maintenance of OSS is more than paid software better to go for paid one.

Decide on Ability to Customize

- The library should test the revised open source code to ensure performance and the maintenance of integrity, and availability of systems and data. The institution should carefully consider its technical and legal ability to modify and maintain the code, and ensure that controls are in place to protect against copyright and patent infringement.

Compatibility

- OSS is often written to open standards and is generally more compatible than proprietary software. However, the compatibility of FOSS programs may not be formally certified as paid software. Therefore, libraries using OSS should about compatibility and interoperability.

Check Maturity

- Institutions should consider the maturity of any software; mature software generally poses fewer risks than less mature software. Mature software will be having well established user and supporting community which will be a greater need for OSS.

Communities of Practices

- The libraries using OSS should come together and establish communities and share their experiences. This practice will help to manage any kind of risk with mutual support.

Lessons learned database

- Libraries using OSS should maintain records of risks and the way how they mitigated those risks. If all libraries practicing this it will become huge lessons learned database and that will be a great support for others facing the same problems.

Education and Training

- There is a need of adequate training and education in using OSS. The organizations and people who are well established in using OSS should take initiation with professional support to train and educate others OSS users.

Systematic Documentation

- With all above discussed strategies systematic documentations of OSS is must. Systematic documentation helps to people to study the system and manage the probable risks on their without depending much on external support and training

Conclusion

Use of OSS is inevitable for libraries as OSS thrown a ray of hope to technically empower financially less privileged libraries. OSS provided an opportunity for libraries to im-

prove its services without much investment on technology which would not have been possible two decades back. In a democratic way by bridging the digital divide OSS enabled Libraries in the developing countries to support automation, electronic access, digital libraries, and resource sharing and

many more activities because they need not to spend more on OSS for libraries. With lots of benefits there are many risks to use OSS and they need to be addressed in a professional and strategic way which is possible with greater commitment and coordination of all stakeholders.

REFERENCE

1. "The Free Software Definition"[home page online]; available from | <http://www.fsf.org/philosophy/free-sw.html>; Internet; accessed on November 9, 2003 |
2. Use of Free and Open Source Software (FFOSS) in the U.S.Department of Defense. MITRE report MP 02 W0000101, January 2, 2003 |
3. Rasch, Chris (2000). A Brief History of Free/Open Source Software Movement [online] Available from: <http://www.openknowledge.org/writing/open-source/scb/brief-open-sourcehistory>. |
4. Chawner, Brenda (2003). Open Source Software and Libraries Bibliographies (Version 0.5) [online] Available from: http://www.vuw.ac.nz/staff/brenda_chawner/biblio.html |