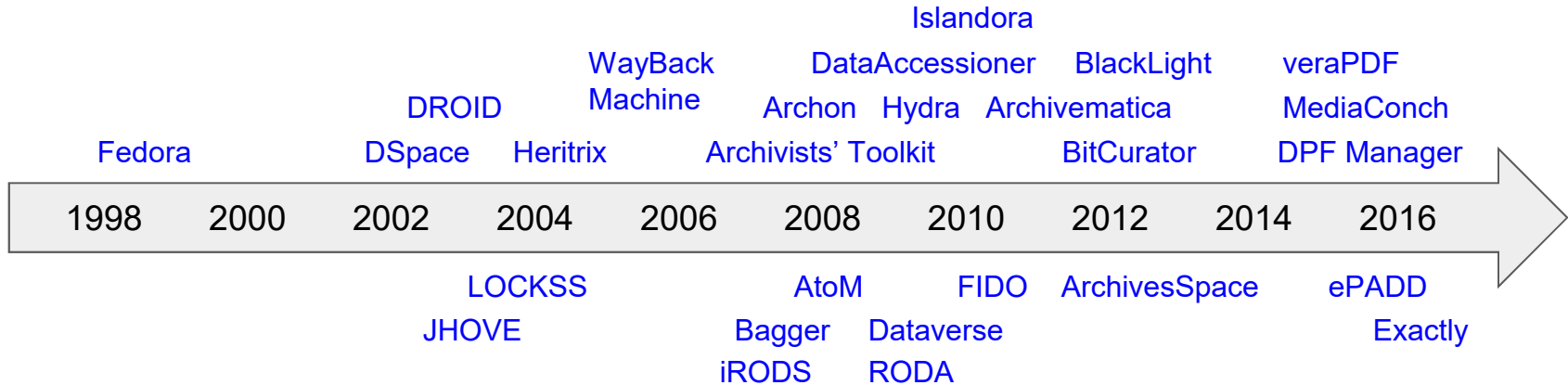


# Business models for open-source software

Evelyn McLellan  
Artefactual Systems Inc.

PREFORMA Innovation workshop  
Padua, March 2017

# Open-source tools for digital preservation: a (highly selective) timeline



# There are lots of open-source tools

Free/Open Source Software for  
**LIBRARIES**


**F4L** FOSS4LIB  
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*Register for the next Introducing FOSS4Lib Webinar on July 27th* [DETAILS](#)

WELCOME TO THE FOSS4LIB SITE

Now available! **Three case studies** of organizations adopting open source software: "When the Open Source System is the Best System" implementing CORAL, "Open Source Integrated Library System in a Rural American Library" implementing Koha, and "Kuali OLE at the University of Chicago Library" implementing Kuali OLE.



Is your library thinking about jumping into open source software, but not sure if you have the tools in place to succeed, or where to start? You've come to the right place.

Whether you are looking to decide *if* open source software is right for your library or need help finding *which* open source software package meets your needs, this site has the content and the community to help you with those decisions.

looking for something specific?  
 [SEARCH](#)

NAVIGATION

- ✦ [Login](#)
- ✦ [Create Account](#)

ANNOUNCEMENTS

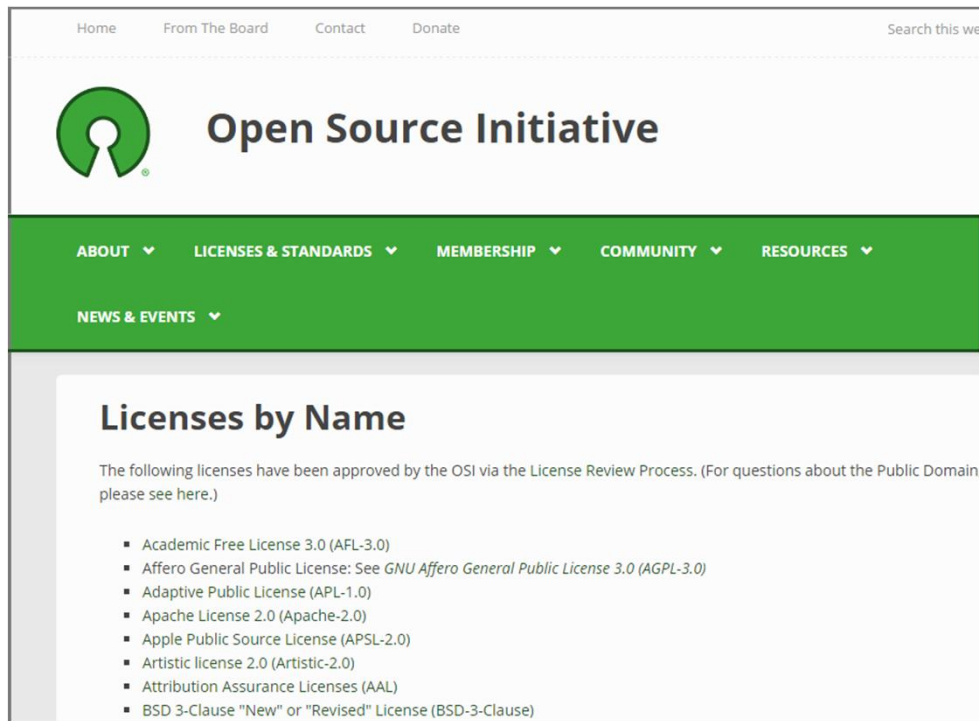
[Case Studies on Open Source Adoptions](#)  
posted Thu, 2014-10-16 17:17

[Free Online Symposium on Sustainable Cultural Heritage Open Source Software: September 24-25, 2014](#)  
posted Mon, 2014-09-15 19:21

[LYRASIS to Manage Open Source ILS Feature Comparison Tool](#)  
posted Tue, 2014-05-13 20:59


[RSS Updates](#) | [All News](#)

# Open-source software: definitions



The screenshot shows the Open Source Initiative (OSI) website. At the top, there is a navigation bar with links for Home, From The Board, Contact, and Donate, along with a search bar. Below this is the OSI logo and the text "Open Source Initiative". A green navigation bar contains links for ABOUT, LICENSES & STANDARDS, MEMBERSHIP, COMMUNITY, and RESOURCES, each with a dropdown arrow. Below this is another green bar with "NEWS & EVENTS" and a dropdown arrow. The main content area is titled "Licenses by Name" and contains a paragraph explaining that the following licenses have been approved by the OSI via the License Review Process. Below this is a bulleted list of licenses.

Home From The Board Contact Donate Search this website

 **Open Source Initiative**

ABOUT ▾ LICENSES & STANDARDS ▾ MEMBERSHIP ▾ COMMUNITY ▾ RESOURCES ▾

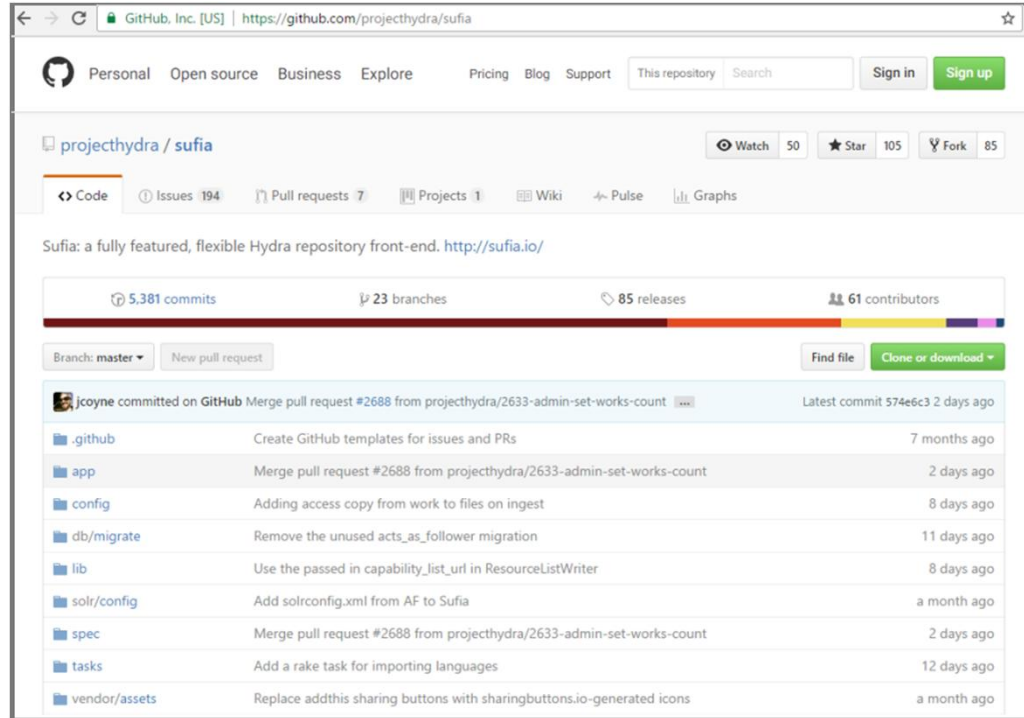
NEWS & EVENTS ▾

## Licenses by Name

The following licenses have been approved by the OSI via the License Review Process. (For questions about the Public Domain, please see here.)

- Academic Free License 3.0 (AFL-3.0)
- Affero General Public License: See *GNU Affero General Public License 3.0 (AGPL-3.0)*
- Adaptive Public License (APL-1.0)
- Apache License 2.0 (Apache-2.0)
- Apple Public Source License (APSL-2.0)
- Artistic license 2.0 (Artistic-2.0)
- Attribution Assurance Licenses (AAL)
- BSD 3-Clause "New" or "Revised" License (BSD-3-Clause)

# Open-source software: community and code



The screenshot shows the GitHub repository page for `projecthydra/sufia`. The page includes navigation links, repository statistics, and a list of recent commits.

Repository: `projecthydra / sufia`

Statistics: Watch 50, Star 105, Fork 85

Navigation: Code, Issues 194, Pull requests 7, Projects 1, Wiki, Pulse, Graphs

Description: Sufia: a fully featured, flexible Hydra repository front-end. <http://sufia.io/>

Repository Metrics: 5,381 commits, 23 branches, 85 releases, 61 contributors

Actions: Branch: master, New pull request, Find file, Clone or download

Commit	Message	Time
<code>574e6c3</code>	Merge pull request #2688 from projecthydra/2633-admin-set-works-count	2 days ago
	Create GitHub templates for issues and PRs	7 months ago
	Merge pull request #2688 from projecthydra/2633-admin-set-works-count	2 days ago
	Adding access copy from work to files on ingest	8 days ago
	Remove the unused <code>acts_as_follower</code> migration	11 days ago
	Use the passed in <code>capability_list_url</code> in <code>ResourceListWriter</code>	8 days ago
	Add <code>solrconfig.xml</code> from AF to Sufia	a month ago
	Merge pull request #2688 from projecthydra/2633-admin-set-works-count	2 days ago
	Add a rake task for importing languages	12 days ago
	Replace <code>addthis</code> sharing buttons with <code>sharingbuttons.io</code> -generated icons	a month ago

# Open-source software: documentation and support

**archivematica**

Home Downloads Documentation Community Development News Wiki Demo

## Archivematica documentation

### Getting started

The getting started manual is intended for users who are considering implementing Archivematica as a digital preservation solution. This manual includes information on the Archivematica project as well as a quick-start guide to help new users test it out. For information about installing and using Archivematica in a production environment, see the user or administrator manuals below.

#### OVERVIEW

The overview section provides a definition of Archivematica and a description of the OAIS model on which it is based, its technical architecture, the microservices framework, and information about system requirements for deploying Archivematica.

- What is Archivematica?
- Web-based dashboard
- Technical architecture
- Micro-services
- System requirements

#### QUICK-START GUIDE

### Archivematica 1.6

[Table of contents]

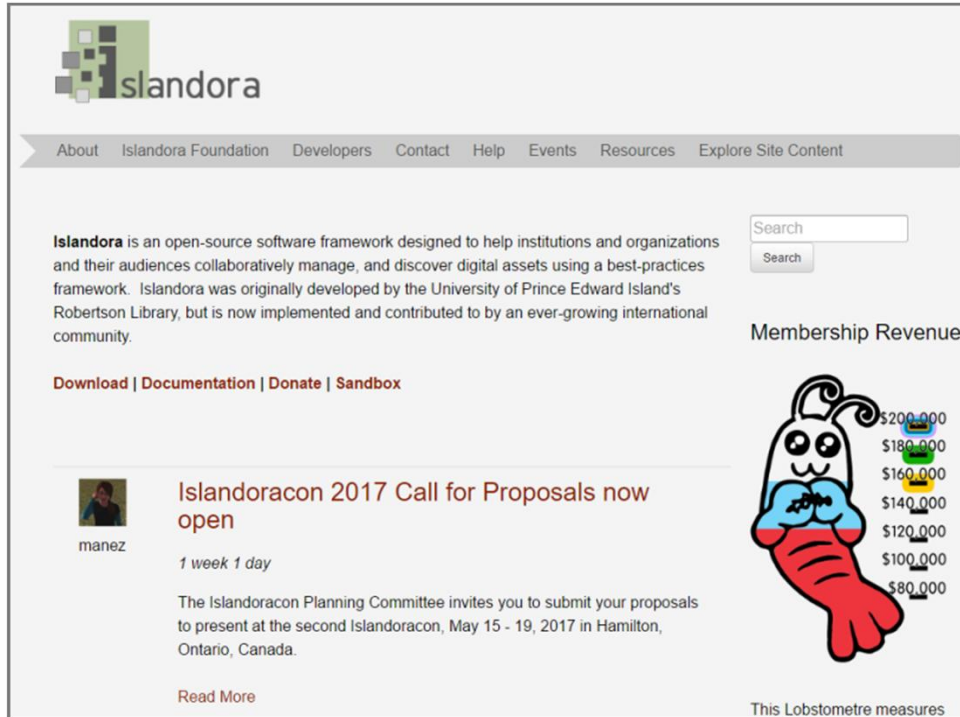
#### CONTENTS

Archivematica documentation

- Getting started
  - Overview
  - Quick-start guide
  - Troubleshooting
  - Other resources
- User manual
  - Transfer
  - Ingest
  - Backlog
  - Storage
  - Access
  - Preservation planning
  - Administration
  - Metadata
- Administrator manual
  - Installation and setup
  - Maintenance
  - Security

SEARCH

# Open-source software: governance




The screenshot shows the Islandora website interface. At the top left is the Islandora logo, which consists of a stylized 'i' made of squares followed by the word 'islandora'. Below the logo is a navigation menu with links: About, Islandora Foundation, Developers, Contact, Help, Events, Resources, and Explore Site Content. A search bar is located on the right side of the page. The main content area features a paragraph about Islandora as an open-source software framework. Below this is a link to 'Download | Documentation | Donate | Sandbox'. A news item titled 'Islandoracon 2017 Call for Proposals now open' is displayed, including a small profile picture of 'manez' and a 'Read More' link. On the right side, there is a 'Membership Revenue' section with a cartoon lobster character and a vertical scale of revenue values from \$80,000 to \$200,000.

**islandora**

About Islandora Foundation Developers Contact Help Events Resources Explore Site Content

**islandora** is an open-source software framework designed to help institutions and organizations and their audiences collaboratively manage, and discover digital assets using a best-practices framework. Islandora was originally developed by the University of Prince Edward Island's Robertson Library, but is now implemented and contributed to by an ever-growing international community.


[Download](#) | [Documentation](#) | [Donate](#) | [Sandbox](#)

 **Islandoracon 2017 Call for Proposals now open**  
manez  
1 week 1 day

The Islandoracon Planning Committee invites you to submit your proposals to present at the second Islandoracon, May 15 - 19, 2017 in Hamilton, Ontario, Canada.

[Read More](#)

Membership Revenue

 \$200,000  
\$180,000  
\$160,000  
\$140,000  
\$120,000  
\$100,000  
\$80,000

This Lobstometre measures

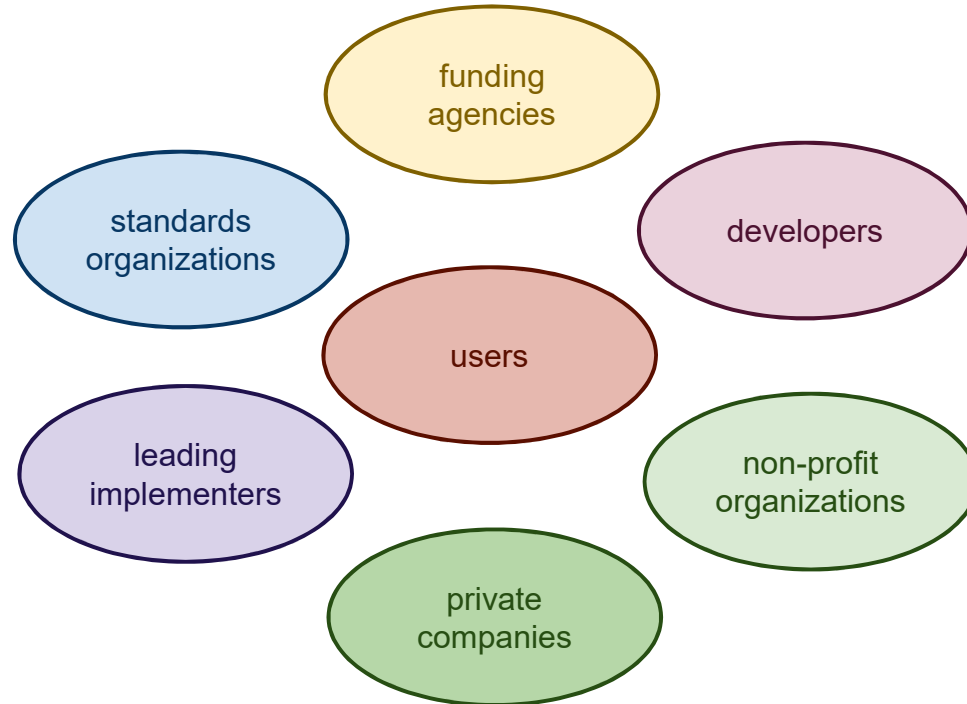
## OPF's software maturity model:

<http://openpreservation.org/technology/principles/software-maturity/>


	OPF-Production	OPF-Labs	OPF-Attic
Community	Active bug reports/fixes Named maintainer Contribution guidelines	Active bug reports/fixes	[no expectation]
Documentation	Source code comments Technical documentation Installation manuals User documentation Microsite	Source code comments Technical documentation	Statement describing why the software has been retired (by original developer or software curator)
Code quality	Test coverage 50% > 80+ %Continuous integration Publishing test results	Test coverage c.50% Continuous integration	[no expectation]
Deployment	Build from source Defined platforms Automated packaging (e.g. DEB/RPM/EXE)	Build from source	[no expectation]
Support	Online demonstrator Virtual machine image Training materials	[no expectation]	[no expectation]
Licensing	Defined open source licence	Defined open source licence	Defined open source licence



# The open-source ecosystem



# The open-source ecosystem



standards  
organizations

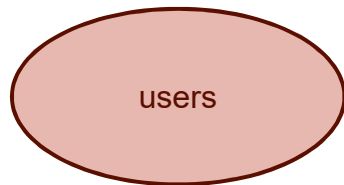
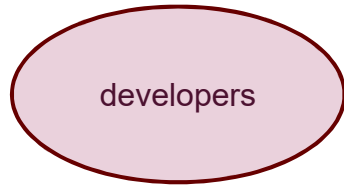
- How does the creation or modification of standards relate to the development of open-source tools? Should standards be created with software development in mind?

# The open-source ecosystem



- Funding agencies play a key role in open-source software development, but what is their role once the tools have been developed?

# The open-source ecosystem

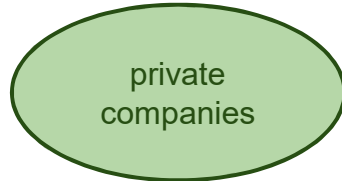


- Developers work for non-profit organizations or private companies. They may also work for leading implementers, or simply be technically-minded users.
- Leading implementers are institutions that provide community support, funding and/or development. These tend to be universities and research institutions.
- Having a large pool of users is a sign of software maturity and stability.

# The open-source ecosystem



non-profit  
organizations



private  
companies

- These organizations provide sustainability for mature open-source software tools by offering software development and release management, hosting, tech support, data migration, training, consulting, documentation, user forums and other critical services. However, finding a viable business model can be a challenge.

# Some open-source business models

- When grant funding ends or doesn't cover all costs, there are different ways of making open-source software viable and self-sustaining. Here are three common models:
  - Membership model
  - Bounty development model
  - Services model

# Open-source business models: membership model

- The software is free and open-source but purchase of a membership allows users to gain access to certain privileges or services. Some membership models mean that only members get access to certain types of documentation, training materials, issue reporting systems and/or member-only user forums. Other membership models provide privileges such as a role in governance, discounts on training and meeting events, but don't restrict documentation etc. Examples:
  - Lyris (ArchivesSpace, CollectionSpace)
  - BitCurator Consortium
  - DuraSpace (DSpace, Archivematica, DuraCloud, Fedora)
  - Islandora Foundation
  - Open Preservation Foundation (JHOVE, Jpylyzer, FIDO, xcorrSound)
  - LOCKSS Alliance
- The money raised is used to support continued development and software release management

# Open-source business models: bounty development model

- The software is free and open-source but development of new features and enhancements depends on one or more institutions providing funding. The new features and enhancements are added to subsequent public releases of the software. Examples:
  - Artefactual Systems (Archivematica, AtoM)
  - Data Curation Experts (Hydra, Blacklight, Fedora)
  - DiscoveryGarden (Islandora)
  - Hudson Molonglo (ArchivesSpace)



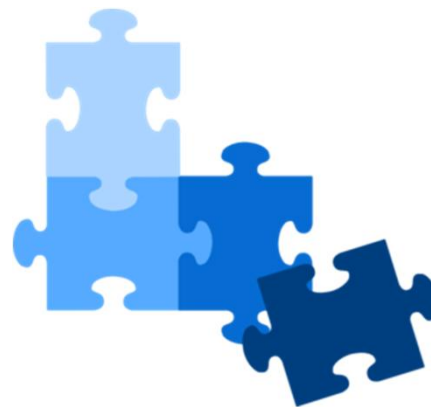
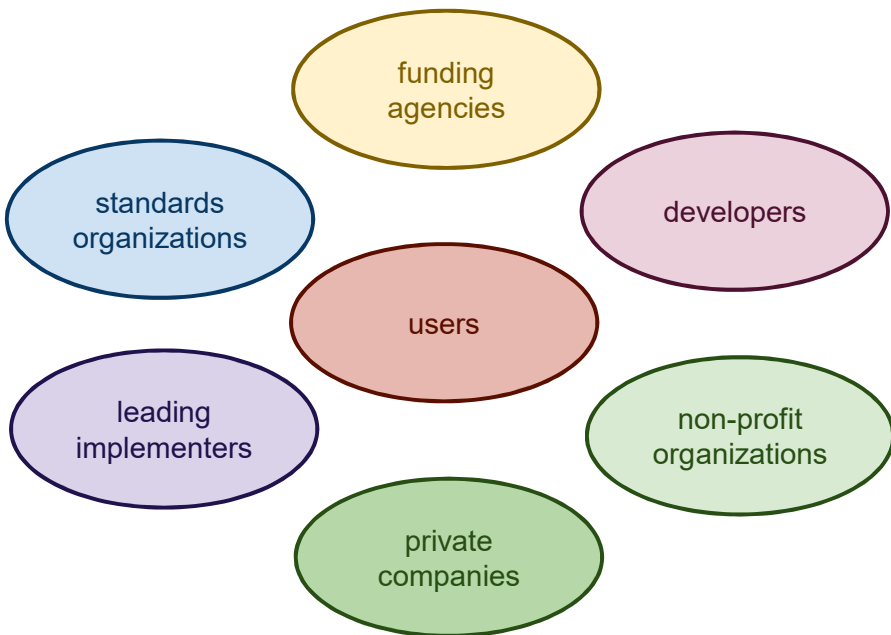
# Open-source business models: services model

- The software is free and open-source, but there are organizations that provide related services such as hosting, technical support, data migration, consulting, training and customization. These organizations may or may not be the lead developers of the tools. Examples:
  - Artefactual Systems (Archivematica, AtoM)
  - DuraSpace (DSpace, Archivematica, DuraCloud, Fedora)
  - DiscoveryGarden (Islandora)
  - Cottage Labs (Hydra, Fedora)
  - AVPreserve (Archival Management System, Exactly, Fixity + other tools)
  - KEEP Solutions (RODA, DSpace + other tools)

# Other open-source business models

- Franchising model: The software is free and open-source, but the name and logo(s) are proprietary and can only be used with permission. The owners of the name and logo(s) sell the rights to organizations to provide technical support, hosting and customization services. Not prevalent in the digital preservation community.
- Proprietary add-on / “freemium” model: The software is free and open-source, but organizations develop proprietary add-ons or plugins or have “enterprise” or “professional” versions that add more functionality or scalability. Not prevalent in the digital preservation community.

# Where do YOU fit in?



*Thank you*