

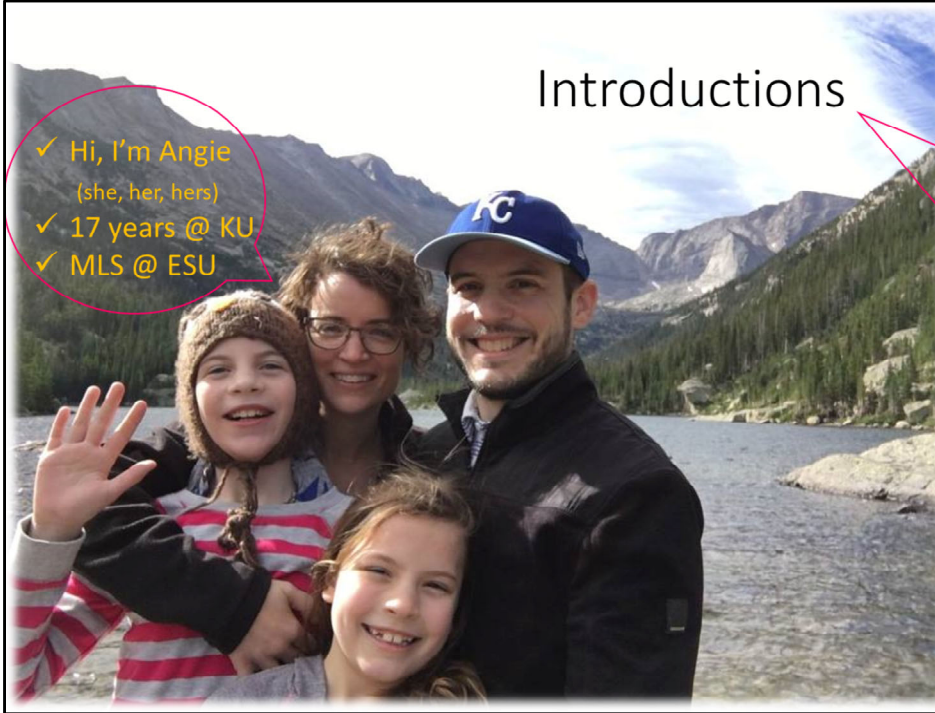
# ERM(S) + Workflow

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## Introductions

- ✓ Hi, I'm Angie  
(she, her, hers)
- ✓ 17 years @ KU
- ✓ MLS @ ESU



- ✓ Your turn  
(pronouns optional)
- ✓ One thing  
you want to  
learn...

My name is Angie Rathmel. I've been working at KU for the past 17 years – all of in the Acquisitions and Resource Sharing area and most of it dealing with serials and electronic resources. This practical experience was helpful since during my MLS studies there was no course in e-resource management. Shortly after receiving my MLS from Emporia State, I was hired as one of two e-resource librarians at KU. In that role, and in my role as head of Acquisitions & Resource Sharing, my professional and research interests center around change in response to e-resources (and by extension open access resources), particularly the responses in workflow systems and tools, and in interpersonal and organizational communication. I am also involved in service with the ALCTS (Associate of Libraries Collections and Technical Services) arm of ALA and I blog with ACRL (Association of College and Research Libraries) at [acrlog.org](http://acrlog.org)

**CLICK** Your turn. Could each of you use the chat to introduce yourself and let me know one thing you're hoping to learn in tonight's class.

# Outline

- Focus
  - Systematically (from the vantage point of systems/tools)
  - Constructively (from course outline so far)
- Basics
  - Definition
  - View inside/outside
- Evolution, Current, and Future State
  - Lifecycle and Workflow
  - Staffing and Organization
  - System Alternatives, Market

## ERM System

- Knowledge Base (KB)
  - Holdings, description
- Administration around the KB
  - Beyond bibliographic descriptors
  - Ongoing maintenance of holdings
  - License, usage
- Administration of administration
  - IPs, URL, EZ Proxy configurations
  - Administrative logins, contacts



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The ERM system at its core is a knowledge base, you'll hear that term a lot. Basically, it is the catalog where you describe what electronic resources your library owns or wants to make discoverable by associate holdings to those records. The integrated library system (ILS) is also a knowledgebase, primarily or historically developed for libraries' print holdings. So in simple comparisons, ILS=print as ERM(S) = electronic holdings.

The ERM system was somewhat in response to the fact that the ILS had limitations by virtue being designed for print. The ILS didn't have structure for administrating other necessary elements for describing electronic resources, its holdings, and managing their discovery on an ongoing basis.

A major defining major part of the ERM, distinguishing it from the ILS, is the administration of data around the knowledge base holdings. For example, the way those particular e-journal and e-books are packaged, their cost, the terms of use or license associated with it, and how they are used, the statistics used for evaluation.

There is also an additional layer of administration of those administrative details that the ERM manages as well. For example the tracking your IP ranges, and EZ Proxy configurations, in order to manage ongoing maintenance of holdings and access. Where you go to download statistics, manage interface, for each of your providers requires

centralized management of those admin interface login detail, and the contacts for troubleshooting.

# Knowledge Base

- Selection to Discovery

- Items under consideration now or in the past.
- What options for purchase are available (platform, package)

中国重要报纸全文数据库 (China Core Newspapers Full-Text Database)	2~6	Subscribed	597	万方知网(北京)技术有限公司
GEOBASE	BUH	Subscription Not Pursued	0	OCLC
Chemical & Engineering News Archives	D2J	Trial expired	3	American Chemical Society
Computer Science Index	BAQ	Trial expired	0	EBSCOhost
ICE Science Journals	TC4	Trial expired	5	ICE Publishing
John Milton Bibliography	JTF	Trial expired	0	University of Toronto
Library, Information Science & Technology Abstracts (LISTA) with Full Text	ELW	Trial expired	369	EBSCOhost
MarketResearch.com Academic	ADB	Wishlist	0	MarketResearch.com

So, the Knowledge Base function of the ERM is primarily providing a centralized place for tracking selections and holdings. As you select and track resources in the ERM, they are “turned on” and become connected to that linking and discovery capability.

But considering selection from a workflow and staffing perspective, the ERM is providing two things. There's the selection as an acquisition and cataloging function – what options are available to buy and selecting what record to attach the holding once its purchased and available. But the ERM can also help track at what stage of the selection process the e-resource is and provide a historical perspective on the selection process for a particular resource. Let's see what this looks like in more detail.

## Knowledge Base - Selection

The screenshot displays the Serials Solutions interface. On the left, a breadcrumb trail reads "Home > Data Management > Database Details". Below this, a red box highlights "EBSCOhost :: Academic Search Complete". A tree view shows "Titles (10600)" selected, with sub-items for "Books (1710)" and "Journals (8898)". The main content area shows details for the title "(Re)-turn: A Journal of Lacanian Studies". Key fields include "Collection Name", "Provider EBSCOhost", "Database Academic Search Complete", "Type Journal", "ISSN 1559-5145", "Publisher University of Missouri Press", and "Status Subscribed". A table for "Defaults for Holding" shows "Start Date" as 03/01/2014 and "End Date" as Present. A table at the bottom shows "1935-6765" for the title, "Journal" for the type, "Subscribed" for the status, and "03/01/2010 - 12/31/2015" for the coverage date range.

Adapted from original slide by Buddy Pennington

The ERM I'm going to use in my examples called Serials Solutions 360 RM product. It is actually no longer the current system we use at my library, but the way it is laid out makes it better for explaining ERM system structure than current systems which are better for actually working in. I'll explain that difference a little later on when we dive into workflow influences on systems.

We're looking here at the basic knowledge base structure (starting with the data element called the "provider") and drilling down to the most familiar bibliographic level data (books and journals).

Shown here in the breadcrumb we see the relationship between the platform provider **EBSCOhost** and its database **Academic Search Complete**, and the **titles** within that database.

One more level of down to the individual title is where you see the more specific bibliographic details including the access URL. It is here you would make edits in order to select this as part of your holdings by changing the status to **Subscribed** and manage the **coverage date ranges** of your holdings. It is also here where you take the initial step to enable linking and discoverability.

## Knowledge base - Linking

**Title** (Re)-turn: A Journal of Lacanian Studies  
**Collection Name**  
**Provider** EBSCOhost  
**Database** Academic Search Complete  
**Type** Journal  
**ISSN** 1559-5145  
**Publisher** University of Missouri Press  
**Status** Subscribed  
**Display In:**  360 Core  
 360 Link ←  
 360 MARC Updates ←

### Custom URL

**Output URL** <http://www2.lib.ku.edu/login?URL=http://search.ebscohost.com/direct.asp?db=a9h&jid=BCN7&scope=site>

...shown by the fact that Display In categories are checked.

360Link in this case indicating the linking to discovery is enabled, and 360 MARC indicates a choice to add a MARC record to your ILS catalog for an additional point of discovery.

The URL includes what's called a proxy prefix that enables it to authenticate users from off campus as part of your on campus network. Here you are seeing the proxy addition to the URL at the title level of this record. But the way the ERM is structured around the provider allows you to set specific details at that top layer and the system manages the inheritance down, so you are not maintaining thousands of URLs.



## Knowledge Base – Discovery

Psychopharmacology (Berlin, Germany) (0033-3158) View Terms of Use

See: Psychopharmacology (Berlin, Germany) (0033-3158) View Terms of Use Citation Linker

from 01/01/2002 to 1 year ago in Proquest Nursing & Allied Health Source

from 10/01/1996 to 1 year ago in SPORTDiscus with Full Text

from 10/01/1996 to 1 year ago in Academic Search Complete

from 03/01/2011 to 1 year ago in Academic OneFile

from 03/01/2011 to 1 year ago in Health Reference Center Academic

from 10/01/1996 to 1 year ago in Academic Search Alumni Edition

from 01/01/1997 to 2016 in SpringerLink GWLA 2016

from 01/01/1997 to present in SpringerLink

from 10/01/1996 to 1 year ago in Academic Search Alumni Edition

from 01/01/2002 to 1 year ago in Proquest Nursing & Allied Health Source

from 10/01/1996 to 1 year ago in SPORTDiscus with Full Text

from 10/01/1996 to 1 year ago in Academic Search Complete

from 03/01/2011 to 1 year ago in Academic OneFile

**Get at KU**

**Mad men, women and steroid cocktails: a review of the impact of sex and other factors on anabolic androgenic steroids effects on affective behaviors**

Author: Onakomaiya, Marie M.  
Journal: Psychopharmacology (Berlin, Germany)  
ISSN: 0033-3158  
Date: 02/2016  
Volume: 233 Issue: 4 Starting page number: 549-569  
DOI: 10.1007/s00213-015-4193-6

**Full Text Online** from SpringerLink [Browse Journal](#)  
01/01/1997 - present  
[View terms of use](#) for the above results.

10/01/1996 - 1 year ago	Academic Search Alumni Edition
10/01/1996 - 1 year ago	Academic Search Complete
10/01/1996 - 1 year ago	Academic Search Premier
10/01/1996 - 1 year ago	Psychology & Behavioral Sciences
10/01/1996 - 1 year ago	SPORTDiscus with Full Text
01/01/1997 -	SpringerLINK Contemporary
01/01/2002 - 1 year ago	Nursing & Allied Health Source
03/01/2011 - 1 year ago	Academic OneFile
03/01/2011 - 1 year ago	Health Reference Center Academic
01/01/1959 -	Kesli Consortium - Springer

To illustrate discovery a little further detail, let's look at this journal level detail in the ERM to show how the ERM structures what the patron sees. I am showing here a journal title Psychopharmacology and the various different databases in which we have selected to track our holdings. The ERM allows me to sort these results however my workflow needs to see it. But ERM also allows me to administer what sorting priority is given to the patron, so that you can optimize their display to show what databases are the most reliable.

So this is search results of the journal itself in a patron interface. This is especially important for when patrons are searching for articles with a more general search.

And which resource is most reliable may change over time. So this is a comparison of the display's order of databases from last year to this year. What's happened is our subscription with the publisher Springer for this title, was canceled, so it is only showing the access for the years we formerly had a subscription. It also reflects some rethinking of the Alumni access being lower in priorities and probably at some point giving a higher overall priority to ProQuest databases, perhaps because their linking mechanisms were more reliable the EBSCO SPORTDiscus, etc).

Unfortunately, ERM and linking capability currently aren't sophisticated enough in ERM to prioritize these by date range provided. So the best we can do is deprioritized cancelled

resources, since they definitely will not have to present access, and these others may have present access for some titles (if not this one). Other reasons you may have for prioritizing certain providers might be based on the openness of its access or terms of use. That was our thinking with prioritizing Alumni access in the first option. But, you have to balance that with the reliability of the linking capability. So we have adjusted order based on reported errors in some cases.

In this search result the link resolver function is going to try to match them with the most reliable result, either by taking them directly to that full text article or to an intermediary like this screen where they can click Full Text Online.

## Administration around KB – Licenses

**Get at KU**

**Mad men, women and steroid cocktails: factors on anabolic androgenic steroids**

Author: Onakomaiya, Marie M.  
 Journal: Psychopharmacology (Berlin, Germany)  
 ISSN: 0033-3158  
 Date: 02/2016  
 DOI: 10.1007/s00213-015-4193-6

[Full Text Online](#) from SpringerLink

[Browse Journal](#)  
 01/01/1997 - present  
[View terms of use](#) for the above results.

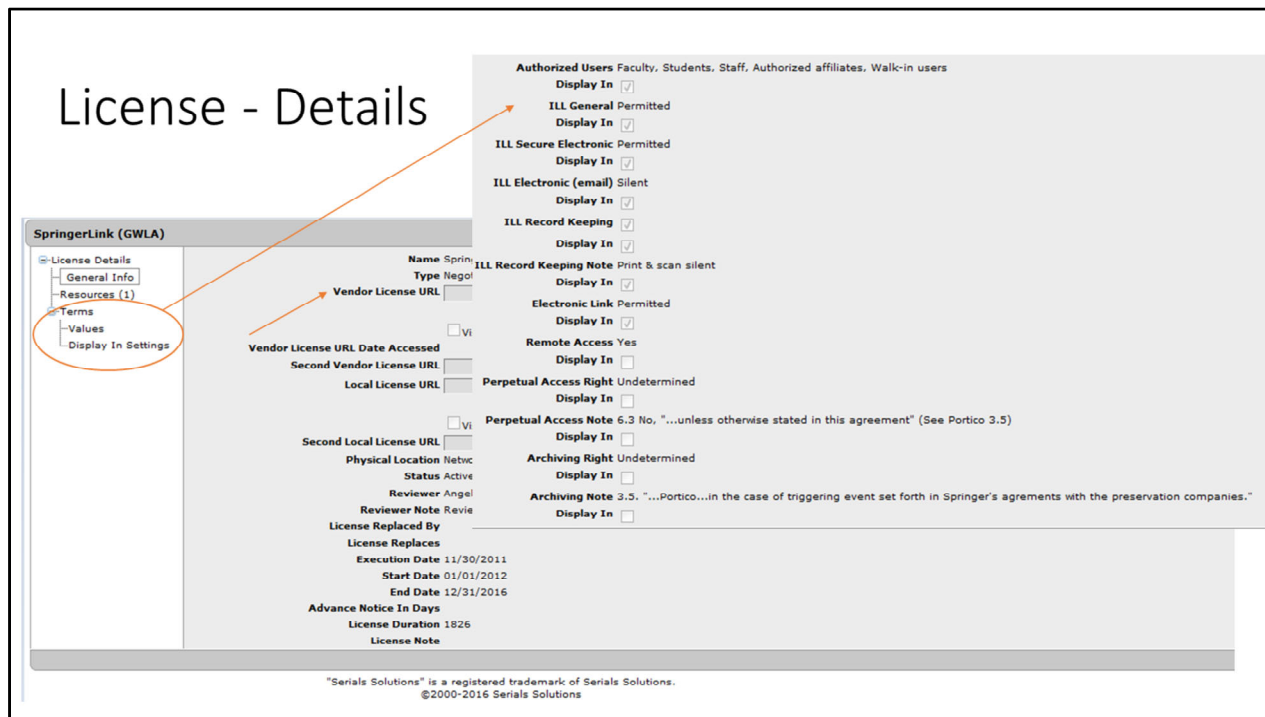
Source	Coverage Dates	Local Terms of Use	Permissions	Note
SpringerLink	01/01/1997 to present	License Term Authorized Users ILL Electronic (email) ILL General ILL Record Keeping ILL Secure Electronic Electronic Link	Authorized affiliates, Faculty, Staff, Students, Walk-in users Silent Permitted Yes Permitted Permitted	Print & scan silent
Academic OneFile	03/01/2011 to 1 year ago	License Term Scholarly Sharing ILL Electronic (email) ILL General ILL Record Keeping ILL Secure Electronic Electronic Link Other Use Restrictions (Public Note) Other Use Restrictions (Staff Note)	Prohibited Prohibited Permitted Yes Permitted Silent	Note NO ILL FOR HARVARD BUSINESS REVIEW Individual content licensors occasionally have conditions of use applicable solely to their content

You can begin to see how the ERM manages administration around our holdings in the knowledge base, centralized around the provider and how that shows up to users. Let's work our way back to how other administrative details about a electronic resource, like licenses, are from this display managed in the ERM.

The ERM allows staff to track licenses associated with a resource, but it also has the same mechanisms to make the terms of the license to display to patrons in the discovery layer. In all honesty, patrons rarely, if ever, use this because its an optional and buried link to click, unlike "click through agreement" we see when download an app or update our software, reviewing and accepting these terms are not usually a required action by patrons to access the full text. But when you do click the Terms of Use link here, or (more likely) when staff do so for troubleshooting, you'd be able to see terms that were first administered and managed in the ERM and made displaying to public in this interface. You can see its showing the terms for each one of these providers.

So even though users may not directly use this display, the staff and workflow that depends on this piece of the display staff troubleshooting access for patrons that may be related to for example their users status or whether the provider allows ILL for a particular article in the database, or in some cases more restrictive terms that apply only to a portion of the content in the database (e.g. HBR). You can see that the display here is only showing those

most relevant and frequently referenced terms. But there are 76 possible fields in the ERM that you could display. As you image looking at just these few displaying that could get real messy real quick from a design and usability perspective.



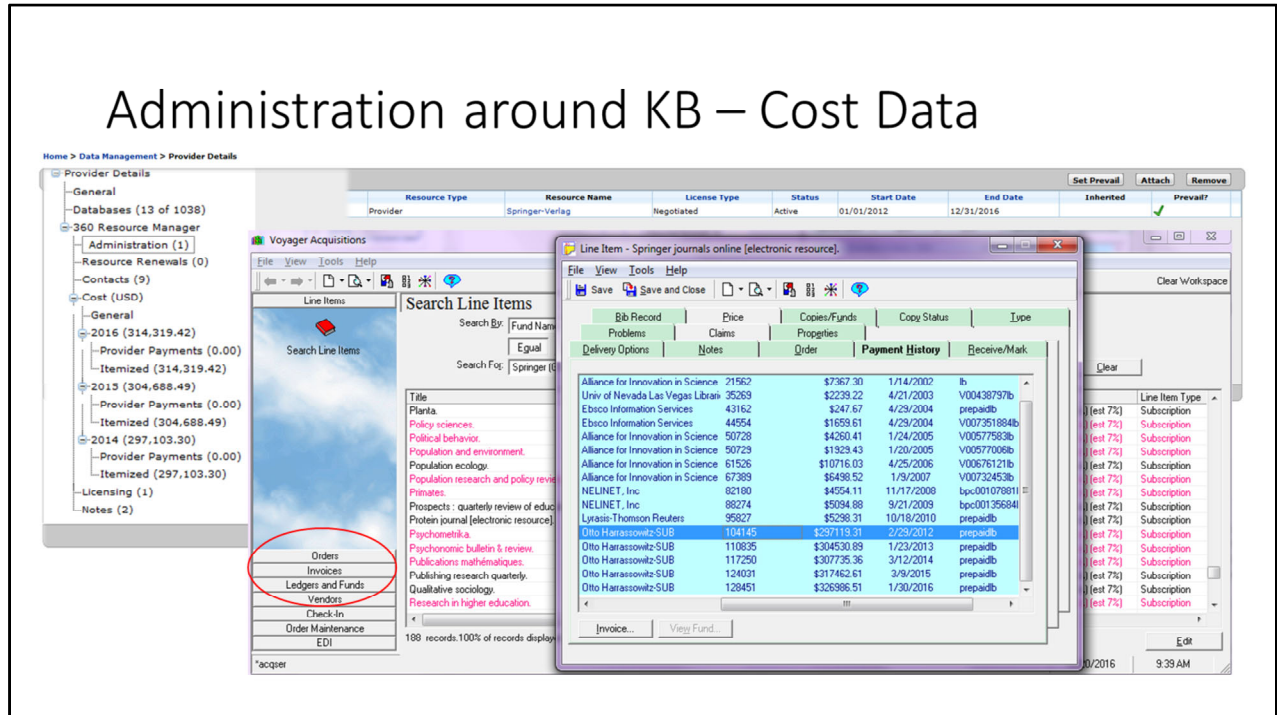
Now, in the ERM can serve as a centralized repository for electronic resource license data, and in some cases, a repository for the license document itself.

Here is where a URL to the license (at the publisher site or your negotiated license stored on a local network).

And where you input license terms values either to manage within the ERM or which of those 76 possible terms are you want to display on the patron interface.

Despite the limitation of the patron display and the license details are a necessary piece of the administration around the knowledgebase, because it allows it to be connected not just to the bibliographic holdings and titles involved, but also connected to the other details, such as cost.

# Administration around KB – Cost Data



Cost is probably the most potentially valuable and yet unrealized aspect of the ERM system and why ERM are on the whole failing to meet libraries' needs. One reason for this is because this cost data is already stored and managed in the library's main integrated library system (ILS)

The ILS provides order, invoice, and accounting details necessary to manage budgeting of all library resources. Just as with ILS knowledge base, the ILS accounting features were also not designed to accommodate additional e-resource data needs like the license, e-resource vendor contacts, and renewal mechanism. Unfortunately, ERM design never developed sufficient interoperability with the ILS so when it comes to cost data, many institution lack the staff to support for loading and managing that data in two systems.

## Cost Data - Detail

- Institutional size (Carnegie Classification)
- Number of users (FTE, sim user limits)
  
- One-time vs ongoing
- Static vs Varied renewal dates
  
- Big Deals, multi-year contracts
- Consortia
- Evaluation with usage

One of the reasons cost data management is so necessary and yet unrealized in either the ILS or ERM has to do with the fact that the pricing and accounting associated with e-resources is extremely complex. First, book prices are fairly stable between institutions, but e-resource are priced according to institutional size or number of users.

Second, whether purchasing e-resources as a one time purchase (like back-file) or as a ongoing commitment (subscription database) there are costs associated with ongoing maintenance and accounting for that provision of access. Where that cost and renewal falls in a budget year – always on the calendar or at varying points throughout the year.

Other cost complexities come as e-resources are often bundled into various packages. These deals that may or may not be offered to institutions in equal ways; institutions may request multi-year pricing discount in response to the particular budget environments at any given time; or institutions may group together in a consortia as another way to collective bargaining tool for controlling costs. Each introduces different complexity to cost management and reporting. Reporting cost is the end-result of this administrative aspect of the ERM, as a evaluation tool. But equally important to that end is begin able to tying that cost evaluation to the evaluation of usage of these resources.

## Administration around KB – Usage

- COUNTER standard (now in Release 4, Release 5 coming soon)
- Centralize admin access
- Repository
- Reporting, peer comparison

The screenshot shows a web form for configuring a data set. The title is "Data Set Name SpringerLink Contemporary (1997 - Present)". The form is divided into several sections:

- Standards Compliance:** Includes checkboxes for "Project Counter 1.0", "Project Counter 2.0", "ICOLC (1998)", and "ICOLC (2001)".
- Delivery Method:** Includes checkboxes for "Online" (checked), "Email", and "Paper".
- Format:** Includes checkboxes for "HTML", "Delimited", "Excel" (checked), "PDF", and "Other".
- Frequency:** Set to "User Selectable".
- AccessUrl:** Set to "http://link.springer.com/signup-login?previousUrl=%2F".
- Access URL Link:** A link to "Access URL Link".
- Login Password:** Fields for "Login" and "Password".

ERMs address the management of usage data in a repository kind of way as well, usually as a separate module or feature of the ERM because at the time separate vendors were also offering this service and also because of the complexity and system resources needed to store and manage usage data itself. Normalization of data across multiple providers is not easy. ERMs often are limited to loading only COUNTER compliant (or standardized) usage data. Often because this is what is reported out to National Organizations that compare peer institutional data, like Association of Research Libraries (ARL) and because its standardized format allows for more automated collection and comparison.



# Administration around KB – Usage

- COUNTER standard

	A	B	C	D	E	F	G	H	I	J	K
1	Journal Report 1 (R4)	Number of Successful Full-Text Article Requests by Month and Journal									
2	University of Kansas										
3		8200405604									
4	Period covered by Report:										
5	2017-01-01 to 2017-06-30										
6	Date run:										
7		10/5/2017									
8	Journal	Publisher	Platform	Journal DOI	Proprietary Identifier	Print ISSN	Online ISSN	Reporting Period Total	Reporting Period HTML	Reporting Period PDF	Jan-17
9	Total for all Journals	Springer	SpringerLink					55272	32053	23215	8679
10	3 Biotech	Springer	SpringerLi	10.1007/1	13205	2190-572X	2190-5738	7	5	2	0
11	4OR	Springer	SpringerLi	10.1007/1	10288	1619-4500	1614-2411	1	1	0	0
12	AAPS PharmSciTech	Springer	SpringerLink		12249		1530-9932	66	36	30	8
13	ADHD Attention Deficit and Hyperactivity Disorders	Springer	SpringerLi	10.1007/1	12402	1866-6116	1866-6647	3	2	1	2
14	AI & SOCIETY	Springer	SpringerLi	10.1007/1	146	0951-5666	1435-5655	8	4	4	1
15	AIDS and Behavior	Springer	SpringerLi	10.1007/1	10461	1090-7165	1573-3254	75	51	24	9
16	AMB Express	Springer	SpringerLi	10.1007/1	13568		2191-0855	3	1	2	0
17	ANNALI DELL'UNIVERSITA' DI FERRARA	Springer	SpringerLi	10.1007/1	11565	0430-3207	1827-1510	7	4	2	0

This is what Release 4 Counter Journal Report 1 looks like. Shows the usage date range, details about the provider and each title (ISSN, etc) and the number of downloads or use, counted by HTML views, PDF downloads, or combined total and combined by each month of the provided date range.

## Administration around KB – Usage

- COUNTER standard (now in Release 4, Release 5 coming soon)

- Centralize admin access
- Repository
- Reporting, peer comparison

The screenshot shows a configuration page for a data set named "SpringerLink Contemporary (1997 - Present)". The settings are as follows:

- Standards Compliance:** Project Counter 1.0, Project Counter 2.0, ICOLC (1998), ICOLC (2001). (Arrows from the text "COUNTER standard" point to these options.)
- Delivery Method:** Online (checked), Email, Paper.
- Format:** HTML, Delimited, Excel (checked), PDF, Other.
- Frequency:** User Selectable.
- AccessUrl:** <http://link.springer.com/signup-login?previousUrl=%2F> (An arrow from the text "Centralize admin access" points to this field.)
- Login:** Access URL Link
- Password:** (An arrow from the text "Reporting, peer comparison" points to this field.)

But when the ERM is not the actual ingest repository for these reports, its primary function is centralizing the secure access points to obtain or connect the providers' usage data, and for storing other administration details describing how to collect that data. (e.g. how its delivered, how often its reported or delivered in some vases, the releases and types of reports available) And as you can see this ERM is dating itself into irrelevance as you can no longer record the most current COUNTER release types available for a provider.

The screenshot shows the ProQuest Intota Assessment interface. It features a navigation menu with 'Home', 'Reports', 'Load Status', and 'Schedule Reports'. A sidebar lists '360 COUNTER Reports' under 'Books' and 'Journals' categories. The main content area displays details for 'Cambridge Journals', including a table of reports and a 'Relative Comparisons' pie chart.

Platform Name	# of Jobs	# of Disks	Annual Cost	Downloads
Springer	3,463	0	\$ 0	261,326
Elsevier	4,940	12	\$ 0	1,612,041
Wiley Blackwell	2,436	0	\$ 0	681,751
Total	9,939	12	\$ 0	1,855,118

ID	File Name	# of Lines	Upload Date
1172	SUSHI.JR1.Cambridge-Core_20170925110928.2017-01-01_2017-07-31.R4.xml	197	Sep 25, 2017
881	CJO2016JR1.csv	562	Aug 18, 2017
859	CJO2014JR1.csv	493	Aug 17, 2017

## Usage and Assessment

- SUSHI protocol  
(or other automated collection)

ERMS that do ingest COUNTER usage reports, either allow this manually or through an automated process according to certain protocols for communicating with providers secure sites, and which align to match up with COUNTER standard data points for delivery and reporting.

The primary one is called SUSHI protocol, but some vendors have created their own proprietary automated harvesting mechanisms (Intota called their DRS – data retrieval service, for example to reflect that the entire process is not entirely automated, but still requires a fair amount of human intervention, normalization, and service (troubleshooting).

In addition to being the repository these systems usually also providing additional layer of visual analysis or peer comparison of data.

# Administration of administration

- Vendors
  - Admin portal login
  - Contacts (many)
  - Interface branding, display
- Holdings Administration
  - IP
  - EZProxy
  - Local A-Z display

**SpringerLink GWLA 2016 (AABHQ)**  
http://link.springer.com  
Springer Nature  
GWLA (RDMC full access)  
1799 titles (0 books, 1799 journals)

Resource Type: Database | Status: Cancelled | Discoverable: 360 Link, 360 Core, 360

**Discovery**

- 360 Core On
- 360 Link On
- 360 MARC Updates On

**Configuration**

- Database URL: <http://link.springer.com>
- Library Proxy: On

**Administration**

- Admin Site URL: <http://www.springerlink.com>
- Admin ID & Password: kansas.admin\_J@yhawk1

**Renewal Details**

- Auto Renew For Subscription Term: Off
- Renewal Note
- Renewal Document
- Perpetual Access Note
- Renewal Cost Note

**Related Actions**

- View Titles
- Download Title List
- View Renewal Checklist

**Contacts (8)**

- Ameduri, Nicole**  
nicole.ameduri@springernature.com  
Customer Service, Technical Support, ...
- Doblick, Nick**  
Nick.Doblick@Springer.com  
Consortia
- Lao, Victor**  
victor.lao@springer.com  
To Escalate
- Sanchez, Treeny**  
treeny.sanchez@springer.com  
Licensing
- SpringerLink Help Desk**  
springerlink@springer.com  
Technical Support
- xBenard, M (see Ameduri)**  
Michelle.Benard@springernature.com
- xBlackwood, Carola (See Lao)**  
carola.blackwood@springer.com
- xCash, Lauren (see Ameduri)**  
lauren.cash@springernature.com

[View Less](#)

The way the ERM administers such administrative details is the final layer of functionality. The ERM's centralization of the vendor's administrative portal details that assists in the usage collection process is one example. That portal also administers each providers search display features and the ability to add library branding. Vendor contacts may seem minor, but centralization here is important given there are many for each different aspect of e-resource management of a particular resource (from sales, to licensing, to tech support). the core of the administration of the administration around the knowledge base.

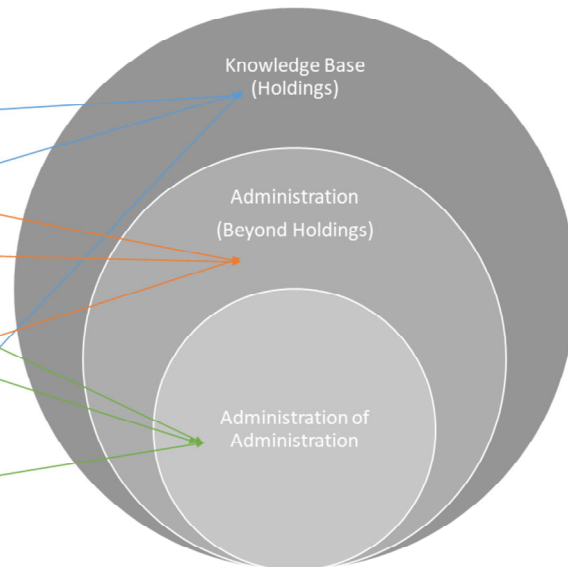
The other administration of administration has to do with the metadata associated with the access details for all your resource. IPs, EZproxy, etc.

# Define ERM

## COURSE OUTLINE

1. Selection
2. Packages and pricing
3. Ebooks (other formats)
4. Evaluation and usage statistics
5. Admin modules of vendors
6. Vendors contact, relations
7. Licensing and Terms of Use
8. Linking and Discovery Selection
9. Link Resolver, UI, Branding Metadata

## ERM ROLE



So here is a look at the basic function of the system the context of what you've already covered in your course so far.

- 1) The knowledge base connecting to selection and how e-resource content is packaged, and linking capabilities is what connects the knowledge base to allow it to be discoverable to patrons.
- 2) The administration function around the knowledge base holdings, relates to what you've covered as far as packages and pricing license and usage data.
- 3) And the administration of those administrative details in the ERM is talking about the work of vendor relations and the administrative modules of vendors, and the metadata associated with the vendors platform – how the link resolvers functions, customizing user interface features, adding local library branding, etc.

## QUESTIONS?

### Outline Check-in

- Focus
  - Systematically (from the vantage point of systems/tools)
  - Constructively (from course outline so far)
- Basics
  - Definition, Evolution
  - View from the inside
- **Evolution, Current, and Future State**
  - **What does ERM do & not do (well)**
  - **Lifecycle, Workflow, Staffing**
  - System Alternatives, Market

Questions before we talk about how the ERM aligns with e-resource workflow and staffing?. Then we'll wrap up with where the system market is headed.

## Question for you...



photo credit <http://www.flickr.com/photos/stuartpibrow/> / CC BY-SA 2.0

Those who've taken a catalog class,

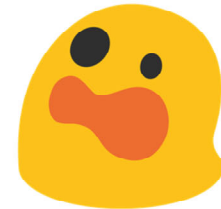
Question: What's another word we could use here to define this administration of all this data about data?

Answer: Metadata

Albeit in a different sense than is commonly understood for that term in cataloging, which has had years of historical development. Metadata and the necessity of standards is a core part of ERM systems and workflow we developed much more quickly. As such, there are some guiding standards ERM metadata, which I'll point to as we go through various sections of the ERM system and workflow, that remains pretty unstandardized, which is why e-resource management has engendered such metaphors as taming the tiger, putting out fires, or herding cats.

So I going to talk about how the ERM as a system evolved as an attempt to herd cats of metadata, so to speak. But also talk about how that chaotic metaphor extended to the development of the e-resources lifecycle, workflow, staffing and organizational structures. This will include a discussion of system alternatives and the state of the ERM in libraries and in the market.

Evolution of ERM(S) +  
Standards +  
Workflow =



- 2004 Digital Library Federation report of the DLF ERM Initiative
- Licensing: SERU, LIBLICENSE, ARL Codes, Best Practices
- Usage: COUNTER, SUSHI
- Problems:
  - Duplicate (and still manual) entry and maintenance of data in multiple systems or modules.
  - ERMs don't do a great job of supporting actual workflows.
  - In general, pace of e-resources vs 12-year old design

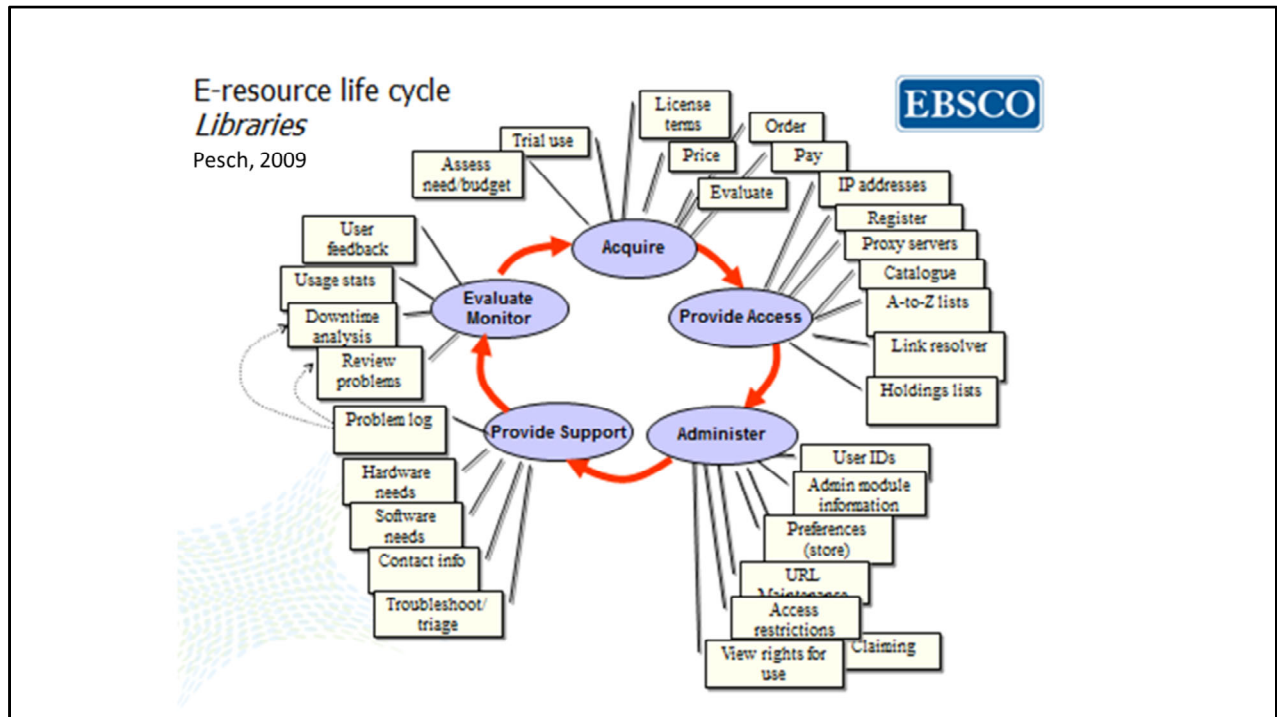
As we think about how the ERM evolves to address needs the ILS was not providing, it involved a lot of rethinking design, addressing new standards for new kinds of data, and new ways of structuring everyday work in libraries. It was fast and furious, mostly reactive, and still involves a lot of workarounds and troubleshooting.

One of the first attempts to address the ILS inability to handle this chaos was the DLF ERM Initiative which outlined standardized features and functions needed to support managing electronic resources. ERM platforms were developed using the report as a blueprint. Other guidelines evolved associated with various ERM aspects – licensing, usage. The SUSHI protocol was one of many other workflow and system standards (KB standards, Linking, Transfer are other examples) developed as part of the National Information Standards Organization (NISO)

However part of the problems from the get go, were the fact that it was a separate system that did not integrate well with existing systems. Much of the usefulness of that system required duplicating data the ILS did provide into the ERM (biggest example e.g. cost data). In this way it just didn't do a great job of supporting workflow. It was designed with data in mind instead of workflow. As acquisition of e-resources grew and the development of different kinds of possible e-resource format grew, outpacing the design of our systems to accommodate it. So, this raised significant workflow problems. To address this, ERM



began to look at metadata elements from the perspective of workflow, which was no longer linear, but cyclical – and staffing competencies.

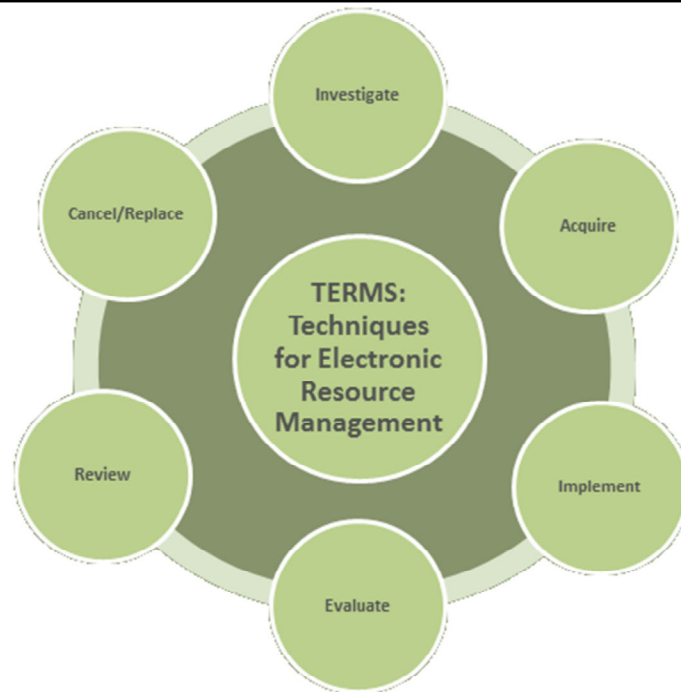


Oliver Pesch in 2009 (who worked for EBSCO at the time) outlined the e-resources life cycle in this image has been used often to illustrate the complexity of the workflow management involved and the chaos that has challenged e-resources management workflow and systems to date. But you can see here too the details involved in administering data around the e-resource lifecycle.

## E-resource life cycle

### *TERMS*

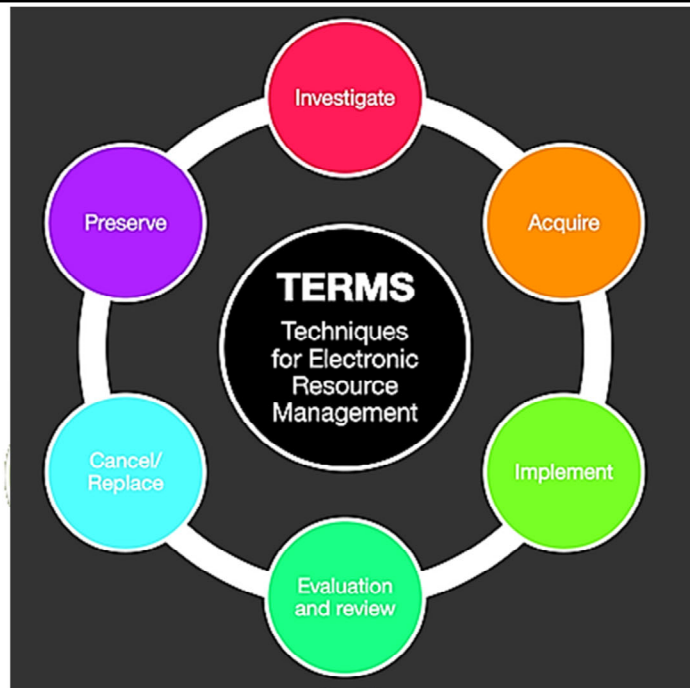
Emery & Stone, 2013



It was this diagram that led Jill Emery and Graham Stone to develop a crowdsourced wiki-project to collect best practices from practitioners in the field for the techniques associated with each point in the lifecycle. Their project developed 6 TERMS.

Understanding the e-resource lifecycle and workflow and the particular work involved at each stage has been useful for refining the use of ERM systems to address workflow.

E-resource life cycle  
**TERMS**  
Emery & Stone, 2013



Recently the TERMS have been revisited into a 2.0 version that incorporates issues related to open access aspects/differences in investigation and acquisition there, as well as important issues related to digital preservation.

## Core Competencies Of Electronic Resources Librarians

*NASIG Executive Board, July 22, 2013*

*Revised with minor edits by CEC, January 26, 2016*

1. Lifecycle of ERM
2. Technology
3. Research and Assessment
4. Effective Communication
5. Supervision and Management
6. Trends and Professional Development
7. Personal Qualities: Flexibility, Tolerance for Complexity/Ambiguity, Customer Service, Time Management

The emphasis on the lifecycle is addressed in another key project, the development of CORE Competencies for E-resources Librarians.

If I were to address how the ERM supports these competencies I would say that it pulls data together at each point in the lifecycle, but the librarian must understand how they fit together.

The ERMS as a specific piece of technology, needs to interoperate (and the librarian must understand the interoperability) with other systems and technology.

The ERM and later the newer Library Services Platform understand the importance of data and assessment and incorporate data elements necessary to evaluate resources. But the librarian must remain understand the limitations of data and how to effectively analyze data for decision-making.

You cannot rely on the tool to replace librarians. However, when evaluating systems, their ability to complement to work of e-resource staff and help address efficiency in this work is critical. In these last several competencies is where the ERM has not been as effective. There are basic workflow needs that the ERM simply can't yet address. Two of the biggest are staffing and communication across the e-resource lifecycle. The TERMS lifecycle

project and these competencies have helped guide and align staffing support with the increase in e-resource acquisition, there is still a great deal that is still developing with respect to how e-resource staffing is organized and managed.

## Staffing and Organization

- E=somebody/group vs E=Everybody/group
- Serials, but what about e-books?
- Staffing e-specialities
- E-resources, Digital Initiatives, Scholarly Communication Assessment, Data Services



06/06/2008 (Day 2.158) – Hat by Kaptain Kobold  
(CC BY-NC-SA 2.0)

I've found in my own research and reorganizational efforts at my institution, that question of best ways to staff and organize of e-resources responsibilities center around the question of whether e-resources is specialized work of a person or group, or if it is better distributed among everyone's responsibilities? Typically e-resources work evolved out of serials work, as a specialized function. But more and more, and particular as e-books evolved out of print based and linear workflow, e-resources has had to become everyone's concern. In fact, discussion around the core competencies has addressed the fact that they are not intended to account for the responsibilities of a single e-resource librarian position. The one person wearing many hats is not very sustainable in libraries where e-resources content account for nearly 80% of budget. As I mentioned at KU when I was hired into a specialized e-resource librarian, I was one of two, and still e-resource responsibilities were also covered in other areas of the organization. While it may still be necessity in some organizations to designate a specialty in this way, the strict interpretation of one person to many hats (or responsibilities) is not desirable. In addition to potentially overloading a single person, you prevent everyone from experiencing and evolving with the change that effects every part of the library from selection to discovery.

To help see how these responsibilities are staffed in either model, I'll outline some of the key specializations and areas of the library where you will find these responsibilities either specialized or distributed.

As I mentioned, beyond these specializations in individual positions, e-resources responsibilities can be also be distributed across the lifecycle of the work



## Investigate - *Selection*

Adapted from original slide in *Many Hats of E-resources Librarianship* (Emde & Rathmel, 2012).

### Subject librarians

- Determine relevance
- Establish funding
- Request trials
- Evaluate feedback

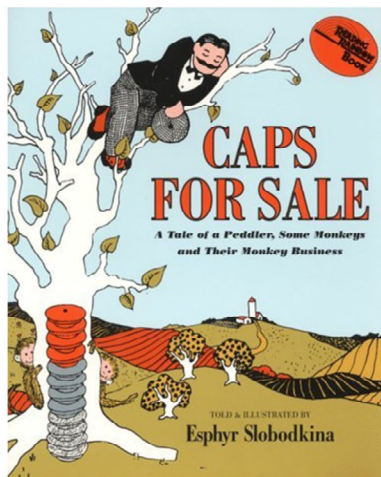


Hat trials by ItzaFineDay  
(CC BY 2.0)

Starting with selection. Usually this is the responsibility of selectors or bibliographers (subject librarians); whether they are in collection development unit, or in a liaison model that involved reference and instruction. They determine relevancy to Univ. programs, figure out how to budget for item, trial resources, ask for comments, Are other resources in subject area used? With selection comes deselection.

## Acquire - *Acquisitions & Resource Sharing*

Adapted from original slide in *Many Hats of E-resources Librarianship* (Emde & Rathmel, 2012).



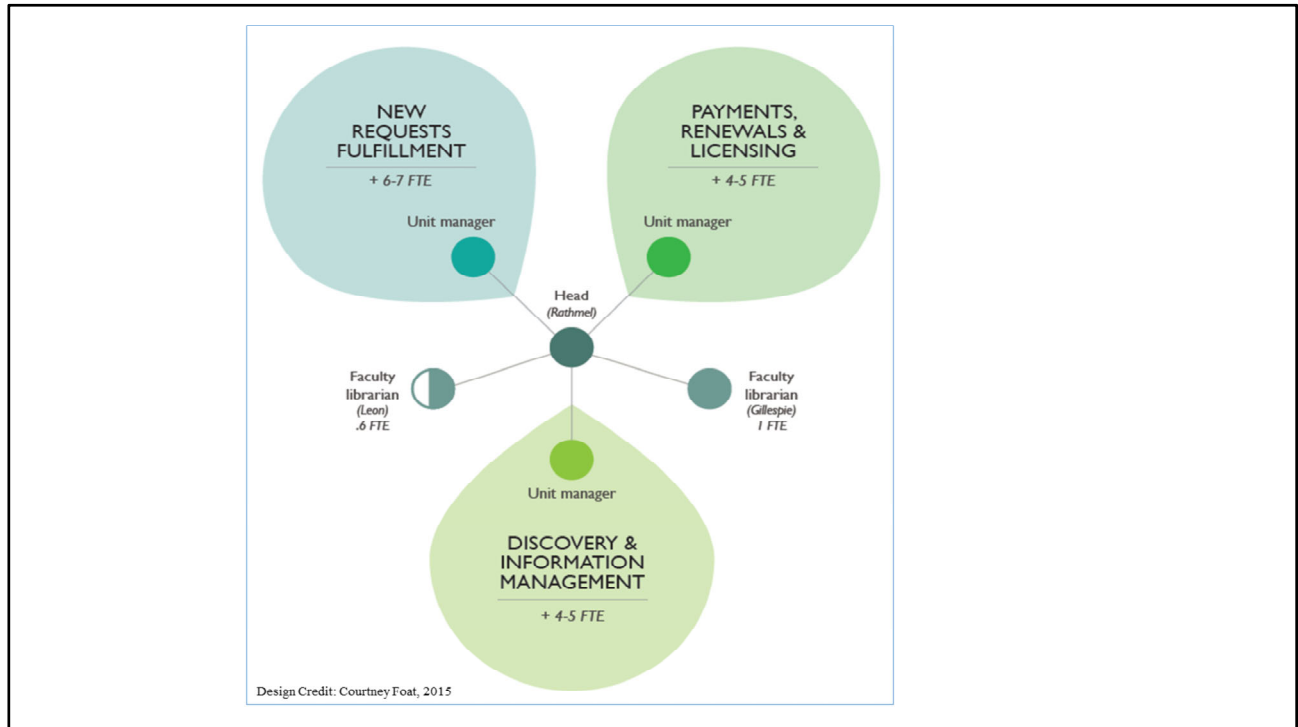
© Esphyr Slobodkina, 1968

- New Requests Fullfillment
- Accounting, Renewals and reconciliation
- Information Management, e-Cataloging, Service desk

Acquisition, and at KU our acquisitions is combined with Resource Sharing (ILL) This is one of the ways we have worked to distribute e-resource responsibility across the organization. We've divided responsibilities into the request process both for acquisitions and interlibrary loan and document delivery – everyone is expected to know the processes and workflows around requests for e-materials as well as print.

Another unit coordinates with the accounting, payment, and invoicing; and the especially complex annual subscription renewals process. Because of the close relationship of license negotiation to sales and payment negotiation, licensing is part of this unit.

The work of e-resource in acquisitions is also more patron facing, since what we are acquiring electronically is them immediately available to patrons, there is not longer an intermediary, so cataloging, information management and troubleshooting with an actual service desk presence is part of our third unit in this department as well.



Our structure in ACQRS attempts to mirror the cycle of e-resource management from acquiring and some implementation in NRF, to implementation, review, and evaluation in PRL, and overall management of the records for cancelling, replacing, or preserving. Troubleshooting is included in that.

## Acquire - *Licensing*

Adapted from original slide in *Many Hats of E-resources Librarianship* (Emde & Rathmel, 2012).

At KU, responsibility of

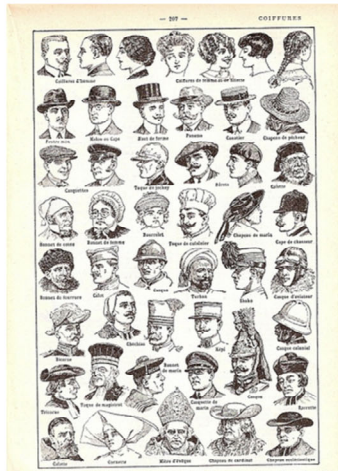
- License Specialist
- Serials/E-resources librarian
- Head of Acquisitions / Mgr of Payments, Renewals Licensing
- University General Counsel
- Consortia
- ILL, perpetual access, fair use



Thinking back the ERM system functions for acquiring e-resources, licensing remains a major task and specialization for librarians' roles. We currently have a Library Specialist devoted to this specialize task. Licensing is one of the hats I wore as an e-resource librarian in acquisitions, and before that our serials librarian handled this role. As head of acquisitions & resource sharing I still have a role working with our license specialist and the university's general counsel who regularly negotiate licenses directly with publishers. I am often involved in licenses that involve consortia or groups of libraries – sometimes these are negotiated and signed by the consortia coordinator. Other responsibilities under license include interpreting rights related to ILL, perpetual access, fair use and public performance rights often requested by instructors, and evolving issues in open access initiatives and researchers needs for online content to have text and data mining capability.

# Implement - *Cataloging*

Adapted from original slide in *Many Hats of E-resources Librarianship* (Emde & Rathmel, 2012).



Hats from 1938 French Dictionary by cindyiscrafty

## Databases:

- E-resource cataloger
  - Access thru Database A-Z and library catalog

## E-Books:

- Catalog individually or in sets

## E-Journals:

- Serials Solutions service manages holdings, titles, URLs
  - Access thru e-journal search and brief MARC records in library catalog

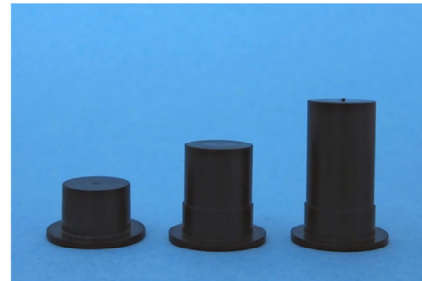
Cataloging is obviously involved in e-resource from the description, holdings and discovery aspects. Some specialized positions in cataloging involve original cataloging of databases and e-resources, updating a web-version A-Z database list, and loading of MARC records sets associated with either database holdings, e-books, or demand driven discovery records (records for items not yet in our holdings).

As for journal content, our library subscribe to services from the vendor Serials Solutions to maintain our e-journal holdings. This activities is not managed in the Cataloging department because the information is so closely tied to the license and renewal process handled in Acquisition & Resources Sharing. Once a month, however, Cataloging receives updated files from Serials Solutions to add, delete, or insert updated brief MARC into our ILS knowledge base (aka catalog).

## Evaluate & Review - *Usage*

Adapted from original slide in *Many Hats of E-resources Librarianship* (Emde & Rathmel, 2012).

- Staff loads usage stats for bibliographers to review
- Excel, Access, and web publishing
- Detail-oriented!



Hat Chart by pasukaru76  
(CC BY 2.0)

We've talked about monitoring and collection usage statistics as very important feature in ERMs. We have a full time staff member who manages this often with additional student help. Over the course of many years we have tired this workflow as a manual process, used the ERM usage module, and explored separate assessment systems. While these stats are made available to content development to review on their own, often staff pull together special groups of usage for comparison and reproduce the data in a format that is conducive to analysis, sometimes comparing across years, adding in cost, and other factors on request. This kind of work requires a keen eye for detail.

This step also involves Selectors (Content Development) for Decision to Cancel or Replace.

## Cancel or Replace - *Communication*

Adapted from original slide in *Many Hats of E-resources Librarianship* (Emde & Rathmel, 2012).



- Essential!
- Routinely report updates to Database list, changes in platforms, problems with vendors.
- Consult with reference staff regarding features at vendor sites
- Consult with IT staff on more technical issues.

You can see how communication in the organization is essential across the lifecycle. One obvious one being campus wide communication that is involved with cancelling or replacing resources. But communication is much more than PR it is an ongoing part of the entire process given the many internal and external players and handoffs involved in the workflow.

Internally, there is strong communication between the technical services end and the public end. For example informing reference/instruction staff about database platform changes, new features, problems, as well as interface and search features available in databases. Communication with the IT staff regarding more technical aspects such as problems with the linking mechanism and EZ proxy configurations is also important. You may also work with IT to address excessive use claims by providers. IT Security office may be involved in identifying users involved, so you can communicate the terms of use associating the activity as a breach of contract, and the risks that effect the entire campus.

## Preserve - *Troubleshooting*

Adapted from original slide in *Many Hats of E-resources Librarianship* (Emde & Rathmel, 2012).

- Aim for a balanced approach to troubleshooting e-access problems
- Information Management & Service Points
- Managing vendors' administrative profiles



Hard hat by rob7812  
(CC BY-NC-SA 2.0)



Angry Birds Crocheted Hat by KateWares  
(CC BY-NC 2.0)

And is also closely tied to aspects of helping to preserve access on a ongoing basis and helping users when they run into trouble. Good communication skill and good service skills are needed just as much, if not more that technical ERM expertise.

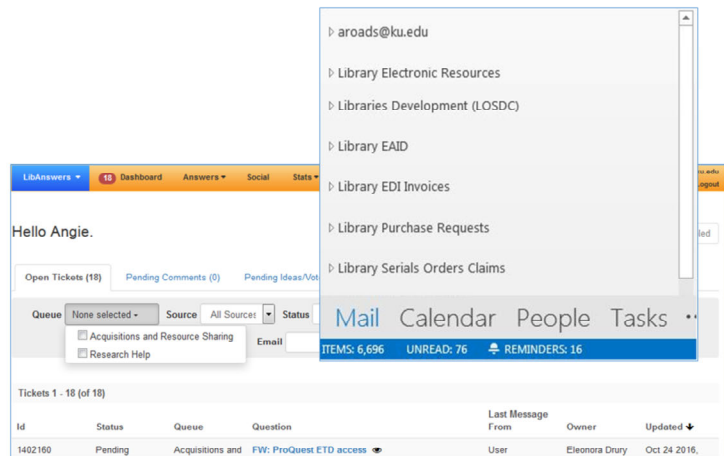
Ongoing maintenance of these resources is an enormous part of the e-resource staffing responsibility, and requires a lot of coordinated effort. We try for a approach that balances our own internal information control while also making it easier for patrons to report errors. This is where for example the administration of vendor contacts and administrative profiles is important.

Many people from many different parts of the organization rely on that “metadata” to address the upkeep of e-resources access and to troubleshoot problems patrons may experience. So it is necessary to have both centralized expertise and distributed effort.



## Preserve - *Information Management*

- Email Communication
- Troubleshooting/ incident management
  - LibAnswers, JIRA
  - Callisto
- Other shadow systems:
  - Excel, Access, R/R
  - Trello, Basecamp, etc.
  - ScholarlyStats, EBSCO Usage Consolidation, LibAnalytics



Communication necessitates good information management. This is challenging when decision points across the lifecycle, happens almost entirely over email (license and renewal negotiation, troubleshooting and incident resolution, and increasing amount of customer service). It is not likely that an ERM or products that evolve from it will entirely replace our email systems. You should expect, however, to seek ERMs or other system solutions that facilitate these communication needs better than traditional email, for example, ticketing and customer relation management systems.

This is especially important for tracking problem resolution for better customer service communication, but also for the purposed of streamlining this part of the workflow as another valuable element in of assessment and evaluation. Like email, and these customer management tools, other shadow systems continue to permeate e-resource management workflows, from basic spreadsheets, to project management software tools, as well as separate e-resource usage assessment tools, or vendor provided usage assessment tools that aimed to take care of cost data de-duplication, or in library-wide assessment tools that address stats across library services beyond content use evaluation. It remains to be seen whether new library services platforms will eliminate the need these extra systems. But it is clear from the evolution of their develop that the began with a strong assesment focus and workflow design in mind.

# Current and Future State

- Breeding's Library Technology Guide

<http://www.librarytechnology.org/>

- ILS to ERM to LSP

2017 Library Systems Report

<https://americanlibrariesmagazine.org/2017/05/01/library-systems-report-2017>

- [FOLIO](#)

## 2015 Product Installations

In Mid-sized and Larger Libraries		
PRODUCT	COMPANY	INSTALLATIONS
Symphony	SirsiDynix	2,548
Aleph	Ex Libris	2,412
Voyager	Ex Libris	1,200
EOS.Web	SirsiDynix	1,089

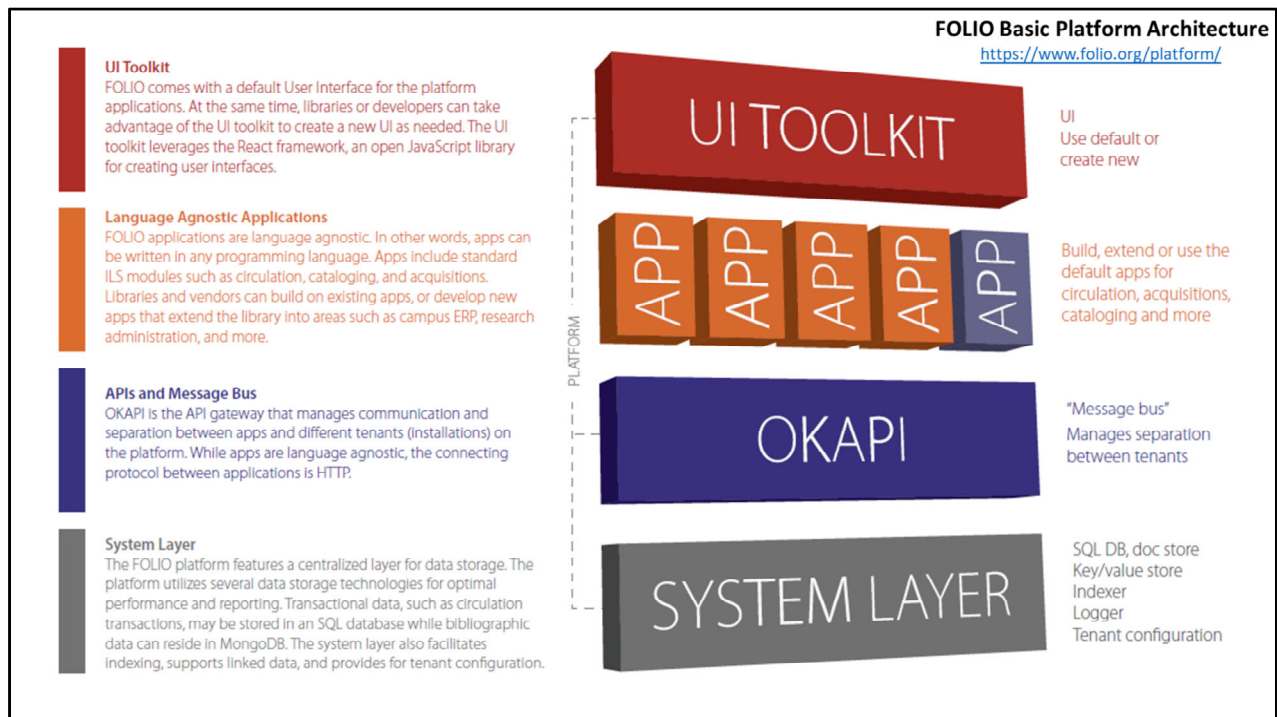
PRODUCT	COMPANY	TOTAL CONTRACTS			INSTALLATIONS
		2016	2015	2014	2016
Symphony	SirsiDynix	142	122	118	2,573
Aleph	Ex Libris, A ProQuest Company	10	20	25	2,401
EOS.Web	SirsiDynix	31	52	58	1,095
Horizon	SirsiDynix	13	15	13	950
Koha (open source)	ByWater Solutions	70	40	53	949
Evergreen (open source)	Equinox Software	13	20	23	896

PRODUCT	COMPANY	TOTAL CONTRACTS			INSTALLATIONS
		2016	2015	2014	2016
Alma	Ex Libris, A ProQuest Company	132	88	43	829
WorldShare Management Services	OCLC	83	68	79	440

To recap, the ERM evolved out of workflow and data management and reporting needs that ILS were not meeting. Basically, ERMS served as linked repositories of data around the e-resource knowledge base, but didn't (still doesn't) integrate well with existing systems to maintain relevance to evolving workflows. This meant creation and reliance on additional shadow systems while ILS vendors and open source developers attempted reinvent both the ILS and ERM in what is know as Library Services Platforms (or formerly aka Universal Resource Management).

Alma, WorldShare Management, and FOLIO are the top new LSP on the market. But library are still not rapidly adopting these systems, given the level of support a migration of this type involves. Each claims to follow agile product development, rather than major and less frequent releases to keep up with rapidly changing technology needs of libraries.

Marshall Breeding is well know in the library systems field. His library technology guide is an excellent resource. What I've excerpted here is from his 2016 library systems report which shows the level of adoption of these new LSP systems remains minimal from 2014-2015, but really changing in the following year with greater adoption of ExLibris' Alma meeting or supassing Voyager implementations.



On the face of it, it this image of FOLIO’s architecture is not similar to how other LSP described themselves as they were developing. Adding in flexibility to incorporate various different applications common to University's and libraries (core ILS and ERM functions, course management systems, university budgeting systems). But the language to describe this functionally similar to the app and platform environment you may be used to on your iPhone, may be just a better way of describing it, by FOLIO claims it is an entirely different architecture that makes it possible.

One key difference between FOLIO and other LSP’s being that FOLIO development is open source, so its apps are developed by non-proprietary academic library programmers (or anyone developing for the academic library market) and the platform is flexible enough that people will want to design apps for it and interoperate with it so users can use their products.

## ERM(S) + Workflow Considerations

### **OFFERS**

- Allows for additional metadata associated with e-resources
- Ability to track and communicate the e-resource lifecycle
- Potential for centralized assessment (usage, cost)

### **NEEDS**

- Better integration with ILS
- To keep pace with development of new formats
- Accommodate the most customizable communication mechanisms along the lifecycle
- Data normalization and system deduplication
- To integrate troubleshooting

ERMs are still used by a number of libraries, despite the fact that the providers are not currently being investing development to them, instead that development and the needs I've talked about here is being invested in LSP development. As these LSPs and other systems develop, these some key features that are already offered that need to remains, and needs LSP might consider developing specifically related to ERM workflow.

# FOLIO

*The Future of Libraries is Open*

**Event:** FOLIO Roadmap Update & Demo

**Time:** Wednesday, November 1, 2017 at **11:00AM EDT / 1600 GMT**

**Registration** [Here](https://zoom.us/webinar/register/WN_4O-OMr9XSzOV7rfOeoxT8A) → [https://zoom.us/webinar/register/WN\\_4O-OMr9XSzOV7rfOeoxT8A](https://zoom.us/webinar/register/WN_4O-OMr9XSzOV7rfOeoxT8A)

The FOLIO platform continues on a fast development track. In this forum, you will hear an update on the roadmap for releasing version 1 of the platform and see a live demo of the components of the system now in place. Hear Harry Kaplanian present the short, medium and long term project goals and deliverables. Watch FOLIO developer Jeremy Huff give a demonstration of the platform as it exists today and take advantage of the opportunity to ask Harry and Jeremy questions about the project and its progress.

**Host:** Eric Hartnett, *Texas A&M University*

**Presenters:**

- Harry Kaplanian, *EBSCO*
- Jeremy Huff, *Texas A&M University*

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