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I. Executive Summary

In the fall of 2010, R2 Consulting LLC (R2) spent 35 days analyzing e-resources workflows and staffing for the Five Colleges (5C). The goals were 1) to increase access and improve user services; and 2) to identify ways for the 5C to collaborate more fully on e-resources management. This work was intended to follow on a 2009-2010 initiative related to shared print workloads, which resulted in selection of a common monographs vendor, and consortium-wide adoption of outsourced cataloging and shelf preparation for English-language books. Electronic resources lend themselves to collaborative management and distributed staffing because there is no physical object involved.

Electronic resources also represent nearly 70% of the combined 5C expenditures on materials. From budgetary and user-preference perspectives, this $9 million annual investment represents the mainstream workflow. At present, these resources and workloads are largely managed independently, and in some cases redundantly, across the 5C. This is done with some difficulty but also with admirable efficiency, as this 70% of the budget is currently licensed, purchased, and made accessible with less than 10% of each library’s staff. Core e-resources management is now provided by a total of 15 FTE across the consortium.

Common tools such as the SFX link resolver, Verde E-Resources Management module, and the Aleph catalog are in place, but structured as separate “instances.” In most respects, they operate as separate systems. All of these systems serve a dual role, both managing resources and enabling users to discover and access those resources. Because approaches to configuring and populating these systems differ from library to library, the user experience can be quite fragmented and confusing. Because the same systems are in place in several institutions, the same work is in many cases repeated in each library. There are significant opportunities to improve both the user experience and resource management.

With help from all five libraries and their shared systems vendor Ex Libris, R2 compared user activity and resource availability across 5C. The most striking finding is that more than 85% of user needs for e-resources are currently satisfied by 60 e-resources “targets”, or sources of full-text data. Most of these targets contain immense amounts of content, so this concentration of user activity is not totally unexpected. But the coherence around this identifiable core suggests a dynamic that could be shaped and managed much more deliberately. It represents a foundation on which a fully shared e-resources collection can be built and managed cooperatively.

R2’s primary recommendation is to introduce what we have called The Five Colleges Commons. The Commons is intended to provide a new way of looking at electronic collections in the Valley, and to identify and emphasize the shared base of resources. (Please see page 11 for a simple one-page graphic of the Commons.) Further, the Commons approach seeks to unify the user’s discovery and delivery experience for most resources. The Commons would be distinguished from the Five Colleges Un-Commons, where individual library resources and unique, locally-produced content would be managed. Both the Commons and the Un-Commons would be managed and made discoverable in a single infrastructure, but the Commons resources would be managed collectively, while Un-Commons resources would be managed by individual libraries.

There are many reasons to believe this would both improve the user experience and back-room efficiency, once the Commons has been built. The Five Colleges have a history of successful collaboration on popular programs such as direct borrowing of print materials within the Valley. 5C also has a deep pool of resident expertise in e-resources, a real benefit of the independent management that currently is the norm. This expertise will be invaluable in the transition to the Commons and in its subsequent operation.
In this report, R2 has submitted more than 30 recommendations that seek to build a truly collaborative e-resources operation, one that is coordinated centrally but that harnesses talent, experience, and hours that are currently distributed across five libraries. These recommendations simultaneously seek to simplify, clarify, and unify the user’s interaction with both Commons and Un-Commons resources. We argue initially for four high level commitments:

- Prioritize the management of electronic resources
- Commit to the Commons
- Develop a “synoptic” view of Commons activity and performance
- Simplify access to Commons resources

None of these can be accomplished without creation of a stronger, more unified infrastructure, which must draw on and from existing individual operations. In our view, there are four components that must be addressed, and we have made a number of recommendations in each of these areas:

- **Shared Collections**: includes a shared Commons budget, maximizing the size of the Commons, moving toward consortial licensing, continued consolidation of vendors, and a shared vocabulary around e-resources.

- **Resource Discovery**: stresses the need for shared decisions around discovery and access, suggests removal of e-journals from the catalog in favor of higher-use sources, movement toward a single shared A-Z list, and replacement of the Aleph “union view” with a single discovery layer, standardization of electronic article delivery, and other ideas.

- **Resource Management**: suggests consolidation into a single consortial instance of SFX and Verde and elimination of ad hoc tracking systems.

- **Shared Staffing**: major ideas include defining Commons-level functions and tasks, along with three possible management/staffing scenarios. The most compelling scenario, in our view, is a Commons-only dedicated staff that operates within a single institution, subject to a detailed service level agreement with the other libraries.

If these ideas are fully developed and implemented, Five Colleges will realize a major transformation. It is important to realize that strong leadership and a strategic investment will be required to make this happen. In our estimation, that investment will yield an excellent return.
II. Introduction and Overview

In September and October 2010, R2 Consulting LLC (R2) spent approximately 30 days analyzing and comparing the Five Colleges Libraries (FCL; 5CL; 5C) with regard to their management of commercial electronic resources, including e-journals, databases, e-books, and e-reference tools. We paid close attention to individual library practices related to licensing, purchasing, and access management, as well as to variations in the user experience. We considered the extent to which technical and organizational changes could improve both aspects of e-resources provision. The analysis included six days of on-site interviews; a site visit to ExLibris; extensive review of library documents, transaction data, and web sites; follow-up emails and phone calls with FCL administrators, librarians and staff; preparation of this report; a conference call with the FCLC; and a return visit to the Pioneer Valley to present our recommendations. This report reflects work performed in the first phase of a two-phased project. The second phase, to be completed on December 8, will focus on locally digitized collections, and the management of commercial images and streaming audio-visual resources. Our expectation is that the phase two report will build on the findings of this one.

Under the direction of the Five Colleges Librarians Council (FCLC), and Neal Abraham, Executive Director, Five Colleges Incorporated, R2 has attempted to understand the current situation from a variety of perspectives, and to articulate a vision for “Shared Digital Collections”. The overall goal is to provide a rationale and a roadmap for the Five Colleges Libraries to join together in a shared effort to increase access and improve services with regard to digital content, and to collaborate more fully on the management of those resources. As our discovery process unfolded, it became apparent that profound philosophical changes would be required to facilitate many of the most important operational improvements. To date, the adoption of this “synoptic” view of 5C activity has not been a formal part of anyone’s work. Therefore, R2 has also made a series of observations and recommendations related to consortial culture and administrative structure.

To a person, staff members and administrators were forthcoming and cooperative during the interview process, and have continued to provide helpful information and perspective via email and phone. We appreciate everyone’s commitment to this process, despite considerable collective doubt that the results of this work will stimulate meaningful change. While our report focuses on transformation, we are respectful of the work now being done on all five campuses, and feel privileged to have had such a close look. Thank you to everyone who participated.

We begin our report with a new vision – for an improved user experience and increased efficiency regarding e-resources management. To some extent, it stems from and was informed by the Five Colleges, Inc. Strategic Plan. During the course of the project, we have come to believe that “an improved user experience”, in practical terms, should be understood to mean less frustrating, more intuitive, and more uniform access paths to full-text resources for all 5CL users. We recognize that there may be competing objectives here, and that it will be necessary to balance a more uniform user experience against each institution’s need to differentiate itself.

We understand “increased efficiency” to mean less operational redundancy across the Valley, a maximum number of shared resources, shared management of shared resources, and some degree of centralized decision-making aimed at reducing the cost of maintenance and increasing the breadth of the collective collection. Recommendations made in this report support both aspects of the vision, and can perhaps serve to establish a new hierarchy of values to be shared by all five libraries.

It is not ideal for R2 to have formulated the “vision” insofar as it lacks the integrity and the inherent support of a vision developed within the consortium. On the other hand, it is apparent that no FCL
apparatus is currently designed or prepared to perform this task. To date, no one has been expected to think this way and it has not been in anyone’s specific interest to do so. This should not be particularly surprising, since priorities and rewards are now set by individual libraries rather than for the good of the whole. A handful of individuals within the FCL, however, have been thinking along these lines for a long time. We have done our best to incorporate their insights and ideas in the vision described in Section II. Obviously, the R2 vision should be carefully evaluated within the consortium and adjusted in ways that will inspire broad-based enthusiasm and support.

Section III provides an overview of the current circumstances related to e-resources funding, staffing, systems and tools, instructional emphasis, access paths, and 5C and intercampus activity. This is largely based on information gathered from individual libraries. A series of SFX reports from each library made it possible for us to investigate patterns of user search behavior with regard to “starting” and “ending” points in the discovery process. With the generous support of ExLibris, R2 has produced a reliable overlap study of e-resources currently subscribed and activated in SFX. R2, with the assistance of many people within the FCL, has also produced a detailed comparison of e-resources management activity. Finally, we have included a brief inventory of important tasks that are currently not getting done, or not getting done as well as FCL staff would like.

Many of our findings are intentionally abbreviated and presented in comparative tables because this format makes it easier to see and consider the big picture. While we have benefited immensely from the information provided by each library on current practices, we did not perform significant analysis of individual operations. Our charge was not to change existing practices, but only to assure that any collaborative approach to e-resources management would take account of those practices, even if they cannot be accommodated in every detail.

The observations and data presented in Section III are not definitive. For example, SFX activity reports reflect a single representative month (April 2010) because comparable data for a longer period was not available. Not all libraries track expenditures by format, so in some cases, we don’t know exactly how much is being spent on electronic content. Not all libraries are equally facile with system reporting tools, so while we know how many free resources are activated in some libraries, we do not know that number for others. Most staff members involved in the management of electronic resources also spend time working with other formats and performing public services so we can only estimate the FTEs (full-time equivalents) dedicated to e-resources. These variations are instructive in themselves, and show what may be needed to create a clear view of collective activity. Wherever necessary, we have simply made our best guess, often in consultation with library representatives. R2 believes the results to be reasonably accurate, but they can certainly be improved over time.

Despite their weaknesses, we believe these kinds of analyses and comparisons should be undertaken on a regular basis and on an even broader scale. The adoption of a 5C perspective is fundamental to improving both the user experience and the efficiency with which e-resources are managed. Learning how to count and compare “apples to apples” will make intercampus communication and coordination increasingly possible. In general, our findings suggest that despite vastly different approaches regarding library operations and service, striking similarities exist among all five libraries in terms of desired resources and user behavior. There are tasks that would benefit from being handled in common. There is a foundation on which important economies of scale can and should be built.

Specific recommendations for change can be found in Section IV of the report. These have mainly to do with shared policies, shared resources, shared tools, shared procedures, and a 5C Commons organizational structure with the authority and the autonomy to act on behalf of the whole. Most
important, of course, are recommendations related to a strong and structured commitment to the new vision, commitment that will be met and measured with staff time and subscription dollars—and in a shared workload. R2 believes that this degree of cooperation will make it possible for each library to invest even more than now in acquiring unique and/or distinctive content, providing exceptional patron service, developing campus specific course and curriculum guides, and engaging in more sophisticated faculty outreach; thereby distinguishing themselves in areas where local expertise creates real value.

For the Five Libraries to increase operational efficiency and significantly improve the collective user experience, each library will have to abandon some degree of local autonomy, including (in some cases) specific procedural and/or technical solutions that work well locally. If scalable, the best individual solutions can be leveraged to benefit the whole, but even this will be a painful process. If achievable, however, a more unified approach will benefit users and libraries in significant and demonstrable ways.

In closing, it’s important to note that 5CL have several major advantages that will make this transition possible, and potentially much easier than in other institutions:

- Electronic resources expertise (SFX, Verde, MARCIt, licensing, trouble-shooting, etc) exists in a much larger group of people than in most individual libraries, in part because it has had to be developed independently in each library. Consolidation of both expertise and workloads, as they are re-organized, will leverage those vital skills for the benefit of the whole consortium. And while additional hours may be needed in the near term to manage the transition, there is plenty of expertise and experience to assure excellent training and rapid growth of requisite skills.

- FCLC and the FC Presidents initiated, and are actually driving the move toward greater collaboration. This increases the likelihood that short-term transition costs will be supported, provided longer-term service improvements and savings are delivered.

- Large portions of the systems infrastructure are owned in common. While no system is ideal, sharing system(s) is important to shared workflows and the discovery experience.

- Many library staff members across the Five Colleges believe there is a great deal to be gained by working more closely together. There is evidence of much creative thinking along these lines, with ideas such as using the Depository ADM for shared eBooks and electronic Government Documents. While there are differences of opinion over how to best collaborate, there appears to be some willingness to do so.

- People seem generally open to reversing decisions that have not worked especially well. Of note here is the 2004 decision to move to separate bibliographic records with the migration from III to ALEPH. There is widespread interest in redressing this, although there is also a discouraging lack of clarity about how that might be accomplished.

- The DEDCC group has already looked closely at options for a Five Colleges discovery tool, and people understand that this may allow 5C to sidestep some of the problems associated with ALEPH union view and its possible removal.
III. The Five Colleges Commons

“To maximize the advantage of the Five College system in recruiting students, faculty members and staff members, it will be important to align these activities under a common—and reenergized—identity, one that complements the individual identities of each of the institutions while promoting the value proposition of the consortium.” ~from The Five Colleges Strategic Plan~

Driven by many factors, willingly or not, higher education has entered an era in which collaboration, cost-sharing, and efficiency have become critical to its continuing vitality. The Five Colleges have already embraced this reality in many areas, with cross-campus enrollments, joint faculty appointments, shared security services, and an ambitious plan to create a “fully-aligned, all-institution course catalog” and federated authentication via Shibboleth.

This project, of course, focuses on libraries, which receive specific attention in the group’s strategic plan. In “Optimizing the Consortial Advantage by 2020”, libraries are cited as primary actors in one of the two main strategic directions. The Five Colleges (5C) seek “additional collaborative strategies for improved services at a reduced cost, including increasing and streamlining access for students and faculty members at each campus to the physical and electronic library collections at the other campuses.”

The implications of this statement are far-reaching, as are the opportunities associated with it. In particular, the provision and management of electronic resources lend themselves well to collaboration. First, they represent nearly 70% of the combined 5C materials budgets, and approximately $9 million in annual expenditures—a number which does not include staffing or systems support. These are the resources most in demand among users. Improvements here could have a very high yield. With regard to e-resources management, some collaboration already occurs. All five libraries use instances of the same software to link to full-text content. Staff managing e-resources often consult with colleagues at other 5C libraries on technical questions and best practices.

In other realms, the 5CL have a well-developed history of cooperation and collaboration. The Five Colleges Depository provides not only shared storage, but coordinated management of last-copy responsibility, and is looked to as a model by other consortia. The libraries have long shared many components of their automated systems (albeit with some variation in implementation), as well as an ILS Coordinator position. Direct borrowing of print materials is a mature, reliable, and heavily-used service among the 5C library patrons. Cataloging and binding workloads are shared to some degree via direct arrangements between individual campuses, and via a “peripatetic” cataloger position. Expertise of all kinds is shared through a variety of Five Colleges committees. And recently, agreement on a single 5C vendor for mainstream print books has enabled awareness of each other’s selection activity.

But, as we learned during our visits to the five campuses, there is much more that could be done, especially with electronic resources. As will be detailed in the following section of the report, there is substantial variation across 5C libraries in the user experience. Discovery of similar resources occurs in different ways, influenced by different philosophies of instruction and different approaches to metadata management. Interpretation of search results can be very confusing, both in the “union view” provided by the online catalog, and in the customized SFX “Get it” menus that display access options for users.

There is also substantial redundancy and variation in practices related to the management of electronic resources. Each library operates almost completely independently in selecting, negotiating, licensing, and purchasing its e-resources. Five separate A-Z lists for databases are created and maintained via five separate content management systems. Links to full-text content are managed in five separate instances.
of the SFX link resolver. Proxy servers are updated individually. Cataloging of e-journals is done differently at each library. Many other differences are outlined in the charts in the following section. In short, however, there exists only a modest amount of shared practice—and almost no shared workloads—in these areas.

This is not particularly surprising. Until recently, there has been no incentive to think and act in concert. Each 5C member library has customized its services and management to the needs of its own campus constituency. This is natural and completely appropriate. But the message of the Five Colleges presidents conveys strong support for fuller collaboration over the next decade. Collaboration, especially among libraries, is now a priority. This will require a change in orientation, and a new way of looking at the Five Colleges collections: as a seamless whole rather than the sum of its parts. In effect, the libraries can lead the way toward a “common—and re-energized—identity.”

In order to achieve significant progress toward “increasing and streamlining access for students”, R2 concurs with many library staff members that both the 5C user experience and the 5C management of resources and access must be improved. We also concur that this process is best begun with electronic resources, and most effectively approached through much deeper collaboration.

In the next several pages, we will attempt to describe what an optimized user experience and collaborative e-resources management might look like. In setting out this vision, it’s important to keep in mind that realizing it will take some time. We are suggesting fundamental changes in orientation, based on the following principles:

1. It is possible to identify a large core of resources appropriate for all 5C undergraduates.

2. These resources should be licensed and purchased consortially. Core resources should be converted to fully-shared subscriptions, even when currently subscribed by just 2 or 3 libraries, and sub or partial packages should be abandoned in favor of complete (like Science Direct and JSTOR).

3. Access to these resources should be uniform, undifferentiated by institution.

4. Consortial e-resources should be funded and managed centrally.

5. Print editions of core e-journals should be separated from the shared subscription and managed by those libraries that continue to receive them.

6. Other resources should be funded and subscribed locally, or obtained via pay-per-view, but should also be managed collaboratively – according to common principles and available for streamlined intercampus borrowing.

In essence, we are suggesting the establishment of a much more deeply and widely shared collection, beginning with e-resources. Significant portions of the “collection” would be accessible to all members of the 5C community through an identical discovery experience. Other, more specialized resources would remain accessible only in the domains for which they are licensed, but would be discoverable through the same tools as commonly-subscribed resources. The best case scenario is that core resources are subscribed consortially, and other resources would be subscribed by just one library, with assurances that service parameters for article delivery are consistent and prompt (within 24 hours).
Management of subscriptions, access, and trouble-shooting for commonly-subscribed resources would be centralized. Tasks related to selectively-subscribed resources would be performed locally, but coordinated centrally.

We suggest it would be useful to think of library resources in two distinct categories (though they will act more like different parts of a spectrum). For the purposes of this discussion we have dubbed them “The Five Colleges Commons” and “The Five Colleges Un-Commons.”

The 5C Commons
According to Wikipedia, the commons are “resources collectively owned or shared between or among populations.” The term also carries the connotation that resources “used and enjoyed by all” confer “a sense of belonging” and “an element of control.” These are precisely the characteristics we wish to embed in the concept of the Five Colleges Commons. Our scope, of course, is limited to library resources and services, but it is clear that this concept could be extended far beyond those boundaries.

The library version of the 5C Commons, then, is a collection of electronic resources completely shared by all members of the group. Unlimited access is provided to all 5C students, faculty and staff. While the number of resources in the Commons may not be large, the demand and transaction volume will be very high. The Commons is optimized for undergraduate users, but can and will be used as a starting point for information discovery by all but the most experienced users. Thus there will be many users, and these will be for the most part general users, and often inexperienced users. The Commons should be clearly branded as a Five Colleges resource; that is, it provides the same user experience and the same content regardless of institutional affiliation. Every effort should be made to expand the Commons to its largest useful and affordable extent, making it the foundation for all users. Given what we have learned about user activity at the Five Colleges in the past month, it is conceivable that the Commons could support 70% or more of all information needs.

The 5C Un-Commons
We considered some other names for the Un-Commons, such as the 5C Enclosures, the 5C Reserves, etc. In the end, we stuck with Un-Commons because it provides a direct distinction, but also connotes a sense of uniqueness that reinforces the notion that it contains specialized content for more specialized users. The Un-Commons will be the province of advanced researchers, whose information needs will vary more widely. It will feature unique and uniquely-available content, as well as some selectively-subscribed content. There will be many more individual resources under management than in the Commons, but there will be fewer users and transactions will be more dispersed. Although the discoverability and user experience will be similar to the Commons, direct online access to the material will be limited to designated institutional users. The Un-Commons will feature institutional differentiation and branding, with content and services customized to the respective user base. Management of this content will involve local staff, supported by colleagues in other institutions and by whatever collaborative management structure is adopted for the Commons.

The following diagram attempts to present the overall concept and distinctions concisely. The purple triangle represents the number of expected users, and the red triangle represents the number of resources and the expected number of transactions. The horizontal green bar represents the line between Commons and Un—Commons; always pushing towards a greater Commons. Additional comments on the User Experience and Resource Management follow the diagram.
Shared Policies

Collaborative Staffing

Individual Subscriptions

Shared Tools

5C Un-Commons

Institutional Branding

5C Commons

Consortial Branding

5C Licenses and Subscriptions

5C Staffing

Depository ADM

5C Operational Principles and Discovery Standards

5C Commons

5C Un-Commons

Single A-Z List: Databases

1 C

2C

3C

4C

5C

Single A-Z List: E-Journals

1 C

2C

3C

4C

5C

Coordinated Management

Collective Management
With the Commons/Un-Commons concept in mind, it may now be useful to refer back to the strategic imperatives that inspired this discussion, and test the concept against them. In other words, how would the 5C Commons contribute to:

1. “increasing and streamlining access for students and faculty members...” and
2. “improved services at a reduced cost”

**Increasing and Streamlining Access: 5C Commons User Experience**

For the Commons, the intent is to create and maintain a clear and consistent discovery and delivery experience across all Five Colleges. In our view, this can best be accomplished by:

- Maximize the number of shared consortium-wide subscriptions; continue to expand the base.
- Focus the Commons first on the needs of undergraduates. This is the biggest group of users, with the most similar needs, probably representing 70% of discovery activity.
- The Commons “collection” would be developed collaboratively, based on usage data currently available, and supplemented by librarian knowledge of patterns.
- A single shared A-Z list for databases would encompass all resources subscribed.
- A single shared A-Z list for e-journals would encompass all resources subscribed.
- A standard SFX menu would be presented, clearly indicating both Commons resources, which are immediately accessible to all users; and also displaying Un-Commons resources, with an indication of specific library subscriptions. For those resources that are not immediately available to a particular user, the opportunity to request e-article delivery (within 24 hours) would be obvious. This would echo the 5C Direct Borrowing experience for print materials.
- A single discovery layer tool would support both the Commons and the Un-Commons.
- Broad-based subject guides would be prepared once on behalf of the consortium. More specific course guides would remain individually-developed and deployed in the Un-Commons sector.
- Instruction sessions for the Commons would be identical regardless of which campus conducts the session.
- Improve the extent and clarity of remote access to 5C Commons content:
  - Phase 1: more consortium-wide licensing, accommodating all IP ranges
  - Phase 1: use of the Depository ADM for electronic Government Documents and 5C-owned resources such as the patron-driven eBooks.
  - Phase 2: Shared discovery layer implemented (WorldCatLocal, Primo, or Summon)
  - Phase 2: Use of Shibboleth for library resources to the extent that it’s needed
    - 5C members as the “information provider” for authentication
    - Implement with all “service providers” who support it; keep growing it
- Shared patron support/instruction/access support/trouble-shooting for Commons
Differentiators: The 5C Un-Commons
The Un-Commons resources should be conceived as a narrower part of the spectrum, rather than a completely different universe. The intent is to maintain the same discovery frame, indicate availability, but to limit access where necessary:

- Both materials and users are more specialized
- Differentiation in access occurs only at this level
- Course guides will continue to be customized
- Improved article-delivery options available to users from non-subscribing libraries
- Pay-per-view may be explored as a cost-effective alternative to some individual library subscriptions

Improved Services at a Reduced Cost: 5C Commons Resource Management
One of the biggest advantages of the Commons concept is that significant efficiencies can be gained in the management of shared electronic resources. As noted previously, 5C as a whole already enjoys considerable expertise in SFX, Verde, and all processes and tracking related to e-resources. By aggregating this expertise virtually, reducing the complexity of underlying processes, eliminating redundant tasks, and assuring a common systems infrastructure, a great deal less effort will be needed to manage this growing body of content. This is an area with very high leverage, because of the number and quality of staff already involved. It’s an unusually fortunate situation, and we urge 5C to take advantage of it. Some elements that will be necessary to fully optimize the management of the Commons include:

- A shared budget for Commons resources
- Shared selection of Commons resources
- An increase in consortial licensing
- Fuller use of shared systems
- Shared policies and practice
- Shared staffing

Differentiators: The Un-Commons
With discipline, e-resources management for the Un-Commons might be kept very similar to that of the Commons. This should be possible since the same systems infrastructure and the same policies would apply. The trick would be to keep exceptions rare. Unlike the Commons, these resources would be funded and managed locally, so the temptation to customize processes will be ever-present. To the degree that standard policies and practices can be maintained even for individually-subscribed content, that work can be shared by e-resources staff in other libraries, if necessary. This is an important asset, and care should be taken not to undermine it.

The practice of prioritizing the good of the whole and emphasizing the standard processes that underpin the Commons will require discipline and trade-offs. There will necessarily be a period of transition and experimentation. In the short term, even as budgets and workloads will shift toward a collective model, there will also be continuing demands at the local level. All decisions should be taken with a view toward moving the organization further in the direction of the 5C Commons. There is an inherent tension between fostering a common experience and a set common management practices and a perceived need for differentiation—to distinguish one’s institution. But it’s important to ask whether the library’s online resources should be a differentiator? Or are they more like dorms, shuttle buses, wireless access ... necessary but not crucial to institutional identity?
IV. The Current Circumstance: Variations on a Theme  
With regard to the management of electronic resources, each of the five libraries shares the same goal, but other similarities are less obvious. R2’s exploration of the environment and our comparative analysis revealed as many operational differences as similarities. It has been our primary intent, however, to find the overlap; to identify commonalities that can lead to greater collaboration, and an improved user experience. Our findings are offered here with the hope that they will inspire further investigation; thoughtfulness about how best to move forward; and of course, action.

The User Community and Cross-Campus Borrowing  
The Five Colleges Strategic Plan describes a user community of 35,000 students and 2,500 faculty members, with nearly 6,000 course specific, cross-registrations each year. Nearly all cross-registrants, like 5C students in general, are undergraduates. UMass enrolls 6,200 graduate students and Smith enrolls 100 more, so including faculty, approximately 23% of the user population may be engaged in relatively advanced research. There are three 5C Academic Departments and more than fifty 5C certificate programs, committees, councils, centers, and cooperative projects, many of which rely on 5C library resources. Some 28 scholars hold Five College joint teaching appointments and more than 80 have served in this capacity since 1973. All these members of the 5C academic community have full viewing privileges for commercial e-content when onsite in the subscribed library. Offsite access to electronic content is necessarily restricted to those users registered at the subscribing institution (or cross-registered for the duration of the course).

<table>
<thead>
<tr>
<th></th>
<th>UMass</th>
<th>Smith</th>
<th>Amherst</th>
<th>Mt. Holyoke</th>
<th>Hampshire</th>
</tr>
</thead>
<tbody>
<tr>
<td>student FTEs</td>
<td>26,328</td>
<td>3,100</td>
<td>1,690</td>
<td>2,200</td>
<td>1,500</td>
</tr>
</tbody>
</table>

For library users registered in an unsubscribed 5C institution, ILL or article delivery options exist for this digital content, but no special 5C borrowing privileges or tools are in place. Some libraries were able to report on 5C article delivery activity (below), but the numbers are low.

The single biggest concern expressed during our interviews related to the frustration users feel when they see an e-article they want (subscribed within the Valley) which is not immediately available to them. One option is to suppress this information to non-subscribers, but no one is especially comfortable with that idea. In addition, users find it un-intuitive to “request delivery” of an online article, and there is no 5CL e-article borrowing process comparable to Direct Borrowing for books. Article borrowing through other avenues, such as the RAPID system in which UMass participates, is significantly higher. This is in part because delivery is guaranteed within 24 hours, and in part because the request process is clear.

<table>
<thead>
<tr>
<th></th>
<th>annual volume of 5C Direct Borrowing - these numbers represent all library circulations, including reserves and ILL</th>
<th>annual volume of 5C article borrowing/lending - no distinctions between print vs online resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>UMass</td>
<td>68,274 items borrowed 37,821 items lent</td>
<td>107 items borrowed 205 items lent</td>
</tr>
<tr>
<td>Smith</td>
<td>30,102 items borrowed 11,713 items lent</td>
<td>126 items borrowed 264 items lent</td>
</tr>
<tr>
<td>Amherst</td>
<td>17,095 items borrowed 60,473 items lent</td>
<td>not tracked</td>
</tr>
<tr>
<td>Mt. Holyoke</td>
<td>25,402 items borrowed 22,715 items lent</td>
<td>91+ (?) items borrowed 71 items lenti</td>
</tr>
<tr>
<td>Hampshire</td>
<td>43,407 items borrowed 15,123 items lent</td>
<td>not tracked</td>
</tr>
</tbody>
</table>
In comparison to cross-campus borrowing of print (we assume mostly books), article-level transactions are so few as to make us wonder whether reported numbers are accurate. Note that none of the libraries distinguish between article-ILL that is sourced from electronic versus print journals. With numbers this small, however, the difference appears inconsequential. Again, there is no special 5C agreement for cross-campus borrowing of journal content.

During a conference call with the FCLC, R2 was reminded that there is no inherent benefit in establishing an exclusive or standardized 5C article borrowing agreement, since delivery is electronic. Geographic location is of no consequence. Still, R2 begs the question of a unified user experience and again, the variation from one library to the next causes concern. UMass is a member of RAPID ILL, and Amherst is considering joining. As far as we know, RAPID ILL is not being considered by any of the other three libraries. Cost was mentioned by at least one as an inhibiting factor.

**Staffing**

From the outset of the project, R2 has been interested to learn about the overall staff investment in the management of e-resources. As demonstrated below, we estimate that each library dedicates from 4% to 8% of its full staff cohort to the myriad technical services tasks related to e-resources: licensing, payment, activation/registration, SFX and proxy maintenance, cataloging, troubleshooting, and usage statistics. We did not include any reference, public services or ILL tasks in this estimate. Across 5C, the number of full-time equivalents (FTE) engaged in the often “invisible” work of managing electronic resources is 15.

<table>
<thead>
<tr>
<th></th>
<th>UMass</th>
<th>Smith</th>
<th>Amherst</th>
<th>Mt. Holyoke</th>
<th>Hampshire</th>
</tr>
</thead>
<tbody>
<tr>
<td>library employee FTEs</td>
<td>&lt; 125 FTEs</td>
<td>50 FTEs</td>
<td>35 FTEs</td>
<td>30 FTEs (excluding IT staff in Mt. Holyoke’s merged organization)</td>
<td>15 FTEs</td>
</tr>
<tr>
<td>estimated library FTEs dedicated to managing electronic resources (excludes reference and instruction services)</td>
<td>5 FTEs</td>
<td>4 FTEs</td>
<td>2.5 FTEs</td>
<td>2.5 FTEs</td>
<td>1 FTE</td>
</tr>
<tr>
<td>e-resources FTEs as % of all library staff</td>
<td>4%</td>
<td>8%</td>
<td>7%</td>
<td>8%</td>
<td>6%</td>
</tr>
</tbody>
</table>

R2 is enormously impressed with the expertise and commitment embodied in this cadre of professionals. They are, without doubt, the single biggest FCL asset in relation to electronic resources management now and for the future. The skills and expertise they embody represent the most critical elements of a new 5C paradigm, upon which to build new services and new service expectations.

One anomalous but highly relevant element of the current staffing picture is the 5C ILS Coordinator. The ILS Coordinator reports to the UMass Director of Libraries, and through him to the Five Colleges Librarians Council. The Coordinator leads the management and ongoing utilization of the 5C integrated library system (ALEPH) as well as related projects and auxiliary services. The ILS Coordinator facilitates communication and project efforts among the libraries. This person serves as the contact between vendors and the Five Colleges Libraries, including advocacy for possible enhancements. In consultation
with others, the ILS Coordinator is authorized to formulate, implement, and revise related policies and procedures as required. It may be helpful think of this position as a model for one or more additional 5C coordinators, focused on e-resources management. See Section IV for further development of this idea.

**Budgeting and Spending**

As mentioned previously, two of the five libraries do not track annual expenditures by format. That is, we have less than definitive data about how much is spent on electronic resources at Amherst or Hampshire so we’ve guessed. For the most part, these data gaps are caused by the ways in which the acquisitions budget is allocated, and the fact that e-only resources are not invoiced separately from e plus p offerings. Nevertheless, R2 believes the following comparison to be relatively accurate for 2009-10.

<table>
<thead>
<tr>
<th></th>
<th>UMass</th>
<th>Smith</th>
<th>Amherst</th>
<th>Mt. Holyoke</th>
<th>Hampshire</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>total materials budget</strong></td>
<td>$6,145,488</td>
<td>$3,089,510</td>
<td>$3,015,000</td>
<td>$1,620,310</td>
<td>$326,769</td>
</tr>
<tr>
<td><strong>e-resources expenditures</strong></td>
<td>$4,657,882</td>
<td>$1,908,589</td>
<td>$761,444</td>
<td>$957,420</td>
<td>$243,000 (?)</td>
</tr>
<tr>
<td><strong>e-resources expenditures as % of overall materials budget</strong></td>
<td>76%</td>
<td>62%</td>
<td>34% (+)</td>
<td>59%</td>
<td>74% (?)</td>
</tr>
</tbody>
</table>

A conservative estimate of overall spending on commercial e-resources is $9 million per year. UMass is responsible for about half of the overall spending; Smith is responsible for 15%; Mt. Holyoke is responsible for 10%; and Hampshire is responsible for 3% of the overall spending. In terms of each library’s material budget, the libraries allocate between 59% and 76% for commercial e-content. Our experience suggests that this range matches national norms.

As a slight aside, R2 notes that these levels of spending do not synch especially well with the traditional “FCL Model of 11ths”. We are also aware that the model has not been used in this way.

<table>
<thead>
<tr>
<th></th>
<th>UMass</th>
<th>Smith</th>
<th>Amherst</th>
<th>Mt. Holyoke</th>
<th>Hampshire</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>(11ths) of $9 million</strong></td>
<td>(4)</td>
<td>(2)</td>
<td>(2)</td>
<td>(2)</td>
<td>(1)</td>
</tr>
<tr>
<td>Actual</td>
<td>$4,657,882</td>
<td>$1,908,589</td>
<td>$1,363,454 (?)</td>
<td>$957,420</td>
<td>$276,347 (?)</td>
</tr>
</tbody>
</table>
Tools for Managing Acquisition and Access
There is considerable uniformity with regard to owned and installed systems. In addition to the “shared” integrated library system (ALEPH) there are several other primary tools that are common to all, though none are used to the same extent or in exactly the same ways:

- Each library owns an instance of Verde (the ExLibris ERM) but only Amherst has taken full advantage of its functionality. Other libraries use an assortment of less systematized approaches.

- Each library manages its own instance of SFX (the ExLibris open URL resolver) but resource decisions and specific menus vary from one library to the next.

- All five libraries have implemented LibGuides – to create subject and course specific pathways to databases, e-journals, and eBooks (free and subscribed). In most cases, resources and/or resource links in LibGuides are updated systematically; a practice that must remain intact.

- GoogleScholar has been implemented in all libraries – some just recently

These are the tools installed in one or more libraries but not all:

- EZ Proxy is used in four libraries, but SQUID (an open source proxy tool) is used to facilitate off-site access to e-resources at Amherst. Likewise, all but Amherst enter the proxy URL in SFX.

- While one of the 5C Committees (DEDCC) is researching “discovery layer” products, UMass has already implemented OCLC’s WorldCatLocal. Because this move was linked to the Boston Library Consortium decision, we understand that UMass is “locked in” with WorldCatLocal for the foreseeable future. Smith is working with a free beta version of WorldCatLocal, and is also a beta partner with Ebsco’s Discovery Service (EDS). As far as we can tell, no other discovery layer products have been tested or implemented.

- There is considerable variation regarding course management systems, which R2 has not addressed. They include:
  - UMass: SPARK and Blackboard Vista
  - Smith: Moodle
  - Amherst: Drupal-based homegrown system
  - Mt. Holyoke: Sakai (Ella)
  - Hampshire: homegrown system but moving to Moodle

E-Resources Titles and Overlap
E-resources are subscribed individually by each library. As far as we can tell, there is just one 5C consortial subscription for an electronic resource (each library receives its invoice for MathSciNet from Five Colleges, Inc.). There are no other 5C consortial purchases per se. Multiple other consortia offer special prices which all five libraries take advantage of, but not in unison. That is, NERL invoices each library separately, even for resources held in common; likewise WALDO, etc. There is a critical mass of commonly subscribed resources, but multiple sourcing options, the lack of naming conventions, and the lack of procedural uniformity make the precise overlap difficult to quantify. At present all five libraries rely on Ebsco as their primary subscription agent, a situation that should not be disrupted.
As mentioned in the introduction, R2 sought advice from ExLibris, which is at present the 5C’s primary systems vendor. With data supplied by each library, ExLibris performed the following overlap study, using the same queries that are embedded in Primo. In this situation, the ExLibris tools were especially helpful in de-duplicating resources within and between libraries, and in distinguishing between different types of resources. All the data in this section reflect current, title-level holdings. We have not analyzed institutional variation regarding the availability of back files.

In the charts below, the All eContent category represent journals, books, databases, dissertations, proceedings, documents, manuscripts, etc. Most of the difference between All eContent and eJournals ONLY is comprised of eBook titles. We know this intuitively because each library holds so many, but also because the difference between eJournals ONLY and No Books is relatively small. We suspect that eBook records have not been fully de-duplicated; making the red bar (below) somewhat or even significantly taller than it should be.

### Active titles per institution

<table>
<thead>
<tr>
<th>Institution</th>
<th>Active Titles De-duplicated All eContent</th>
<th>Active Titles De-duplicated eJournals ONLY</th>
<th>Active Titles De-duplicated No Books</th>
</tr>
</thead>
<tbody>
<tr>
<td>UMass</td>
<td>273,147</td>
<td>48,992</td>
<td>70,098</td>
</tr>
<tr>
<td>Smith</td>
<td>222,260</td>
<td>55,913</td>
<td>61,867</td>
</tr>
<tr>
<td>Amherst</td>
<td>130,073</td>
<td>62,288</td>
<td>69,449</td>
</tr>
<tr>
<td>Mt. Holyoke</td>
<td>227,929</td>
<td>37,797</td>
<td>39,174</td>
</tr>
<tr>
<td>Hampshire</td>
<td>110,363</td>
<td>52,163</td>
<td>53,015</td>
</tr>
<tr>
<td><strong>Total Titles</strong></td>
<td><strong>963,772</strong></td>
<td><strong>257,153</strong></td>
<td><strong>293,603</strong></td>
</tr>
</tbody>
</table>

It is important to remember that the five libraries do not use SFX uniformly. For example:

- One library activates all available free resources, while others activate them selectively. We do not have a reliable number of de-duplicated free e-journals, but there may be upwards of 20,000.
• Just one library allows automatic activation of all resources in SFX, while others use “automatic activation” selectively. The reasons for this are sound, but this decision also introduces the possibility that not all subscribed resources are activated in a timely way.

• Some (but not all) eBooks have been activated in SFX by all five libraries.

• Amherst has entered holdings data in SFX for print journals held in the Depository. To our knowledge, no other libraries have entered print holdings in SFX, but others are contemplating the benefits.

These variations skew our results towards uniqueness, artificially lowering overlap percentages. Nevertheless, we now know that all five libraries hold nearly 28,000 e-journal titles in common – some of which are open access.

### Titles held by 1, 2, 3, 4, and 5 libraries

<table>
<thead>
<tr>
<th>Overlap Count # of Institutions</th>
<th>Titles All eContent</th>
<th>% overlap All eContent</th>
<th>Titles eJournals ONLY</th>
<th>% overlap eJournals ONLY</th>
<th>Titles No Books</th>
<th>% overlap No Books</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>58,797</td>
<td>18.49%</td>
<td>13,039</td>
<td>16.44%</td>
<td>33,845</td>
<td>32.30%</td>
</tr>
<tr>
<td>2</td>
<td>49,370</td>
<td>15.52%</td>
<td>20,163</td>
<td>25.42%</td>
<td>20,334</td>
<td>19.41%</td>
</tr>
<tr>
<td>3</td>
<td>115,899</td>
<td>36.44%</td>
<td>8,620</td>
<td>10.87%</td>
<td>11,912</td>
<td>11.37%</td>
</tr>
<tr>
<td>4</td>
<td>11,277</td>
<td>3.55%</td>
<td>9,572</td>
<td>12.07%</td>
<td>10,101</td>
<td>9.64%</td>
</tr>
<tr>
<td>5</td>
<td>82,686</td>
<td>26.00%</td>
<td>27,928</td>
<td>35.21%</td>
<td>28,590</td>
<td>27.29%</td>
</tr>
<tr>
<td>Total and %</td>
<td>318,029</td>
<td>100.00%</td>
<td>79,322</td>
<td>100.00%</td>
<td>104,782</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

% overlap of eJournals ONLY

- 35%
- 25%
- 17%
- 12%
- 11%
- 12%
Moving towards a bigger picture

If we simplify and compile various data elements described above, we can begin to see some of the current 5C patterns, and not all are entirely intuitive. We have included estimates of free eJournals activated in SFX by each library, which helps to explain some of the unexpected percentages.

<table>
<thead>
<tr>
<th></th>
<th>UMass</th>
<th>Smith</th>
<th>Amherst</th>
<th>Mt. Holyoke</th>
<th>Hampshire</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>student FTEs % of all</td>
<td>26,328</td>
<td>3,100</td>
<td>1,690</td>
<td>2,200</td>
<td>1,500</td>
<td>35,518</td>
</tr>
<tr>
<td></td>
<td>74%</td>
<td>11%</td>
<td>5%</td>
<td>6%</td>
<td>4%</td>
<td>100%</td>
</tr>
<tr>
<td>e-resources expenditures % of all</td>
<td>$4,657,882</td>
<td>$1,908,589</td>
<td>$1,363,454 (?)</td>
<td>$957,420</td>
<td>$276,347 (?)</td>
<td>$9,163,692</td>
</tr>
<tr>
<td></td>
<td>51%</td>
<td>21%</td>
<td>15%</td>
<td>10%</td>
<td>3%</td>
<td>100%</td>
</tr>
<tr>
<td>currently subscribed eJournals (de-dup’d) % of all</td>
<td>48,992</td>
<td>55,913</td>
<td>62,288</td>
<td>37,797</td>
<td>52,163</td>
<td>79,322</td>
</tr>
<tr>
<td></td>
<td>62%</td>
<td>70%</td>
<td>79%</td>
<td>48%</td>
<td>66%</td>
<td>100%</td>
</tr>
<tr>
<td>estimated # of free eJournals inconsistently counted and not always de-dup’d</td>
<td>15,112</td>
<td>14,878</td>
<td>33,146</td>
<td>7,460</td>
<td>&gt; 33,146 (all)</td>
<td>?</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Non-OPAC Access

As in most academic environments, 5C users tend to access the libraries’ electronic resources via alphabetical or subject specific lists of databases and e-journals; or via web (Google) searches. The primary tool that supports this activity is SFX – an open URL resolver that has been successfully implemented in all five libraries – although not always uniformly.

It is no surprise that each library website is unique. But even those things that we would consider primary navigational tools are not always easy to find. Because many of the underlying (SFX) interfaces are nearly identical, it is counter-intuitive that they would be named differently in different libraries. From a cross-institutional user perspective this can be problematic - five unique gateways can confuse users and slow access.

The following is a very crude description of what the user encounters on each library home page. We recognize that each one has undergone considerable local scrutiny, and each has certain appealing attributes. The point we’re trying to make is that they are all different. Each indent below represents a required “click”:
At UMass: All the links to primary search tools are on the library’s home page - an excellent design feature that sets it apart from all the other sites. And the language is simple.

- Quick Search box at the top of the page against Libraries WorldWide (WorldCatLocal), the BLC, the 5C Catalog, and the UMass catalog
- The databases tab takes the user to an alphabetical list of databases including eBooks – the header on this page says Research Databases.
- The ejournals tab takes the user to an alphabetical list of ejournals
- The citation linker tab takes the user to the citation request form
- The subject research guides tab takes the user to libguides organized by subject
- The Advanced Search link takes the user to a variant list of databases
- Other tools most heavily promoted include GoogleScholar

At Smith: there are quick links on the top left of the home page for the union catalog, renew, and Find E-Journal (a link to the A-Z list).

- Mousing over the word Research reveals several links:
  - Find articles, books and more takes the user to a Research page – with links to
    - Find Articles tab takes the user to lists of databases by subject
    - Find Journals by Title tab takes the user to the Journal Locator
    - The link to Research Guides and Advice takes the user to a series of “how to” search pages
  - Five Colleges Library Catalog
  - Journal Locator takes the user to the alphabetical list of e-journals
  - Databases by Title takes the user to the alphabetical list of databases
  - Library Class Guides takes the user to a list of libguides sorted by class name and # - that page header is Library Research Guides
  - Reserve Lists
  - Moodle/E-Reserves
  - R2 was unable to find a citation linker at Smith – which causes us to wonder about Smith’s source data (see below)

At Amherst:

- Quick Search tabs at the top of the page include – Catalog, Reserves, Databases, Journals, DVDs/Videos
- Descriptive links work as follows:
  - Advance Search takes the user to the Advanced 5C Catalog Search Form
  - Books, films, music, etc. takes the user to the Basic 5C Catalog Search form
  - Journal Articles takes the user to a web page of additional links
    - CitationLinker
    - Database by topic/discipline takes the user to a list of databases by subject
    - Alphabetical by database name
    - Library Catalog
    - Full-Text Electronic Journals takes the user to the alphabetical list of e-journals, called AC LINKS: FIND E-JOURNAL
    - Finding Full Text Online takes the user to a list of E-Book and E-Journal packages, organized as general, News, Sciences, Social Sciences and Humanities, Encyclopedias and Dictionaries
At Mt. Holyoke:
- Quick Search tabs at the top of the page include – Catalog, Articles, Journals, Multimedia, Reserves
- Left menu option for Library Research and Collections takes the user to a page of descriptive links:
  - Find Books – takes the user to another page of descriptive links
    - Books & more at MHC takes the user to the MHC catalog
    - Books in Five Colleges takes the user to Basic FC Catalog Search
    - Books in Local Public Libraries takes the user to C/W MARS
    - Books in the Wider World takes the user to WorldCat
    - Links to various eBook collections including eBrary, NetLibrary, Springer eBooks, Safari Books, Books 24x7, and EEBO
  - Find Articles takes the user to another page of descriptive links:
    - E-Resources A-Z takes the user to the alphabetical list of databases
    - Research Guides takes the user to a list of databases by subject
    - Course Guides takes the user to a list of course by semester – linked to appropriate resources
    - E-Journal Browsing takes the user to an E-Journals Quick Title Search box and a Library Catalog Quick Search box
    - E-Journal Locator takes the user to the alphabetical list of e-Journals called MH Links, Find e-Journals
    - Citation Linker
    - Library Catalog takes the user to the Basic Search of the Mt Holyoke Catalog
  - Find Multimedia takes the user to a page of descriptive links to specific databases, and special resources
  - Find Facts and Figures takes the user to a page of descriptive links to specific databases and reference works.
  - Digital Collections
  - Borrowing and ILL
  - Research Help and Tools

At Hampshire:
- Quick search of the 5 Colleges Catalog at the top of the page
- Search our Collections links:
  - Research material by subject takes the user to a list of LibGuides by subject
  - Databases A-Z takes the user to the alphabetical list of databases
  - Journals by title takes the user to a page of descriptive links
    - Full-text Article Finder takes the user to the citation linker
    - A-Z list of full text journals takes the user to the alphabetical list of e-Journals called Find-eJournal
    - Five College Library Catalog takes the user to the Basic 5C Catalog Search form
- Quick links at the bottom of the page for Article Locator

Please note that primary links to the alphabetical list of databases are named differently in each library:
- databases
- Databases by Title
- Alphabetical by database name
- E-Resources A-Z
• Databases A-Z

Links to subject specific lists of resources include:
• Subject research guides
• Find articles
• Databases by topic/discipline
• Finding full-text online
• Research Guides
• Research Material

Depending on which library you’re in, you might find the citation linker somewhat more consistently:
• citation linker
• CitationLinker
• Full-text article finder
• (or not at all)

And primary links to the alphabetical list of e-journals are named inconsistently from one library to the next:
• ejournals
• Find Journals by Title
• Journal Locator
• Full-text electronic journals
• E-Journal Browsing

Another important difference with regard to the user experience has to do with the SFX menu that each library presents to the user. We’ve attached a screen shot of the SFX menu from each library (for the “ADA Update”) to highlight the variation that inter-campus users may encounter. Note that the “ADA Update” represents a relatively simple situation – a ceased journal, for which UMass, Smith, Amherst, and Hampshire have full-text online access. There is no solid evidence of a print copy anywhere in the Valley.

At UMass, the SFX menu is sweet and simple:
At Smith, a link to full text is clear. Checking for the print copy, however, takes the user to a 5C union view – listing five iterations of the same electronic resource. A Hampshire subscription is listed twice, once as ADA and once as A D A.

The message about ILL is not apparently necessary, and certainly not compelling.
At Amherst, the link to full text, is again clear; the suggestion to request ILL is less daunting but still unnecessary; and the Check the Five Colleges Catalog link results in a slightly different display of the same 5 iterations of the e-journal.
Searching for “ADA Update” in the Mt. Holyoke A-Z E-Journal List returns a no-hit message and invites the user to use the citation linker form. Obviously, one weakness introduced by five separate instances of SFX is that information about subscriptions in other libraries is (in this interface) hidden from the user.

At Hampshire, ADA Update appears in the alphabetical list of e-journals and when the user clicks on the title, s/he is taken to the Article Finder. This is Hampshire’s default approach, with the expectation that users will simply hit the green (Go) button if they have no specific citation information.
Instructional Emphasis

Various elements of website design obviously influence user behavior. What they click on depends entirely on the buttons and links presented, and which ones “seem” most appropriate. We also know that once a patron has had success with a particular database, s/he is likely to “start” there for all subsequent searches, regardless of its specific relevance to later projects, etc. R2 assumes (hopes) that the instructional emphasis in each institution has some bearing as well. We did have the opportunity to meet with a small number of reference and instruction librarians in each library, and have short-handed what we heard about how patrons are taught to access e-resources. While there is some commonality, there are some potentially significant differences as well.

<table>
<thead>
<tr>
<th>instruction emphasis</th>
<th>UMass</th>
<th>Smith</th>
<th>Amherst</th>
<th>Mt. Holyoke</th>
<th>Hampshire</th>
</tr>
</thead>
<tbody>
<tr>
<td>instructional emphasis</td>
<td>Research Databases</td>
<td>e-Journal Locator; DB guides; and class guides</td>
<td>Journal Locator</td>
<td>Journal Locator AND OPAC</td>
<td>individual consultations</td>
</tr>
</tbody>
</table>

In an effort to explore the possible effects of this variation, as well as that imposed by library web pages, we compiled the following comparison of user “starting points”. The data was extracted from SFX Source Reports from each library and reflect activity that occurred in April 2010. SFX requests should be understood to mean the number of times a user clicked a button or a link that brought her/him to the SFX menu (examples above). There is some commonality here, but perhaps not as much as we might have anticipated. It appears that the library gateway and instructional emphasis, (and of course, specific resource availability) have a significant impact on the user search behavior. The low percentage of requests from the OPAC is particularly striking, and will be reconsidered later.

<table>
<thead>
<tr>
<th>SFX requests - April 2010</th>
<th>UMass</th>
<th>Smith</th>
<th>Amherst</th>
<th>Mt. Holyoke</th>
<th>Hampshire</th>
</tr>
</thead>
<tbody>
<tr>
<td>SFX requests coming from the A-Z e-journal list - April 2010</td>
<td>17,222 (21%)</td>
<td>473 (2%)</td>
<td>1,005 (11%)</td>
<td>737 (6%)</td>
<td>559 (8%)</td>
</tr>
<tr>
<td>SFX requests coming from the Web of Science - April 2010</td>
<td>14,212 (18%)</td>
<td>893 (4%)</td>
<td>839 (10%)</td>
<td>2,166 (17%)</td>
<td>0 (not subscribed)</td>
</tr>
<tr>
<td>SFX requests coming from Google Scholar - April 2010</td>
<td>7,460 (9%)</td>
<td>1,335 (6%)</td>
<td>0 (Google Scholar not yet implemented in April?)</td>
<td>1,817 (15%)</td>
<td>0 (Google Scholar not yet implemented in April)</td>
</tr>
<tr>
<td>SFX requests coming from Academic Search Premier</td>
<td>5,664 (7%)</td>
<td>1,239 (6%)</td>
<td>448 (5%)</td>
<td>587 (5%)</td>
<td>698 ? (15%)</td>
</tr>
<tr>
<td>SFX requests coming from OPAC 856 - April 2010</td>
<td>3,771 (5%)</td>
<td>1 (0%)</td>
<td>368 (4%)</td>
<td>0 (no SFX links in the OPAC)</td>
<td>766 (16%)</td>
</tr>
<tr>
<td>SFX requests coming from citation linker - April 2010</td>
<td>UMass</td>
<td>Smith</td>
<td>Amherst</td>
<td>Mt. Holyoke</td>
<td>Hampshire</td>
</tr>
<tr>
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<td>-------------</td>
<td>-----------</td>
</tr>
<tr>
<td>1,289 (2%)</td>
<td>6,123 (29%)</td>
<td>?</td>
<td>1,384 (16%)</td>
<td>383 (3%)</td>
<td>1,326 (28%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SFX requests coming from PsychINFO - April 2010</th>
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</thead>
<tbody>
<tr>
<td>3,380 (4%)</td>
<td>1,475 (7%)</td>
<td>1,589 (18%)</td>
<td>688 (6%)</td>
<td>400 ? (8%)</td>
<td>(free version)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SFX requests coming from PubMed - April 2010</th>
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</thead>
<tbody>
<tr>
<td>5,075 (6%)</td>
<td>838 (4%)</td>
<td>334 (4%)</td>
<td>336 (3%)</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

| Total % from these 8 sources (starting points)    | 72%   | 58%   | 68%     | 55%         | 67%       |

| SFX requests coming from all Ebsco databases combined - April 2010 | 18,271 (23%) | 5,938 (28%) | 3,180 (37%) | 2,832 (23%) | 1,719 (36%) |

All Paths Lead to the Same End

Despite the lack of uniformity between libraries’ web pages, procedures, and instruction emphasis; in spite of the vastly different fiscal parameters; and given the mere 35% overlap in e-journal subscriptions, the following comparison suggests that there is enormous conformity with regard to the specific e-resources in which 5C users finally “arrive”. The chart below is compiled from data extracted from SFX Target Service Reports, provided to us by each library. Here again, the activity occurred in April 2010.

While we found less uniformity than we expected with regard to user “starting points” (SFX Sources above), we actually found more than expected with regard to user “end points” (SFX Target Services below). getFullTxt Clickthroughs should be understood to mean the number of times a patron used the SFX menu option to retrieve full-text content online. Target Services included in the chart are those that appeared most prevalently on all five activity reports. They are obviously some of the biggest, most comprehensive packages, not all of which are subscribed uniformly. We compiled the specific list of target services such that 85% of every library’s FullTxt Clickthroughs for April would have been satisfied (see the last page of the chart). For the most part, 0 Clickthroughs tell us that the library does not subscribe, or subscribes to an alternate version of the package (example: Elsevier Science Direct).

As we see it, the big story here is that some 60 e-products now satisfy 85% of user needs. If all these resources were consortially subscribed, it seems likely that the percentage would be even higher. That is, these resources would attract activity from additional users that at present have no access to these, so use alternate resources. It has not been possible for R2 to estimate the number of dollars currently spent on the subscriptions listed in the chart below, but we strongly recommend additional investigation at that level of detail. We have some confidence that cost implications may be advantageous because UMass, which represents the vast majority of users, already subscribes to all the big (complete) packages in the list. But even if more favorable pricing is not available for all these resources, the case to be made is not simply subscription savings, but operational savings and most importantly, an immensely more uniform user experience.

Green shaded cells simply offer another way to consider the data. A much smaller number of resources (12-15) represent 60% of overall (non-library specific) traffic. This perspective may or may not have value to the consortium.
So again, the scope of our analysis is too narrow to be definitive. However, the strength of these findings should prompt additional investigation. Sharing a “core” of resources that could satisfy 60% – 90% of user needs could be leveraged in dramatic ways to reduce costs, improve the user experience and over the longer term, make it possible for individual libraries to focus more on unique content and local service.

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
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<td>Total &quot;getFullTxt&quot; clickthroughs</td>
<td>56,548</td>
<td>10,705</td>
<td>4,921</td>
<td>5,616</td>
<td>2,879</td>
<td>80,669</td>
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<td>3,025</td>
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<td>3,278</td>
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<td>11</td>
<td>10</td>
<td>0</td>
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<td>ANTHROSOURCE getFullTxt</td>
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<td>33</td>
<td>39</td>
<td>33</td>
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<td>300</td>
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<td>65</td>
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<td>592</td>
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<td>0</td>
<td>21</td>
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<td>0</td>
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<td>0</td>
<td>287</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>52</td>
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<tr>
<td>ELSEVIER_SD_FREEDOM_COLLECTION getFullTxt</td>
<td>3,167</td>
<td>1,142</td>
<td>563</td>
<td>846</td>
<td>0</td>
<td>12,223</td>
<td>15%</td>
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<tr>
<td>ELSEVIER_SD_SCIENCE_DIRECT_COMPLETE getFullTxt</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>45</td>
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<tr>
<td>GALEGROUP_ACADEMIC_ONEFILE getFullTxt</td>
<td>2,540</td>
<td>1,279</td>
<td>102</td>
<td>51</td>
<td>0</td>
<td>3,972</td>
<td>5%</td>
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<td>GALEGROUP_IT_EXPANDED_ACADEMIC_ASAP getFullTxt</td>
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<td>0</td>
<td>0</td>
<td>55</td>
<td>0</td>
<td>226</td>
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<td>HEIN_ONLINE_LAW_JOURNAL_LIBRARY getFullTxt</td>
<td>210</td>
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<td>328</td>
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<td>489</td>
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<td>INFORMAWORLD_TAYLOR_FRANCIS_GROUP_CURRENT_COLLECTION getFullTxt</td>
<td>537</td>
<td>247</td>
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<td>6</td>
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<td>INFORMAWORLD_TAYLOR_FRANCIS_JOURNALS_COMPLETE getFullTxt</td>
<td>8</td>
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<td>71</td>
<td>12</td>
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<tr>
<td>INSTITUTE_OF_PHYSICS_JOURNALS getFullTxt</td>
<td>161</td>
<td>6</td>
<td>33</td>
<td>2</td>
<td>0</td>
<td>2</td>
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<tr>
<td>JSTOR_ARTS_AND_SCIENCES_1 getFullTxt</td>
<td>668</td>
<td>178</td>
<td>0</td>
<td>103</td>
<td>52</td>
<td>5,360</td>
<td>7%</td>
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<tr>
<td>JSTOR_ARTS_AND_SCIENCES_2 getFullTxt</td>
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<td>208</td>
<td>0</td>
<td>81</td>
<td>48</td>
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<td>JSTOR_ARTS_AND_SCIENCES_3 getFullTxt</td>
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<td>JSTOR_ARTS_AND_SCIENCES_4 getFullTxt</td>
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<td>25</td>
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<tr>
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<tr>
<td>JSTOR_BIOLOGICAL_SCIENCES_COLLECTION getFullTxt</td>
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<td>130</td>
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<td>1,014</td>
<td>1%</td>
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<tr>
<td>MISCELLANEOUS_EJOURNALS getFullTxt</td>
<td>514</td>
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<td>NATURE getFullTxt</td>
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<td>29</td>
<td>11</td>
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<td>NERL_CAMBRIDGE_UNIVERSITY_PRESS_JOURNALS getFullTxt</td>
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<td>171</td>
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<tr>
<td>OVID_JOURNALS_AT_OVID getFullTxt</td>
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<td>OVID_LIPPINCOTT_AND_WILLIAMS_TOTAL_ACCESS_COLLECTION_2</td>
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<td>94</td>
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<tr>
<td>PROQUEST_EDUCATION_JOURNALS getFullTxt</td>
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<td>0</td>
<td>0</td>
<td>92</td>
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<td>44</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PROQUEST_NEWSSTAND_STATE_PACKAGES getFullTxt</td>
<td>4</td>
<td>2</td>
<td>22</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PROQUEST_PSYCHOLOGY_JOURNALS getFullTxt</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>54</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PROQUEST_SOCIAL_SCIENCE_JOURNALS getFullTxt</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>47</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PUBMED_CENTRAL_JOURNALS_FREE getFullTxt</td>
<td>366</td>
<td>105</td>
<td>21</td>
<td>83</td>
<td>29</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ROYAL_SOCIETY_OF_CHEMISTRY_JOURNALS getFullTxt</td>
<td>491</td>
<td>9</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SAGE_COMPLETE getFullTxt</td>
<td>2</td>
<td>0</td>
<td>45</td>
<td>9</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SAGE_PREMIER_2010 getFullTxt</td>
<td>2,110</td>
<td>385</td>
<td>54</td>
<td>0</td>
<td>153</td>
<td>2,702</td>
<td>3%</td>
</tr>
<tr>
<td>----------------------------------------------------</td>
<td>-------------------------------------------</td>
<td>------------------------------------------</td>
<td>---------------------------------------------</td>
<td>-----------------------------------------------</td>
<td>-----------------------------------------------</td>
<td>-------</td>
<td>------------</td>
</tr>
<tr>
<td>SPRINGER_LINK_JOURNALS_STANDARD getFullTtx</td>
<td>2,728</td>
<td>413</td>
<td>171</td>
<td>273</td>
<td>27</td>
<td>3,612</td>
<td>4%</td>
</tr>
<tr>
<td>UNIVERSITY_OF_CHICAGO_PRESS getFullTtx</td>
<td>292</td>
<td>49</td>
<td>35</td>
<td>34</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WESTLAW_CAMPUS_RESEARCH_NEWS_LAW getFullTtx</td>
<td>1,054</td>
<td>147</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1,202</td>
<td>1%</td>
</tr>
<tr>
<td>WILEY_INTERSCIENCE_2010_COMPLETE getFullTtx</td>
<td>3,954</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>5,166</td>
<td>6%</td>
</tr>
<tr>
<td>WILEY_INTERSCIENCE_JOURNALS getFullTtx</td>
<td>353</td>
<td>543</td>
<td>233</td>
<td>83</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>total getFullTtx Clickthroughs to this list of full text targets</td>
<td>48,554</td>
<td>9,295</td>
<td>4,187</td>
<td>4,817</td>
<td>2,541</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% of all getFullTtx Clickthroughs</td>
<td>86%</td>
<td>87%</td>
<td>85%</td>
<td>86%</td>
<td>88%</td>
<td>49,163</td>
<td>60%</td>
</tr>
</tbody>
</table>
OPAC Access to E-Resources

Again, most searching for electronic content occurs outside of the conventional catalog. Nevertheless, there is enough OPAC access to e-resources (these numbers are probably inflated by librarian and ACQ/ILL staff searches) to warrant consideration of that path. As everyone knows, the Five Colleges Libraries have one ALEPH server with seven administrative modules (ADMs). Each institution has an individual catalog; there is one for the Depository; and one that supports a combined or “union” view. All user views include resources in the Depository ADM.

Individual library practices vary widely with regard to how serials and serial holdings are represented in their individual catalogs and variant decisions made at each library negatively impact the integrity of the union view. Complex matching algorithms determine the way in which search results are displayed, many of which are misleading, and some of which are simply incorrect. At this point, there is widespread frustration with the union view; no meaningful activity intended to improve it; and profound regret about the 2004 decision to move from two primary catalogs (and bib records) to five. No one, either in the libraries or at ExLibris expressed confidence that algorithmic adjustments can correct the Union View. In 2009, the ALEPH sub-committee of the Technical Services Consolidation Task Force researched options for re-merging the bib records, and for a variety of reasons, recommended against it. Clearly, the FCL must identify alternative solutions.

Depository ADM

In May 2010, a short term task force was formed by the FCLC to determine the feasibility of creating a “Five College Shared E-Resources Collection” with records residing in the ALEPH Depository ADM, and to recommend the strategies to implement this collection if it is feasible. Happily, the task force concluded that using the Depository ADM for that purpose is both feasible and desirable. R2 was impressed with the report for its conciseness, clarity, and actionable recommendations, nearly all of which we applaud. However, the task force made various assumptions that we believe should be re-considered. These have to do with the implementation of a sixth instance of SFX (already owned but never used), and the duplication of work this approach would require.

The task force report was published on 10 August. Since then, various steps have been taken to move forward with plans to utilize the Depository ADM for Government “Documents without Shelves”. It is our understanding that 5C agreement was reached with regard to MARCIVE record loads, and we’ll be interested to learn what has transpired since our visit. Because government documents are to be made available without restriction, authentication issues can be avoided.

And we heard additional ideas about how to leverage the Depository ADM – all of which revolve around e-resources that are open access, or purchased/subscribed in common.

- POD (purchase on demand) eBook pilot project could utilize the Dep ADM
- MathSciNet --- the only consortially subscribed journal
- All online resources purchased by the state of Massachusetts (MLIN) and for which every library in the state has access (e.g. Academic Onefile)
- Free e-journals and web resources
- Anything subscribed by all five libraries

R2 believes that all these are ideas are worth pursuing, but only if they can help the 5CLs move toward greater operational efficiency and an improved user experience. In other words, not if their inclusion requires a sixth instance of SFX.
Five Colleges Committees
In addition to the work occurring within each library, there is a huge amount of work undertaken within the domain of the Five Colleges Committee Structure. With regard to the management of electronic resources and the user experience of same, we count as many as 18 separate committees and or task forces that could have influence. R2 is not entirely clear about the hierarchy of the committee structure, not their respective reporting lines. They include:

- Discovery Service Task Force
- Depository ADM Task Force (Report completed Aug 2010) charged to determine feasibility of creating a FC shared e-resource collection with records in Depository ADM to recommend strategies to implement if found feasible.
- DEDCC - charged to improve user access, service delivery and creation of digital collections for the Five College Libraries through the use of existing and emerging technologies. The committee will investigate and analyze areas for Five College library collaboration and develop and implement projects as appropriate. The Committee will be empowered to make decisions regarding technology that do not require substantial levels of funding or major changes in the deployment of staff. The Committee will make recommendations requiring substantial levels of funding or major staff changes to the Librarians Council.
- Cataloging Advisory
- Circulation
- Collection Management
- Research Instruction and Outreach
- Serials & Acquisitions
- ERM subcommittee – charged with assessment and recommendation for an Electronic Resources Module and (officially - informally ?) extended to reconsider OpenURL resolvers
- ALEPH Advisory – charged to review ALEPH service packs, etc.
- ALEPH Systems / OPAC  Working Group (two groups currently merged)
- Ad Hoc Depository Advisory (is the distinct from the task force above?)
- Verde (inactive?)
- Digital Resources (membership to be announced soon?)
- We think there is no 5C committee related to the management of Government Documents, and no joint representative to FDLP meetings. But there probably should be. Did we miss this?
• Operating outside of the FCL committee structure (?) yet related:
  
  o SFX Users group

  o Intellectual Property Policies for Shared Media Committee – R2 will be meeting with this group during the project’s second phase. This committee reports to FC Inc.

  o **Shibboleth Initiative** - The goal of the Shibboleth project is to establish a Shibboleth server at each of the five campuses to allow for federated identity verification. One of the immediate uses of these servers will be to streamline identity verification for students’ enrollment in course management systems at other campuses. Next steps would be to find particular applications to utilize the federated identity verification system. This committee also reports to FC Inc.

  With regard to library subscribed e-resources, R2 is somewhat unclear as to the potential implications of Shibboleth, but they should be explored. As soon as possible, planners and implementers should communicate with e-resources librarians so that access options can be explored and optimized in that environment. Note that not all content providers or library systems are Shibboleth compliant. As progress is being made on the Shibboleth project, 5CL could join the effort to compel library resource providers to accommodate. The current list of enabled providers can be found at: [https://spaces.internet2.edu/pages/viewpage.action?pageId=11484](https://spaces.internet2.edu/pages/viewpage.action?pageId=11484)

**Concerns about the Committee Structure**

In general, there are lots of good things to be said for participatory organizations. Given the highly complex and quickly evolving e-resources environment, however, when each system must be carefully integrated with every other, and during a period when the consortium is contemplating fundamental change, the committees can resemble the “blind men” in the parable about the elephant. Without an overarching vision, and no mutually accepted principles of collaboration, the work does not appear adequately coordinated. It is not possible, for example, to design an appropriate, cost-effective solution to the union view “problems” without knowing what to expect (or even what is possible) in terms of alternate strategies/solutions that could be brought to bear via discovery layer tools. Discrete decisions about new systems and/or traditional functions no longer make sense, except within a shared concept of the entire discovery process.

It is not surprising that many interviewees are unsatisfied with the committee structure and/or their own committee participation – this dissatisfaction was expressed as frustration, boredom, even disdain. Part of the frustration related to the reported lack of follow-through on the part of the FCLC. Decisions remain unmade – no doubt because there is awareness that many should not be made in isolation.

When decisions are made, it appears that they are most often individual library decisions, with little attention to the benefits of the whole. Budgetary constraints (and imbalance) are often mentioned as primary inhibitors to collaboration, but as we see it, the culture of non-conformance extends far beyond economic boundaries. Even the “shared” decision to implement automated OCLC Cataloging for books from YBP (for example) has still not been implemented in all libraries.

The value placed on individual library autonomy dilutes the value of committee work, across the board. In the case of electronic resources, we will do well to remember that users probably won’t notice and
definitely won’t care whether the branding is institutional or consortial. R2 suggests that the incredible investment in 5C committee work – over very many years, should be re-considered in terms of real costs and benefits. Why take the time to investigate jointly, solutions that are almost never implemented in unison?

Another, somewhat smaller concern about the committee structure as currently conceived is that 5CL relationships with vendors, agents, and service providers have become fractured as a result of too many voices. In this environment, it appears that vendors are unable to offer intelligent service/product offerings, or even competitive price quotes because the 5CL exploratory and decision-making processes are unclear. It seems obvious that coherent, sophisticated negotiation on the part of the whole could yield important technical and monetary advances for the consortium. As we see it, some 5C committees will be needed forever, but the committee structure should be reconfigured around a new consortial paradigm. Look for more on this topic in Section IV.

Things not getting done

It’s fair to say that all five libraries have found ways to keep their “heads above water” with regard to e-resources management, and isolated sparks of brilliance do exist. At the same time, it is fair to say that much more could be done to improve service and to manage subscription investments more responsibly. Each library has its own list of things not getting done, to which we add the following. If addressed consortially, they could go a long way towards improving the user experience and controlling the overall cost of managing these critical resources:

- License terms for e-resources are not adequately visible, making it impossible for ILL staff to adhere to them
- We know students, especially undergraduates, work at all hours of the day. 24/7 online patron support is not provided, but could be. And could be more easily staffed in collaboration.
- No one has adequate time for consistent collection analysis – are we subscribing to the right stuff?
- No one is consistently collecting or analyzing usage data. No one has implemented SUSHI.
- Every library has duplicate subscriptions to the same journal – some are unavoidable, but some are not. Having time to weed out duplicates within and between libraries could save money and could simplify search results for users.
- If consortial subscriptions are to be pursued, sophisticated 5C negotiation with providers will be fundamental.
- Lots of effort is put into link checking, but none of it is adequately comprehensive or proactive. Too often libraries wait for the patron to identify the problem.
- R2 heard about an exciting project related to usability testing at Smith. Much, much more of this is needed, and it should be performed uniformly in all libraries.
- R2 found a series of video tutorials on the UMass website. Some of them would be appropriate to other libraries, or would be if there was adequate uniformity across all. Collaborative
development of tutorials could go a long way towards bringing bibliographic instruction into conformity.

- Significant time in every library is spent creating subject guides – which again could be appropriate to students throughout the Valley. Why not collaborate?
### Master Chart
This chart compares 35 elements of the e-resources environment across the 5 libraries. Many of the comparisons have been described above, but not all. Again, we are not entirely sanguine about the accuracy of every number and welcome correction.

<table>
<thead>
<tr>
<th></th>
<th>UMass</th>
<th>Smith</th>
<th>Amherst</th>
<th>Mt. Holyoke</th>
<th>Hampshire</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>total materials budget</td>
<td>$6,145,488</td>
<td>$3,089,510</td>
<td>$3,015,000 includes Visual and SpecColl w/o carry over. Includes interest earned on endowed accounts</td>
<td>$1,620,310</td>
</tr>
<tr>
<td>2</td>
<td>e-resources expenditures</td>
<td>$4,657,882</td>
<td>$1,908,589</td>
<td>$761,444 + does not include e-resources bundled with print</td>
<td>$957,420</td>
</tr>
<tr>
<td>3</td>
<td>e-resources expenditures as % of overall materials budget</td>
<td>76%</td>
<td>62%</td>
<td>34% (+) but given the number of e-resources activated in SFX, R2 assumes the actual percentage to be 60% or more</td>
<td>59%</td>
</tr>
<tr>
<td>4</td>
<td>De-dup’d ejournal titles activated in SFX</td>
<td>48,992</td>
<td>55,913</td>
<td>62,288</td>
<td>37,797</td>
</tr>
<tr>
<td>5</td>
<td>ejournals w/local thresholds</td>
<td>3,516 (7%)</td>
<td>2,884 (5%)</td>
<td>191 (.03%)</td>
<td>2,550 (7%)</td>
</tr>
<tr>
<td>6</td>
<td>free e-journals in SFX (not de-duplicated)</td>
<td>15,112</td>
<td>14,878</td>
<td>33,146</td>
<td>7,460 (?)</td>
</tr>
<tr>
<td>7</td>
<td>SFX requests - April 2010</td>
<td>81,092</td>
<td>21,320</td>
<td>8,651</td>
<td>12,399</td>
</tr>
<tr>
<td>8</td>
<td>SFX clickthroughs - April 2010</td>
<td>70,306 (87% of requests)</td>
<td>14,438 (68% of requests)</td>
<td>6,508 (75% of requests)</td>
<td>9,937 (80% of requests)</td>
</tr>
<tr>
<td></td>
<td>UMass</td>
<td>Smith</td>
<td>Amherst</td>
<td>Mt. Holyoke</td>
<td>Hampshire</td>
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</tr>
<tr>
<td>10</td>
<td>SFX getFullTxt clickthroughs April 2010</td>
<td>56,548 (80% of clickthroughs)</td>
<td>10,705 (74% of clickthroughs)</td>
<td>4,921 (76% of clickthroughs)</td>
<td>5,616 (57% of clickthroughs)</td>
</tr>
<tr>
<td>11</td>
<td>ebooks retrieved via R2 OPAC search</td>
<td>293,678</td>
<td>463,592</td>
<td>204,441</td>
<td>154,969</td>
</tr>
<tr>
<td>12</td>
<td>student FTEs</td>
<td>26,328</td>
<td>3,100</td>
<td>1,690</td>
<td>2,200</td>
</tr>
<tr>
<td>13</td>
<td>library employee FTEs</td>
<td>&lt; 125 FTEs</td>
<td>50 FTEs</td>
<td>35 FTEs</td>
<td>30 FTEs (excluding IT staff in Mt. Holyoke’s merged organization)</td>
</tr>
<tr>
<td>14</td>
<td>estimated library FTEs dedicated to managing electronic resources (excludes reference and instruction services)</td>
<td>5 FTEs</td>
<td>4 FTEs</td>
<td>2.5 FTEs</td>
<td>2.5 FTEs</td>
</tr>
<tr>
<td>15</td>
<td>e-resources FTEs as % of all library staff</td>
<td>4%</td>
<td>8%</td>
<td>7%</td>
<td>8%</td>
</tr>
<tr>
<td>16</td>
<td>link resolver</td>
<td>SFX (UMLinks)</td>
<td>SFX (SCLinks)</td>
<td>SFX (ACLinks) - includes Amherst's Depository print journals</td>
<td>SFX (MHLinks) - no SFX links in ALEPH. All ALEPH links are direct</td>
</tr>
<tr>
<td>17</td>
<td>automatic activation in SFX?</td>
<td>selective</td>
<td>selective (e.g., JSTOR, Project Muse)</td>
<td>no - Verde is used to activate subscribed resources in SFX</td>
<td>selective</td>
</tr>
<tr>
<td></td>
<td>UMass</td>
<td>Smith</td>
<td>Amherst</td>
<td>Mt. Holyoke</td>
<td>Hampshire</td>
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</tr>
<tr>
<td>18</td>
<td>single search</td>
<td>Google Scholar</td>
<td>Google Scholar</td>
<td>Google Scholar</td>
<td>Google Scholar was recently implemented, and while it is a &quot;single-search&quot; for things in SFX it does not cover other resources in the library and is not promoted as a single-search entry point for the library.</td>
</tr>
<tr>
<td>19</td>
<td>management of off-campus access</td>
<td>EZ Proxy</td>
<td>EZ Proxy</td>
<td>SQUID (open source)</td>
<td>EZ Proxy</td>
</tr>
<tr>
<td>20</td>
<td>proxy entered in SFX?</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>21</td>
<td>ERM</td>
<td>Various EXCEL spreadsheets for dblist, tracking renewals, license statuses, desiderata, selector credits, and usage statistics. Payment, cost, renewal dates, online host, and simultaneous users are entered in ALEPH order records. Email &amp; calendar tickler files. <strong>Verde</strong> is used for vendor contact information only</td>
<td>Shared folders on the <strong>local P drive</strong> - populated with detailed ejournal cover sheets</td>
<td><strong>Verde</strong> contains full-text databases and is used to dynamically generate database locator and research guide webpages. Also used to update e-journal lists. Includes license terms. Preparing to activate SUSHI. Also shared departmental spreadsheets for administrative logins, upcoming changes, statistics, etc.</td>
<td>EXCEL spreadsheet and paper files to manage subscribed titles/packages.</td>
</tr>
<tr>
<td>22</td>
<td>course management system</td>
<td>SPARK Blackboard Vista</td>
<td>Moodle</td>
<td>Drupal -based</td>
<td>Sakai (Ella)</td>
</tr>
<tr>
<td></td>
<td>UMass</td>
<td>Smith</td>
<td>Amherst</td>
<td>Mt. Holyoke</td>
<td>Hampshire</td>
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</tr>
<tr>
<td>23</td>
<td>basic approach to creation and maintenance of bib records for e-journals</td>
<td>MARCit! Loads every 8 weeks or so - and local cataloger contributions</td>
<td>Local copy cataloging. Considering MARCit! for some sets.</td>
<td>Local copy cataloging - records downloaded 1x1 from OCLC</td>
<td>Local copy cataloging - records downloaded 1x1 from OCLC</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Monthly MARCit! loads</td>
</tr>
<tr>
<td>24</td>
<td>basic approach to licensing and license management</td>
<td>Licensing workload is distributed among those who order the resource; paper copies retained.</td>
<td>AD for CD reads, amends and signs licenses, else Library Director. Paper copies retained - recently started saving electronic copies on a shared network drive.</td>
<td>Head of Serials signs licenses; license status (and ILL terms?) entered in Verde; paper copies retained but not all in one place.</td>
<td>LITS Director signs licenses after several librarians review the terms; paper copies retained.</td>
</tr>
<tr>
<td>25</td>
<td>pay-per-view services</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>Wiley tokens (pilot)</td>
</tr>
<tr>
<td>26</td>
<td>basic approach to troubleshooting</td>
<td>DBHelp - email listserv - one DBHelper assigned for each day of the week.</td>
<td>SFX results menu- Report a Problem Form -- these are routed to the Neilson Reference email account. Technical problems are routed to the e-r librarian.</td>
<td>shared departmental email account monitored by three serials staff</td>
<td>Ask Us (button) on LITS website - directed to a shared email list. Some reports go directly to liaisons; referred to E-R Librarian</td>
</tr>
<tr>
<td>27</td>
<td>basic approach to link checking</td>
<td>No longer use an auto link checker - looking for a useful one. Local creators of subject and research pages are responsible for semi-yearly checking. In SFX, primarily reliance on Listserv and DBHelp trouble reports.</td>
<td>Student workers check item-by-item</td>
<td>Rely on SFX listserv to identify large-scale changes; maintenance done as needed</td>
<td>Rely on SFX listserv to identify large-scale changes; maintenance done as needed</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>rely on trouble reports</td>
</tr>
<tr>
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<td></td>
<td>UMass</td>
<td>Smith</td>
<td>Amherst</td>
<td>Mt. Holyoke</td>
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<tr>
<td>28</td>
<td>instructional emphasis</td>
<td>Research Databases</td>
<td>e-Journal Locator; DB guides; and class guides</td>
<td>Journal Locator</td>
<td>Journal Locator AND OPAC</td>
</tr>
<tr>
<td>29</td>
<td>collection and analysis of usage data</td>
<td>Statistics info is gathered in spreadsheet form. SUSHI is not yet enabled in Ustats.</td>
<td>collected only as needed - DB usage statistics collected in the context of cancellation projects</td>
<td>statistics have been collected but not consistently analyzed - planned move to SUSHI in Verde</td>
<td>Ad hoc - no formal system in place yet</td>
</tr>
<tr>
<td>31</td>
<td>consortial relationships/dependencies</td>
<td>NERL - member Five Colleges BLC WALDO -limited member CRL MAHSLIN MCCLPHEI Some subscriptions shared w/other UMass campuses</td>
<td>Oberlin Group Lyrisis NERL - affiliate NELINET WALDO - limited member Five Colleges</td>
<td>Oberlin Group NERL - affiliate Lyrisis WALDO - limited member Five Colleges</td>
<td>NELINET NERL - affiliate Lyrisis WALDO - limited member Five Colleges</td>
</tr>
<tr>
<td></td>
<td>UMass</td>
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<td>-----------</td>
</tr>
<tr>
<td>32</td>
<td>e-resources funding</td>
<td>Subscriptions are paid out of one huge e-resources budget. One-time purchases may be paid out of individual selector's budget or a one-time serials budget.</td>
<td>Beginning efforts to group under specific fund code for electronic; most titles are still mixed in with &quot;dept&quot; serials or books.</td>
<td>Serial funds associated with academic departments (not distinguished from print); else Electronic Serials; Electronic Reference, endowed fund, or Big Ticket item.</td>
<td>various e-resources budget codes</td>
</tr>
<tr>
<td>33</td>
<td>annual volume of 5C Direct Borrowing Statistics - these numbers represent all library circulations, including reserves and ILL</td>
<td>68,274 items <strong>borrowed</strong> 37,821 items lent</td>
<td>30,102 items <strong>borrowed</strong> 11,713 items lent</td>
<td>17,095 items borrowed 60,473 items <strong>lent</strong></td>
<td>25,402 items <strong>borrowed</strong> 22,715 items lent</td>
</tr>
<tr>
<td>34</td>
<td>annual volume of 5C article borrowing/lending - no distinctions between print vs online resources</td>
<td>107 items borrowed 205 items <strong>lent</strong></td>
<td>126 items borrowed 264 items <strong>lent</strong></td>
<td>not tracked</td>
<td>(91 +) items <strong>borrowed</strong> 71 items lent</td>
</tr>
<tr>
<td>35</td>
<td>RAPID ILL ?</td>
<td>yes</td>
<td>no</td>
<td>under consideration</td>
<td>no</td>
</tr>
</tbody>
</table>
V. Creating the Conditions for Collaboration

As noted above, available data suggests that licensed or purchased e-resources claim between 59% and 85% of each library’s materials budget. In addition, at least 90% of current Federal Documents are available in electronic form, tens of thousands of free electronic resources have become an important part of each library’s electronic offering, and eBooks are very quickly growing in importance for all types of users. From both workload and budgetary perspectives, e-resources now constitute the libraries’ mainstream workflow. We propose that organization, staffing, and systems support should better reflect its primacy. The emergence of this mainstream has been an obvious but sometimes overlooked point within the Five Colleges as in other academic libraries nationwide. While the management of print materials will continue to occupy significant numbers of staff, library workloads and user preferences have shifted, and 5CL’s operational priorities need to reflect this reality.

As described in the Introduction, we believe that 5C already has some unique advantages, in the form of a larger-than-average pool of expertise and experience with e-resources management. This could be leveraged to great effect, once it is organized differently. The key, in our view, is to build a truly collaborative e-resources operation, one that is coordinated centrally but harnesses talent, experience, and hours that are currently distributed across five libraries. Changes in content licensing, a more standardized approach to access, a simplified systems infrastructure, and outright elimination of some procedures will all contribute to a streamlined process. But even better results will follow from a decision to combine effort around the 5C Commons material, and in fact to share many aspects of the Un-Commons workloads. The recommendations that follow are all intended to move Five Colleges in this direction. We recognize that these cannot all be pursued immediately, but key decisions should be made soon, to begin the journey toward improved user experience and e-resources management.

Prioritize management of e-resources

Students and faculty throughout the 5C system benefit from a huge array of full-text resources, and in most cases, prefer them to print. All told, 5CL spends more than $9 million every year to provide access to commercial e-content, a number that is expected to grow. The inescapable conclusion: e-resources should be handled as the highest-priority content stream across the system. While many people recognize this need, at present fewer than 15 staff members (FTEs) across 5C are actively engaged in electronic resources management. In any given library, this represents between 4% and 8% of the entire library staff. It is both reasonable and practical to enlist additional staff hours to help manage content that absorbs so much investment and confers such massive system-wide benefit.

The $9 million spent annually on these resources suggests that all processes associated with their selection, licensing, purchase, access creation, maintenance, trouble-shooting, and usage analysis deserve maximum attention. And while good people are working hard on this now, everyone with whom we spoke agreed that service could be substantially improved. Better prices and broader access might be negotiated consortially. A more vigorous program of verification and maintenance of access could be implemented, to assure timely and convenient availability to users. Access paths could be simplified and optimized. Knowledgebase management might be consolidated, to improve both service and efficiency. Standards could be decided and implemented. ERM modules could be populated and used, or analyzed and replaced. Usage statistics might be more regularly collected, normalized, analyzed, and acted upon. In short, there is a great deal more that could be done to manage e-resources as the top priority.
The first step is to identify all the tasks necessary to assure excellent management of e-resources. Some of those are described in the following recommendations; others will be added by those now working with this content stream. It seems clear to us that additional staff resources will be needed, at least in the short term. At minimum, it seems reasonable to suggest that each library be prepared to dedicate 10% of its staff to the management of e-resources (up from the 4% to 8% at present). During our interviews, we heard requests for additional systems support, and additional para-professional help, but generally these requests were modest, ranging from .5FTE to 1 FTE.

This speaks to the quality of staff already in place, and to their confidence in managing these workloads. But in our view, this should be explored more fully, especially in the context of much greater sharing and collaboration we have outlined in this report. Adequate staffing of e-resources management is the single most important priority to satisfy as a result of this project. Optimal management of this massive, high-demand content stream will benefit the greatest number of users, and will enable the most efficient use of staff hours. It is critical to understand in detail what will be needed to staff for sustained excellence.

It is conceivable that even lavish staffing of e-resources will require very few additional hours, once the five currently distinct operations have fully coordinated, and all possible redundancies eliminated. With a changed approach to licensing, systems support, procedures, and division of labor, fewer total hours may be necessary. But that remains to be tested. The point is to staff and support e-resources fully first, reducing effort in other areas if necessary, rather than the reverse.

**Commit to the 5C Commons vision**

To date, it has been the prerogative of each library to honor 5C practices and priorities in the context of local needs. The creation and operation of the 5C Commons will introduce a re-balancing of collaborative versus individual responsibilities. This will be a major cultural change, and will no doubt require some adjustment. The 5C Commons is intended to grow gradually, increasing the base of shared resources and workloads, but even at the outset will have noticeable impact. While the Commons will never represent the full scope of activity for most libraries, the goal should be to make it as large as it can be—the most resources for the greatest number of users under collaborative management—with unique resources the only ones being managed locally. Even unique resources may benefit from distributed participation in their management.

It will be important to refine the Commons concept and to build commitment for its implementation, because, if enacted fully, it will change priorities and the pattern of people’s work. By staffing it properly from the beginning, while adopting some changed practices, problems will be minimized and benefits maximized. But commitment to the Commons may in some cases mean that Commons-related work will take precedence over local work—and that the good of the whole may temporarily trump the good of an individual library. Like all cooperative efforts, management of this transition will require some mixture of persuasion and compulsion. We suggest that taking the time up front to articulate and refine the Commons concept more fully will pay dividends later on.
Develop a “synoptic” view of activity and performance
One of the most difficult aspects of R2’s analysis of Five Colleges’ activity was the absence of a big picture. Every library had good data on its own activities, but with only a few exceptions (e.g. direct borrowing data, cross-registrations), a Commons-like view does not yet exist. In order to construct an overview of 5C activity, R2 laboriously compiled, combined, compressed and compared information from each library. It was often difficult to tell whether we were comparing “apples to apples”, but in general this synoptic view proved very useful, bringing patterns to light, and providing a new vantage point on 5C activity. It became much easier to see where both problems and opportunities could be fruitfully addressed. This is exactly the perspective that will be needed to manage the Commons effectively.

While the tools themselves can definitely be improved, gathering and synthesizing information in this fashion should become a routine task within the Five Colleges Libraries. As we see it, real collaboration should always be informed via hard numbers and demonstrable patterns of behavior. Our experience of collecting comparable data from each library was fraught with problems and uncertainty. R2 is quick to acknowledge that our requests were sometimes unclear, but most of the problems stemmed from a lack of uniformity in language, the absence of standard practices, the lack of available data, and uneven familiarity with reporting tools.

None of this should be surprising; there has been only limited need to think, work, and manage in this way until now. Effective collaboration will depend on clarity as to where the work is, shared objectives, and measuring 5C-wide performance against those objectives. All of this will require management tools that provide the system-wide picture, and a new way of thinking about activity and performance.

Simplify access to Commons resources
A number of issues surround authentication and credentialing of students at one campus to allow access to resources subscribed only at another campus. In the medium to longer term, it is expected that Shibboleth, with its structure of identity providers and service providers, can begin to address this, but we believe the situation can be improved in the short term with a simpler approach.

We have suggested that the 5C Commons be initially populated with approximately 60 targets. Further, we have suggested that 5C move to license some or all of these collectively, and that existing subscriptions be broadened to include all institutions. In either of these scenarios, 5C would supply the resource provider with the combined IP ranges for all five campuses. This would enable seamless access to all Commons resources from any Commons user. Basically, by broadening the base of shared resources, 5C can side-step the access problem for now.

While a more granular approach to authentication would be needed for selectively-subscribed resources (i.e., those where fewer than five libraries participate), the goal will be to reduce the number of these, and ultimately Shibboleth can be used to accommodate those that remain. There is some concern that Shibboleth may not be supported by every organization that provides electronic resources to the 5C libraries, and this needs to be monitored closely.

Another short-term approach would be to consolidate instructions for off-campus access in a Commons view, along the lines of this example, again from the Tri-Colleges consortium:
These first recommendations have been general in nature, but as we move into more specific recommendations regarding how to establish and grow the 5C Commons, it will be useful to group recommendations by topic. The following pages, then, will include clusters of ideas on:

- Shared Collections
- Resource Discovery
- Resource Management
- Shared Staffing & Managing the Commons

**Shared Collections**

Again, we’re referring to these as the 5C Commons.

**Create a shared e-content budget for Commons resources**

Although the idea sounds radical on the surface, in some respects this situation already exists—it just hasn’t been deliberately shaped and managed. As described in Section III, more than 85% of user activity related to e-resources ends within just 60 target services. These could be regarded as the foundation of the Commons universe of content. To the degree that all five libraries already commit funds to this universe, a de facto budget exists. By harvesting monies already committed to these same resources, but currently administered independently, that budget could be formalized. More significantly, it could then be actively managed, by combining subscriptions, reducing overlap, expanding packages, and in general maximizing the opportunity for meaningful negotiation with vendors.

The shared budget for the Commons collection would be managed centrally, based on input from a 5C Selection Committee. The budget would then need to be reviewed each year to renew baseline commitments, and provide for inflationary increases and new purchases as the Commons grows.

**Maximize the number of Commons resources**

The point of the Commons is to provide the largest shared base of content that makes economic sense. The larger this foundation of shared content, the more consistent the 5C user experience...
will be, and the more efficient its management will be. While there will remain a significant need
for unique content on each campus, the goal should be to maximize what’s shared, keeping in
mind that 85% of activity focuses on a very small number of providers.

Because of their importance and because each library will have a financial stake, it will be critical
to create a mechanism for shared selection of Commons resources; a shared budget implies
shared selection responsibility. While the initial determination of Commons resources will be
based almost entirely on use, consideration of new resources will need to be debated and
agreed.

**Negotiate consortial licenses**

As detailed in the previous section of the report, a relatively small number of SFX target services
(about 60) account for more than 85% of the full-text downloads on all campuses. To the degree
that this group of resources can be licensed consortially, 5C can dramatically reduce the work
associated with them. Each license would only need to be vetted and signed once. The power of
the consortium could be used to advantage in the negotiation process, potentially saving some
money and eliminating some ILL concerns.

This is a fairly major shift, and will likely require some time to develop. It may require transfer of
signing authority to the Five Colleges. It will definitely require new strategies for negotiation and
dealing with vendors. But instead of each institution handling the same resource independently,
those tasks could be handled once centrally. With more emphasis on shared resources,
consortial license agreements will become the norm, and the operating environment could be
restructured to eliminate delays currently associated with shared purchases, and to make this
workflow easy to support by staff at the individual institutions.

In the short term, consortial licensing can eliminate some authentication issues, by simply using
aggregate IP ranges. Over time, this approach could be replaced with Shibboleth. Because some
of these resources likely come up for renewal at different times of the year, a gradual transition
of existing resources may be needed. However, any new resources that meet the criteria for 5C
Commons participation could be started as such immediately.

An agreed set of licensing principles will need to be developed, to assure consistency in access
terms and to assure "fair use" of all information for non-commercial, educational, instructional,
and scientific purposes by authorized users. Providers should allow e-information (such as
electronic copies of journal articles) to be used to generate copies (whether in print or
electronic form) for interlibrary loan.

NERL licensing principles for electronic journal licenses address a common concern for
protecting fair use, and can continue to be used as a model. Specifically, the definition of
authorized use ([http://www.library.yale.edu/NERLpublic/EJrnlPrinciples.html](http://www.library.yale.edu/NERLpublic/EJrnlPrinciples.html)) includes a
relevant reference to usage rights:

**Electronic journal licenses should afford broad usage rights for teaching and research
and customary library activities such as interlibrary loan. NERL members must be free to
use the licensed content to fulfill these institutional responsibilities in the most
expeditious way available. A license should permit the inclusion of articles in print and
electronic reserve systems and in online courseware applications, including the right to**
download articles for use within such systems. Ad hoc scholarly sharing, use in printed course packs, and interlibrary lending according to existing ILL guidelines should all be permitted.

CROSS-ACCESS to titles owned by other NERL libraries should be an option available to any participating member for a nominal fee.

**Develop a shared vocabulary related to electronic resources**

At present, there is a fair bit of variation among 5C libraries in the terminology used to describe electronic resources. Again, this should not be surprising, since each library developed its own approach independently. But as greater collaboration and sharing are pursued, a common vocabulary will prevent confusion among both users and staff. It will be enormously helpful if everyone means the same thing when they say “the journal locator” or “the article finder” or “a database.” A shared vocabulary allows and improves communication surrounding access to library resources.

This is probably a more difficult and important recommendation than it appears. Habits develop around these sorts of usage, and Web screens, instruction sessions, spreadsheets and other tools all bear these labels and ingrain them deeply. It will be helpful to settle on shared terminology as the Commons environment is developed. It will also be necessary to agree on a single description of each database included in a shared A-Z list. Staff at individual libraries have worked hard to create their own descriptions, but some of that ownership will need to be relinquished in order to support the Commons.

**Maintain a consolidated vendor environment**

Consistency of user experience and efficiency of management both rely on an infrastructure that is as uniform as possible. Every exception that is introduced chips away at that consistency and efficiency. 5C benefits from a vendor environment that is currently well-consolidated. ALEPH, SFX, and Verde are shared even if not uniformly implemented. EZProxy serves four campuses. Until very recently, EBSCO has been the primary subscription vendor for all campuses, and YBP has been selected as the primary monographs vendor. This level of agreement on vendors enables implementation of shelf-ready programs, similarity in interfaces and reporting, and some degree of interoperability. It is much more complicated to manage these processes in an environment where multiple vendors operate.

During our visit, we were made aware of strains in some of these relationships. And even since the time of our visit, one library has moved away from Ebsco as their primary agent. In July 2010, the DEDCC reported favorably about ProQuest’s Summon as a discovery layer product, even though WorldCatLocal is in place at UMass and is being tested at Smith. In the absence of a consortial focus, these decisions matter only to the individual institution. But as 5C works to create a Commons, it is much more important to consider the impact on the whole group, and to tend toward convergence rather than divergence.

Another example may make this clearer. Four libraries use EZProxy to control off-campus access to resources, and one library uses Squid, an open-source proxy server. At present, that does not affect anyone adversely. But imagine that all 5C proxy updates are performed centrally, or that in a virtual E-R group, proxy updates are performed by someone from another campus. In each case, two update processes would need to be conducted, probably with some variation.
between them. While this is certainly possible, it would clearly be preferable to support a single process.

These decisions, writ large, will determine how cohesive and how efficient the Commons environment becomes and remains. We urge careful consideration of decisions that further fragment an environment that actually needs to become more cohesive. Certainly the vendors with which 5C consolidates need to be monitored and held accountable for their performance. But any shift in vendors really needs to be done as a group, if the 5C infrastructure is to provide the benefits of which it is capable.

Resource Discovery
The Commons approach will require a much higher degree of uniformity in the discovery experience. This will limit the extent to which individual libraries can set their own policies or the degree to which exceptions can be supported. Ideally, shared policies and practice would be developed around all aspects of e-resources, from selection to access and instruction. In order to assure consistency in the user experience and to streamline and share work, most tasks will need to be done the same way on all campuses. This may require, for instance, that all 5C Libraries agree to remove e-journals and databases from ALEPH, allowing them to be found only through A-Z lists, journal locators, or citation links. Such a decision would in turn suggest that instruction sessions at all libraries guide users to the Journal Locator rather than the catalog. (Note: shared language would also be helpful here, with every library using the same terminology for the Journal Locator.) Additional policy decisions framed and implemented consistently would help users and reduce low-yield work. Examples would include whether and how to set print holdings in SFX, where and how holdings information should be stored in SFX, OCLC, and ALEPH.

Make strategic and shared decisions about e-journal discovery and access
The basic idea here is to examine patterns of user behavior, and make choices about which access paths to support based on that behavior. The underlying premise is that a) it may not be possible to fully support all access paths; so b) it’s better to focus on those that are used most often. Such an approach may also help simplify presentation of search results, since there will be less conflicting data.

It is reasonable to assume the goal for most contemporary researchers is to reach full-text online with the fewest clicks possible. Speed of access and convenience are critical. 5C provides several avenues to its full-text content, including A-Z lists and subject lists for databases and e-journals, MARC records in ALEPH, article linking through the SFX link resolver, searching through Google Scholar, and in two of the five libraries, discovery via WorldCatLocal.

While this array of possibilities offers maximum flexibility for users, it also adds complexity, and maximizes maintenance work. It is difficult to assure timely, accurate and comprehensive access through so many channels, especially given that coverage information and links are so dynamic. This may be a good moment to think strategically about which avenues best repay investment of staff hours and best serve users. A slightly narrower range of options for which links are always current and regularly monitored may serve users better than a wide range where maintenance is not always possible.

5C has excellent data on user behavior from SFX source reports and target reports, like that described in the previous section of this report. This data provides an objective basis on which
to decide access paths. To optimize the Commons environment, of course, these decisions need to be made in concert across all five libraries. There are many other components of discovery which would benefit from discussion and standardization, such as:

- Which free resources should be activated in SFX
- Whether SFX-activated resources should also appear in ALEPH
- When Local Thresholds should be entered in SFX
- Load of eBook MARC records into ALEPH
- Presentation of SFX links to ALEPH, ILL, and User Help

Remove e-journals from ALEPH
Judging from our interviews, there is more consternation about the ALEPH union view, especially for journals, than any other aspect of the user experience. We saw many examples of multiple iterations of records, partial or confusing holdings data, and lack of clarity between print and electronic coverage. As we understand it, some of this stems from the decision at migration to convert to institution-specific bibliographic records. That has been complicated by the proliferation of electronic journals, which require separate records in order to take advantage of third-party services such as MarcIt! Finally, because coverage and provider data is dynamic, these records require ongoing maintenance. The upshot is that even the most experienced users, such as ILL staff, have difficulty determining what the library actually owns.

From what we can discern, there is no simple or immediate answer for this situation. One strategy that has been considered is to re-merge the institution-specific bibliographic records into a single consortial record for each format; i.e., reduce the variation to one record for print and one record for the electronic version. This is a complex task, which would also involve holdings transfers and normalization on a large scale. Numerous discussions have been held with ExLibris about adjusting the algorithms that govern display in union view. While this would improve some aspects of the situation, it is at best a partial solution and likely to be labor-intensive.

Therefore, we suggest that 5C consider elimination of MARC records for e-journals from ALEPH. It is clear from the SFX source reports that a very small proportion of users arrive at an SFX menu via the catalog; most full-text downloads are launched from citation databases, A-Z lists, subject lists, or LibGuides. In at least three libraries, users are taught to begin article searching through A-Z lists, rather than the catalog. We recommend that this approach be adopted 5C-wide, and that all e-journal records be removed from all individual catalogs. This will not only reduce confusion, but will reduce cataloging and maintenance workloads, and eliminate the need for monthly MARCIt loads.

We recognize that there are drawbacks to this. Journal access will be split, with records for print holdings in the OPAC, and information on e-journals only available through SFX. It undermines the idea that the online catalog is the authoritative and comprehensive source of access information. It flies in the face of historical cataloging practice. But it will cut by half the number of records presented in union view search results, and will provide clear strategies for finding both electronic and print. Further, there are options for addressing the split access, either through adding print journal holdings to SFX, or by using a new discovery layer to unite results from different sources.
Consolidate to a single A-Z list of databases

From the user perspective, and as noted in the previous section, there is little to distinguish any one library’s alphabetical list of databases, except the titles themselves. With a greater number of shared databases, and a clear path for requesting article delivery, the user will benefit from a ‘union’ view. As shown in the example from Tri-Colleges below, it is important to indicate clearly which libraries provide access to which resources; they have done it with a color-coded symbol in the far right column.

The user readily sees the universe of research resources. Given that any user can engage in scholarship at any campus, at any time, this is particularly congruent with 5C strategic directions. Login instruction and access restrictions can be clarified at the outset. Troubleshooting can begin at a central location, versus being repeated at multiple campuses when a commonly owned database goes offline.

In terms of resource management, a consolidated list could be generated from a single shared knowledgebase, reducing maintenance and redundant tasks. Like the various A-Z lists in place now, it would need to be generated dynamically from a shared content management system that in turn assures updated links wherever they appear—on subject lists, LibGuides, etc. A single annotation would suffice for each resource, rather than each library creating its own.
Implement a single A-Z list of e-journals
The same concept should be applied to single A-Z list of e-journals, and the same arguments apply. The argument, in fact, may be even stronger than for databases, since it is much harder to make a list of journals distinctive. As we pointed out in Section III, the five existing and separate lists are nearly identical.

Replace ALEPH union view with a single Commons discovery layer
In July 2010, DEDCC completed a thorough investigation of discovery layer products, and made a recommendation to FCLC, so this recommendation is intended only to support that direction. In discussions with ExLibris staff about alternatives to the ALEPH union view, they emphasized movement to a discovery product as a better strategy than trying to fix the union view; i.e., even if the underlying data remained the same, discovery layer products offered much better tools for de-duplication and presentation of search results. They, of course, framed this discussion around Primo and Primo Central, their own discovery-layer offering, highlighting its interoperability with SFX, Verde, and ALEPH.

As mentioned earlier, DEDCC’s investigation of discovery layers has been product and platform neutral despite UMass’ recent WorldCat Local (WCL) implementation. Again, UMass describes itself as “locked in” to WCL because of an agreement with the Boston Library Consortium. Smith, if we understand correctly, is working with a beta version of WorldCat Local and is also looking at EBSCO’s Discovery Service (EDS). Not to put too fine a point on it, R2 believes that looking again at every discovery layer in the market may be counterproductive.

If 5C agrees that a Commons should be built, this is one of the most important decisions the group will face this year. We submit that the most vital aspect of a new discovery layer is that it be shared. That is what will unify the user experience and shape the underlying workloads to facilitate collaboration. This will be a difficult decision to make collectively, largely because historical decisions and independent decisions have already shaped the outlines of the discussion. If 5C were starting with a clean slate, it seems likely that Summon would be chosen, since it is seen by the committee as the best (albeit the most expensive) product. But of course the slate is not clean.

First, the historical decision to implement the ExLibris suite of products means that 5C data and transactions stored in ALEPH, SFX, Verde, MetaLib and DigiTool are in structures that are well understood by ExLibris. It seems reasonable to assume that Primo will be optimized for interacting with other ExLibris systems. It is worth considering the advantages of remaining within a single suite of products. Second, and more importantly, UMass’s decision to implement WorldCat Local has created a massive “given”. The product is already in use, and UMass has invested heavily in implementation and in data exchanges such as connecting SFX to the OCLC eSerials Holdings service. They also have a formal commitment to BLC. Even if it were deemed necessary, it would be difficult and expensive to change directions at this point.

In our view, these givens must be weighted heavily in reaching a 5C-wide decision about the discovery layer. No product is perfect, and it is vital that the discovery layer be shared if the Commons is to be built. R2 has never recommended specific products or vendors, and in fact does not do so even here. We simply believe that 5C would be better served by accommodating a reality that already exists than by dismantling a service that has only just been built. In future, if the Commons is to thrive, decisions of this magnitude will need to be made jointly.
Use Depository ADM as transition strategy to discovery layer
Whatever decision is made regarding the discovery layer, it will take some time to come to
terms with the choice, purchase, and implementation. 5C will likely need an interim strategy for
managing shared resources. Use of the Depository ADM, as proposed by a number of people
during our visit, seems like the best candidate. As we understand it, records for MARCIVE’s
Documents Without Shelves (i.e., electronic versions of current US Government Documents) will
be loaded to the Depository ADM. A similar approach is planned for eBook records associated
with the Patron-Driven Acquisitions pilot. Any resources that are openly accessible or are owned
at the 5C consortial level would be candidates for similar treatment. In effect, this returns 5C to
a single bibliographic record for these resources, and enables consortium-wide access with
minimal maintenance. However, once a common discovery layer has been implemented, these
Depository ADM records should be among the first uploaded to and indexed in that product. At
that point, the Depository ADM should no longer be needed as a discovery aid.

Consider creating Commons-level basic subject guides
This is one additional area where more consistency could be introduced into the user
experience. Subject guides for undergraduates could be created once for each discipline at the
5C level. Having a single consortial subject guide for, e.g., American History, would reduce the
workload required to create one for each campus, and that time might be used to increase the
number of subjects covered. Course guides, on the other hand, would remain the province of
individual libraries, since those are tied directly to the curriculum.

Standardize the requesting process for e-article delivery
5CL has a long-standing successful mechanism for patron-initiated cross-campus borrowing of
print monographs. Patrons know how to place these requests, they know the turnaround time
for delivery, and they are extremely satisfied with this service. For electronic resources,
however, patrons are much less clear on access privileges, requesting protocols, or expected
delivery times. Indeed, when a user identifies a 5C e-resource holding pertinent to their
research, their retrieval options can seem limited. Users can present themselves as walk-ins at
the physical location, or they can request delivery via ILL, which is a process entirely unrelated
to 5C holdings.

To complicate matters further, the steps necessary to request an e-article vary from one campus
to the next. No separate, clearly identified channel of document delivery for 5C e-resources is
available to the user. SFX menus inconsistently invite the user to request ILL, and at least in
some cases, these invitations establish the expectation of delivery within 3-10 days. For an
undergraduate with a deadline, 3 days can seem an eternity.

Moving to a single instance of SFX will make it possible to design a common requesting
experience (see the Tri-Co example below), but R2 believes that the speed of delivery should be
standardized as well. As described above, a single A-Z list of e-journals will clearly indicate that
a particular resource is subscribed somewhere within the Valley, even if it is not immediately
accessible. Once that visibility is achieved, it can be made clearer to users that they can request
electronic delivery of articles. And it seems highly likely that users will take advantage of the
option if delivery falls within an acceptable time frame.
Provide 24-hour delivery of e-articles
RAPID ILL libraries have become accustomed to 24-hour fulfillment of e-articles. 5C itself can deliver a physical object within 24 hours of the order. This, it seems, has become the presumed norm. It therefore seems reasonable that 5C researchers should expect and receive this standard of service from their libraries for article delivery. R2 suggests that 5CL embrace this benchmark, and find the means to provide this level of service on behalf of all 5C patrons. Adoption of RAPID by all five libraries may provide the most efficient means to that end, but it may also be worth considering an exclusive 5C system for delivering e-articles from the Un-Commons – to act in parallel with 5C Direct Borrowing for books.

Promote e-article borrowing
Once the service has been developed to meet the 24-hour benchmark, it will behoove the consortium to promote it. Seamless and speedy 5C borrowing of e-articles will make it possible for the Libraries to eliminate the 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> individual subscriptions that currently absorb significant acquisitions dollars.

Standardize user help / Coordinate troubleshooting
We recommend a consistent and coordinated approach to user help forms, regardless of the home institution and regardless of which of the three primary research portals the user is working within (ALEPH, A-Z list of journals, or A-Z list of databases). The UMass DBHelp listserv, driven by a user selected help form, stood out as a particularly effective model.

UMass DBHelp is monitored by various staff in the library, following a schedule. Other staff are subscribed to DBHelp, such as library administrators and campus IT/systems staff, for general awareness and identification of themes. The benefits of using a listserv for user help services are: effectiveness of push technology, system is self-archiving, searchable knowledgebase or FAQ readily created, and ease of sharing information and promoting interaction among staff.
Consider ALEPH help – If the user, working within the union view of ALEPH were directed to a listserv, “CatalogHelp”, for example, the ILS coordinator could participate - reviewing list activity and identifying problems for which system solution exist and can be applied. At the same time, local library staff would be responding to the individual user. A perspective on cross-institutional issues would be available, based on direct user experience, and 5CL would have the needed information to discuss and develop initiatives that improve service.

In our vision, each research portal would have a single listserv, which would transmit with information about virtual location of user (system supplied, e.g. ALEPH, or MHC SFX) along with user supplied home institution information. The home institution would serve as the primary responder for their users, and would assign monitoring responsibilities accordingly. As the movement toward a shared collection and shared tools becomes reality, centralized FCL staff will become involved in directly responding. Establishing a consistent system at the outset will provide for seamless transition of service, and continuous access to information. As the base of common material and tools grow, FCL staff participation will grow. Even now, without a common license or central purchase, there is a common base – for example a Smith library user working in the list of databases submits an inquiry about linking problems for ACM Digital Library – three other institutions may be able to apply proactive solutions in their library, or assist Smith with the solution, since they also subscribe to this database.

Resource Management
As we have argued repeatedly in the preceding recommendations, we believe 5C can realize significant efficiencies through collaboration and through fuller use of shared systems. 5C already enjoys a number of advantages in this regard, because the group shared the purchase of ALEPH, SFX and Verde. Four libraries use EZProxy. But other than the union view in ALEPH, the operation of these systems is not truly shared. There are at least six instances of ALEPH, and five separate instances of SFX. Verde is really used in only one library. In order to share workloads and information via the Commons, a single point of viewing and transactions will be needed. Shared management of e-resources requires shared access to the data. This might take the form of a single consortial instance of SFX, use of the Depository ADM as a transition strategy, replacement of ALEPH’s union view with a discovery tool, and a single content management system which dynamically updates the shared A-Z lists.

While some tools are better than others, there are no perfect tools. From a Commons vantage point, the specific tools chosen are much less important than to adhere to the vision of shared tools. New purchases must focus on extending and strengthening consortial arrangements. Existing systems and tools should be examined, with an eye toward consolidating activity to extend their power across more libraries and more transactions. As systems are increasingly shared, redundant efforts can be reduced and, efficiencies can be realized.

Consolidate to a single consortial instance of SFX
As we understand it, there has been intermittent discussion of this issue for some years. Migration to a single consortial instance will encourage collaboration, reduce duplication of work, align staff with others involved in related activities, and coordinate problem solving and decision-making. A 5C shared SFX knowledgebase would allow for centralized management of many tasks currently carried out across five institutions. Activation and maintenance for jointly held resources would be handled centrally, while unique local holdings would continue to be maintained via local SFX managers who are authorized to login to the central SFX.
As a reality check on this idea, R2 consulted with ExLibris, to understand what would be involved from their point of view. The following response is from Susan Stearns:

The first option [and the one we recommend] involves merging the current and separate five instances of SFX into a single, consortial instance. We can, if interested, provide more details on this as well as a quote for the services themselves, although we would need to have some conversations with you and/or the customer in order to finalize a quote.

This option allows Five Colleges to centralize the work associated with ongoing maintenance of SFX, presumably better ensuring that the best local expertise is used. And, of course, it significantly reduces the work the individual colleges currently do [some of which – i.e. almost 26% - is redundant and duplicative], resulting in clear cost savings. However, this option does require that there be a single, central administrator for the consortial instance. It would not be feasible for the individual institutions to manage their resources as they do now with separate instances. This implies changes to workflows but offers real savings once new processes and staffing are in place.

Because linking is typically based on IP, any query of this consortial instance by the end user would resolve to the appropriate licensed resource, ensuring that patrons more clearly understand when an e-resource is immediately available [a “click away”). However, because there is only a single SFX “menu” that is maintained, the individual colleges do lose the local branding they currently have with SFX. We believe this is a small price to pay and one that may, in fact, be consistent with the overall direction of the your recommendations.

As noted, this approach would mean that a single consortial SFX menu would need to be agreed, but this provides one more way in which the user experience can be simplified.

Use a single instance of Verde as the system of record for e-resources transactions
Information and decisions related to e-resources at 5C are at present widely dispersed. The many systems, spreadsheets and paper files that constitute the de facto ERMs are listed earlier in this section. To date, the 5C’s “official” ERM (Verde)—has been fully populated and implemented only at Amherst College. In fact, Amherst’s implementation includes locally-added value, such as dynamic updates of subject lists and LibGuides from the Verde knowledgebase. The Verde interface is also used for SFX activation, because the presentation of title data and relationships to packages is clearer there. Amherst is also preparing to implement the SUSHI functionality that is incorporated into Verde.

Other 5C libraries have not yet populated and implemented Verde for a variety of reasons, ranging from low volume of e-resources transactions to satisfaction with current spreadsheet-based management. One of the biggest barriers cited is the time-consuming process of populating Verde with the necessary data. However, as we understand it, the next version of SFX will incorporate Verde, enabling both functions to operate from a single centralized knowledgebase. This will Verde easier to populate and to maintain, and will assure that data in the two systems remains synchronized. It would be interesting to explore whether these development, combined with the work and expertise in place at Amherst could be used to move
5C toward a single consortial instance of Verde. This would offer many of the same benefits as a single consortial instance of SFX.

Transparency and shared information are essential even in a centralized system, but still more so when responsibility for their management is broadly distributed. Given the number of people who will continue to be involved in e-resources from here forward, a designated system of record will be important. Staff working on e-resources will reside in several buildings and there will be many more of them, so paper files, checklists, and Excel spreadsheets alone will no longer be sufficient. In order to maximize its benefit, the ERM should be fully integrated into e-resources workflows. It should become the system of record for contact information, permissions, license scans, usage data, and all business arrangements except the purchase order itself, which will reside in ALEPH.

Business terms should be extracted from email correspondence and stored in the resource record. Every effort should be made to incorporate all necessary data elements that are currently stored in spreadsheets, email boxes, shared drives, colored folders and other repositories. The intent is to capture most information relevant to e-resources in a single system.

Simultaneously, 5C should enable broad staff access to the ERM. Subject librarians, ILL staff, Technical Services staff, and any other groups who can benefit from knowing about e-resources should be authorized to view the data. A significant number should also be authorized to enter or update some fields. It should be possible to see what resources are being trialed, what licenses or terms are under review, what copy, print or ILL permissions exist, which resources are temporarily inaccessible and the status of trouble-shooting, etc. If possible, the excellent checklists that now help organize and track e-resources processes should be embedded into the ERM, to take advantage of automated alerts, etc.

The ERM also enables resource status information to be modified in one place and distributed widely; e.g., if EbscoHost is down for some reason, broadcasting that message will prevent multiple reports and will enable staff (and possibly users, depending on how the ERM integrates with ALEPH) to know when access is restored. In sum, we suggest taking full advantage of everything that Verde can do. If it does not provide all of the needed functionality, begin to work with ExLibris to suggest enhancements.

**Implement SUSHI centrally, to automate most gathering and compilation of usage statistics**

Many readers will know that the COUNTER standard provides a well-accepted model and rules for capturing and comparing usage of individual electronic resources. The SUSHI (Standard Usage Statistics Harvesting Initiative) protocol enables automated retrieval of e-resource usage statistics from compliant vendors. From Verde, SUSHI requests data where the vendor’s response includes COUNTER data, using COUNTER’s schema.

At present, 5C libraries for the most part take an ad hoc approach to gathering and analyzing vendor-supplied usage data. It is typically done manually, on an as-needed basis. Implementation of SUSHI would take a significant amount of the labor out of that process, and make it much easier to collect usage data systematically. Since SUSHI harvesting will be incorporated into the next release of Verde, the ability to capture usage data automatically will
exist—another good reason for implementing Verde 5C-wide. Amherst College is already preparing to implement, and could probably lead this effort on behalf of the consortium.

Eliminate “shadow” ERM systems
Shared use of Verde/SFX will eliminate the need for many of the spreadsheets and email folders that now contain information critical to management of electronic resources. It is important to make certain that all useful data gets transferred into Verde, SFX, or ALEPH. Again, if these systems do not support key data elements, it will be necessary to work with ExLibris to accommodate that, or at minimum, consolidate remaining exceptions into a single 5C spreadsheet. In a distributed management environment, all e-resources information must be visible to everyone involved, across all campuses.

Once information has been entered into enterprise systems or stored centrally, it will be important to stop using other tools. Redundancy of data will only lead to confusion and extra work.

Shared Staffing and Managing the Commons
The movement to a Commons collection, a single-instance consortial SFX/Verde infrastructure, and a single consortial discovery environment creates an opportunity to think about work practices, staffing, and management in new ways:

- Commons and Un-Commons resources will all be managed in this same structure; practices across libraries will be much more standard.
- It will be possible to separate management of the Commons from management of the Un-Commons if this is wanted, or to combine them if that is preferred.
- New combinations of staffing and management will be possible: consolidated/dispersed, centralized/distributed, dedicated/shared.
- Building and maintaining the Commons will require input from all 5C libraries (like a committee), but will also require rapid decisions and action (like an operating department).
- Commons resources would benefit from consolidated management, supplemented by distributed expertise and capacity.
- Un-Commons resources would benefit from local management, supplemented by shared workloads and expertise.
- The migration from the current, largely independent state of play to the Commons/Un-Commons model will initially require more e-resources staff capacity than is now dedicated to those tasks collectively. Once the Commons has been implemented, e-resource staffing needs for commercial content will likely revert to current levels or lower. This will make more staff hours available to the respective Un-Commons initiatives, where unique, locally-produced or locally-curated content will be growing dramatically.

This is a complex set of circumstances in which to consider staffing and management. It is difficult to gauge what form of organization might work best. From the R2 perspective, the most important characteristics of a new 5C Commons management/staffing structure are these, and should be ensured in any model that is adopted:

- To enable collaboration and coordinated management of *functions* without requiring centralization of staff.
• To retain and fully utilize the 5C’s existing wealth of e-resources expertise.
• To assure that some entity maintains and advocates the Commons viewpoint in all decisions. Allegiance is to the consortium rather than to an individual library.
• Autonomy to make operational decisions on behalf of the Commons.
• Established priorities and effective procedures to grow the number of Commons resources.
• Adherence to strategic policies and practices that have been adopted by the Commons.
• Some mechanism to ensure philosophical and procedural consistency on the part of each library in its Un-Commons activities.
• Regular evaluation of Commons resources and user experience – benchmarks should be established and progress measured against them.
• Charismatic leadership of the 5CL in the realm of electronic resources. Regardless of where and how the Commons organization is ultimately supported, it is important to remember that effective leadership comes from individuals, not from groups.

It may help to think first about the specific functions that will be required to build and maintain the Commons—and the infrastructure that will underpin both the Commons and the Un-Commons. We have divided these into two broad areas: Collections and Access.

Define the Commons Collection function
The overall task is to identify, build, and monitor the 5C Commons collection. This may include:

• overlap studies – along the lines that R2 has demonstrated
• gap analyses – what is missing from the Commons that could be added?
• cost analyses – how much is currently being spent on “Commons” content?
• creation and management of a Commons materials budget
• shifting from individual to consortial licenses for Commons resources
• management of the move to a single instance of an ERM

Once the transition has been accomplished, ongoing routines must be established for:

• coordination of selection and deselection decisions (including decisions about free and open source resources) – what belongs in the Commons?
• trials management for new Commons resources
• consortial negotiations for e-content subscriptions
• ongoing management of the licensing process for Commons resources
• coordination of ERM maintenance - including entry of usage rights and license terms
• invoice processing, registrations/activations
• cancellations, renewals, updates related to Commons resources
• analyzing usage and downtime

And over the longer term:

• investigation of a Commons pay-per view article delivery model – including economic thresholds, etc.
• support for accreditation processes, etc.
Define the Commons Access function
The overall task is to build and maintain a consistent user experience when accessing Commons resources. Components of this may include:

- management of the move to a single consortial instance of SFX
- implementation of a single A-Z list for databases, and one for e-journals
- management of central KnowledgeBase updates
- coordination of SFX and proxy maintenance for Commons resources
- coordination of resource description and holdings maintenance for Commons resources
- implementation of expedited electronic article delivery
- coordination of troubleshooting for e-access problems
- coordination of a collaborative approach to 24/7 online help
- continual optimization of library resources as targets for external search engines like Google and WorldCat
- work needed in relation to the implementation of Shibboleth

In conjunction with librarians and web designers from each campus:

- understand current research behavior and 5C user preferences
- assure usability testing on all campuses
- reconsider web and search interfaces – to create a uniform user experience
- publish new resources alerts including Pod casts, RSS feeds, etc.
- participate in the 5C choice and implementation of a shared discovery layer
- participate in the development of shared subject guides

In short, building and maintaining the Commons environment will require all of the skills needed to run an individual e-resources operation. But it will also require adopting a completely different perspective—one that continually seeks the broadest benefit to the broadest number of users. Depending on how it is structured, it may also demand a deft hand at management, in order to draw on widely-distributed staff expertise and capacity to support the Commons infrastructure, while still allowing sufficient local autonomy to manage Un-Commons resources. While we can suggest no solution that is completely satisfactory, there are three options worth considering:

**Option A: Establish a consortium-wide dedicated staff for all e-resources**
This might be called the “harvesting” option, meant in the best sense of that word. As mentioned earlier, Five Colleges enjoys one of the biggest and best concentrations of e-resources talent we have encountered. At present, it is distributed across five operations that are working independently, and to some degree redundantly. Once the consolidated infrastructure described above has been achieved, 5C will have an abundance of e-resources expertise with which to work.

One way to take full advantage of that talent is to pull it all together in a single group. This expert group would manage all Commons resources and all Un-Commons resources on behalf of all five libraries. As the Un-Commons grows to incorporate locally-digitized materials, this option assures that ample expertise and capacity exist to deal with that growth. The Commons
continues to be managed by a large group of people who know SFX, Verde, and all of the other relevant tools and practices related to e-resources.

This group could be built by identifying the 15 FTE now engaged in e-resources management. To manage the migration to Commons/Un-Commons model, it will be necessary to supplement this group temporarily with additional hours—perhaps 2-3 FTE for a year. From R2’s viewpoint, this would be most easily managed as a physically-centralized group, but we understand that this cannot happen. Instead, we suggest the creation of a virtual E-Resources department, comprised of all the staff in all libraries now working on this content. The group would be responsible for handling collectively all Commons and Un-Commons resources. Essentially, all e-resources activities for all libraries would be handled here.

While the prospect of creating such an e-resources supergroup is intriguing, there are numerous problems with the idea. The biggest, of course, is supervision and coordination. The members of this virtual department would actually remain employed by five separate institutions. This leads to questions of: Who’s in charge? Who sets priorities? How are tasks divided? Who makes decisions? What ensures cohesion? How can performance be guaranteed? Who maintains the Commons viewpoint? This would suggest that the group needs to become a 5C entity, entirely separated from individual libraries. But this would be far too disruptive, and would require huge amounts of non-productive time to achieve.

Option A also artificially segregates tasks between print and electronic, which would make handling of print/online packages more difficult than they already are. It also leaves other local work a competing priority, since people’s jobs are multi-faceted. In short, such a virtual department would be very hard to manage in the absence of some new structure.

**Option B: Establish a dedicated staff for Commons-only resources**

A more limited option would be to designate a smaller group of staff who work on Commons-only tasks. Once the first iteration of a Commons resource list has been created, it will be possible to estimate the size and complexity of the corresponding workload. Under this scenario, Commons resources would be handled by a dedicated staff, while Un-Commons resources remain handled by the e-resources staff in the individual library that owns or subscribes to the resource.

The Commons-only staff, then, will be smaller than the 15-17 FTE suggested in Option A, but the exact size can only be judged when the Commons workload is better understood. One of the most compelling attributes of this model is that the perspective, focus, and loyalty of the Commons-only staff remains clear. Their job is solely to make the Commons work, and to look for opportunities to expand its scope.

Here again, though, the question of leadership and supervision arises. Because a cross-institutional, physically-centralized department is a non-starter, a Commons-only staff that draws on several libraries would also require a virtual organizational model. This sets off the same questions as the larger virtual department suggested in Option A. Namely, who is in charge? Who sets priorities? How can the work of a virtual department member in one library be judged by a supervisor in another? What about the non-Commons work that still needs to be done in my library? These are difficult issues to address in the current environment.
However, there is one additional alternative for structuring a Commons-only group that shows more promise: make it the responsibility of a single library. If the Commons-only staff were all employees of the same institution, it could operate like a traditional department, with direct supervision, accountability, and focus. This presents some interesting possibilities, but also some challenges. The Commons is collectively-owned content, but under this scenario it would be managed by staff employed by a single member. Such an arrangement would have to be worked out carefully, to assure input from all members on selection, renewal, and cancellation decisions. A formal memorandum of understanding, service level agreement, or even a contract should be negotiated.

At present, probably only UMass has sufficient scale to play this role. UMass already subscribes to almost all of the proposed first round of Commons resources, but this workload would expand with the need to convert to a consortial model. Additional staff hours (perhaps 2-3 FTE) would be needed to manage the transition to single instances of SFX/Verde, consolidation of licensing, etc. This concept introduces a host of new issues, all of which would need to be thought through. As noted above, it leaves management of the Un-Commons resources in the hands of individual libraries, but ultimately consolidates all of the tasks associated with Commons resources in the hands of “contractor” library.

It would be essential under this model that the contractor library designate a separate group or department for Commons-only work, in order to keep its own Commons/Un-Commons activity clearly delineated, and to assure that Commons-related work received the level of attention expected by the other members. The loss of direct control experienced by the contracting libraries must be fully addressed in the service level agreement in order for this to work well.

**Option C: Establish dedicated Coordinators for Commons-only resources**

Another option is to introduce a central coordination function that organizes Commons activities and priorities across the consortium. Under this scenario, some work on the Commons resources would be done centrally by two coordinators, but most would rely on assistance from e-resources staff distributed throughout the five libraries. Un-Commons resources would be handled locally, independently from this arrangement. Thus, e-resources staff in any individual library would be balancing Commons and Un-Commons workloads, with Un-Commons priorities being set in their library and Commons priorities being set by the dedicated Coordinators.

In this model, two Commons E-Resources Coordinators would be named to work in concert with the existing ILS Coordinator in a central organization. These two positions probably can and should be drawn from within existing 5C ranks; however, an external search should not be ruled out. Specific administrative/employment details will depend on who fills the positions. These would both be high-level professional positions, with considerable autonomy to orchestrate individual library activities, to recommend policies, to chair important 5C committees, to negotiate with vendors and suppliers, and to make timely decisions on behalf of the Commons.

The two positions would follow the functional distinctions described earlier. 5C would establish a Commons **Collections Coordinator**, and a Commons **Access Coordinator**. Their responsibility and allegiance will be to the Commons and the 5C as a whole; like the existing **ILS Coordinator**, they would report to the FCLC. Together, these three librarians would provide leadership for consortial collaboration in the realms of collections and systems. While some Commons work (such as SFX knowledgebase maintenance and overlap analysis) might be performed directly by
the Coordinators, their bigger task would be to organize and harmonize Commons-related efforts in individual libraries on behalf of the entire consortium. The Coordinators would work closely with directors, key staff at the individual institutions, 5C committees, and in some cases directly with users.

The three coordinators will be authorized to make Commons-related policy, purchasing, and procedural recommendations to the FCLC, and to implement changes accordingly. The coordinators will act on behalf of all 5C users, guided by a new consortial vision, and will be expected to balance gains in access and overall efficiency against the need for local autonomy. While communication and consensus building will be significant aspects of both positions, it will be essential that all three be supported and prepared to make timely, well-informed decisions, always with an eye on strengthening the Commons. Strong project management and communication skills will be critical to both new positions.

Here too, a realistic assessment of the 5C Coordinators model exposes a number of significant flaws. First, it imposes an additional layer in the 5C hierarchy, between the Directors and their staffs. This could complicate communication, decision making, and lines of authority. As with other virtual department options, the Coordinators would have no supervisory leverage. If tasks and or strategic directions are unpopular, Coordinators would necessarily rely solely on persuasion and coaxing. Further, those 5C librarians best-qualified to fill the Coordinator positions are the very same librarians that each library can least afford to lose in support of Un-Commons resource management.

In addition, a commitment was made at the outset of the project to find an e-resources management model that would not require “centralization” per se. But Option C represents a small first step in that direction. As the Commons grows, it is easy to imagine a need to expand this central function. There may come a time when it is no longer practical, appropriate or feasible to have the Coordinators report to the FCLC. As the consortial emphasis grows, and the tools and collections become increasingly managed via the Commons, the need for a 5C Commons Director may emerge. Eventually, the Director of the 5C Commons might join the FCLC as a full member, on par with library directors. Clearly, this is a potentially a slippery slope, and could lead in directions that are objectionable to many.

In some ways, the model very much resembles the 5C committee structure, with Coordinators acting essentially as Chairs. We have already observed the committee approach to be ineffective in some cases, and it is especially unsustainable to operational matters. Finally, defining these positions, funding them, and then filling them with inspired and inspiring librarians may take too long – if it can be achieved at all.

Of the three models and their variations, then, the most promising to our eye is the creation of a Commons-only dedicated staff, operated within the UMass environment, buttressed by a strong service level agreement.

**Fund the transition to the Commons adequately**
Whatever model is ultimately adopted for Commons management and staffing, and whatever benefits ensue from its adoption, the need to invest in the transition will be the same. The Commons cannot be created without significant new effort. In the short term, it will require more staff and management time than is currently dedicated to e-resources collectively.
Licenses and pricing will need to be renegotiated. The conversion from five separate instances of SFX to a single consortial instance will need to be planned and managed. Verde will need to be populated with additional information and introduced into environments where it has not yet been implemented. Existing spreadsheets used to manage e-resources need to be converted and retired. The various content management systems that update database lists and subject guides will need to be compared, and decisions made about consolidation and shared practice. Standard language for SFX menus will need to be agreed. New document delivery options need to be investigated. Etcetera.

In short, there will be a great deal of new one-time work required to build the Commons. In our view, this is an investment well worth making, since the end result can improve both the user experience and reduce the amount of time and effort needed to manage the Commons resources. That in turn will release hours that can be used to develop each library’s Un-Commons content and environment—those resources that are unique and locally-created.

R2 is not in a good position to make specific recommendations about how to fund these temporary needs. One possibility is to pull hours from print-related operations. To the degree that 70% of materials expenditures are for electronic resources, and fewer than 10% of staff hours are allocated to their upkeep, this seems justifiable. However, it may be that specific skills are needed, so this avenue, while it should be explored, may not be enough. Depending on which option is chosen for management of the Commons, financing may take different forms; i.e., if Coordinators are employed by 5C, the situation is different than if the Commons management is contracted to UMass. But regardless of how funds may be distributed, it is important that contributions be made equitably and in proportion to expected benefits. This might take one of several forms:

- Temporary or grant-based funding from Five Colleges to develop the Commons
- Combined discretionary funds from individual libraries.
- Temporary use of existing open positions for the Commons, balanced through some form of exchange, e.g., a position offsets some portion of Commons subscription contribution.

Again, we see establishment of a robust Commons-only transition team as a prerequisite to nearly all the other recommendations made in this report. It is difficult to imagine completing an effective transition without this strategic investment. Over the longer term, it should be possible to use library staff vacancies as they occur to enhance Commons staffing. In the end, a well-run Commons will reduce the time and money currently absorbed in e-resources management by each library. That expectation should be clear at the outset, and performance should be measured against that goal.

**Prioritize the Commons in all decisions until it is stable**

The Commons, even at the outset, will support 85% of all user activity for e-resources on all five campuses. The best way to satisfy the most users at the lowest cost is to get the Commons designed and implemented well. This will require a major effort, and for some period will draw energy and resources away from other activities. While this may cause discomfort in the short term, the benefits from Commons implementation can potentially transform both the user
experience and the management of e-resources. We suggest Commons-related assignments and responsibilities take precedence over local priorities in every library until it is fully established.

The intent is to assure that e-resources management is adequately staffed, especially for the material that is in highest demand. In some libraries, this could mean that some staff time will have to be transferred from print tasks to e-resources tasks; in others it may be temporary deferral of Un-Commons related projects. Finally, at the risk of stating the obvious, creation of the Commons will require committed, visionary leadership if it is to be realized. Someone needs not only to carry the Commons banner, but to make it.

Adjust the 5CL Committee Structure
Regardless of exactly how the Commons is built and maintained, it seems obvious that the 5C Committee Structure should be overhauled. As described in the previous section of the report, R2 has observed that at present, the committee structure does not support effective decision-making with regard to e-resources management. Though there are notable exceptions, there appear to be too many groups working on closely-related initiatives, without any overarching themes or strategies. If indeed the 5CL moves in the direction of the Commons, it will be necessary to re-imagine and re-build the committee structure, in support of the new shared vision and agenda. Some, like the Selection Committee mentioned earlier, may become more like virtual departments, while others may adopt the current committee model.

R2 recommends retention of a small number of committees that are focused as they are now. The Circulation Committee, for example, has had enormous success in standardizing borrowing and lending practices for print. The high volume of Direct Borrowing (documented in Section III) demonstrates the effectiveness of this committee’s work.

As we see it, many other committees that could influence any aspect of “resource discovery” should be suspended in the short term, and re-established only after a new 5C vision has been adopted. New committees should directly support and inform the work of the Commons and should be established only to addresses cross-campus concerns that cannot be addressed well in other ways. In future, it may be appropriate to establish new committees for the following:

- standardize e-article borrowing – and implement 24-hour delivery
- to better understand current research behavior and 5C user preferences – coordination of usability tests on all campuses
- coordinated redesign of library web pages and search interfaces – to create a uniform user experience
- development of shared new resources alerts including Pod casts, RSS feeds, etc.
- implementation of a shared discovery layer
- development of shared subject guides and shared video tutorials
- coordination of 24/7 chat or online help
VI. Closing
Recommendations from outsiders can have enormous value, but naturally they have limitations. Our observations and ideas are based on only a few days’ immersion in 5CL’s processes, systems, and culture. We are certain that we have mistaken some of what we heard and saw, and that our recommendations will need scrutiny by those of you closest to the situation.

As we see it, the time is right for the Five Colleges to create a model for consortial collaboration that others in the country can follow. 5C Inc. has created the impetus, the existing 5CL staff cohort has the expertise and creativity needed, and activity data points to the possibility of significant benefit from both a management and a user perspective. We wish 5CL all the best as further analysis is undertaken and next steps are planned.