



Framework for Discovery-to-Fulfillment Systems Planning in the Context of % L J 7 H Q \$ F D G H P L F \$ O ResourceSharing

A report to the % L J 7 H Q \$ F D G H P L F \$ O
Library Directors D Q F H

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Executive Summary

PURPOSE

In May 2012, the CIC Library Directors commissioned a small project team to report on the range of issues and challenges pertaining to providing modern resource sharing services. A project team comprised of John Butler (Minnesota), Barbara Coopey (Penn State) and Lee Konrad (Wisconsin) was created to undertake this task, working in cooperation with CIC

FINDINGS

A number of themes emerged from the stakeholder engagements shedding light on the complexity of our discovery environments for users and the significant challenges and dependencies associated with the provision of modern resource sharing services. It is clear that

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options asserted within the user interface, and that despite our efforts, some complexities will be difficult to conceal from users. The challenge of communication, both with users and with staff working across functional lines, stands out as a primary opportunity for improving both the user experience and our business processes.

The project team determined that a potentially useful course of action would be to develop a framework that CIC institutions and colleagues might find useful in planning for and addressing both institutional and consortial needs and interests. The project team characterized this

components, those being: discovery, fulfillment, and technology. Each of these components can be viewed as functioning independently *and* interdependently within the environment. The ecosystem of discovery-to-fulfillment processes, with respect to resource sharing, is unclear and

GOALS AND RECOMMENDATIONS

1. Develop clear governance and decision-making processes in areas of high interdependency. In highly interdependent operational areas in the CIC (e.g., resource sharing), develop well-understood processes for exploring options, planning, decision-making, and execution. The goal is to develop actions or commitments that constrain collective action. The goal in mounting functionally-interconnected services is that they are richly responsive to the needs and intentions of each institution, as well as to the consortium.

Recommendation:

Formalize and document standardized processes for CIC resource sharing systems deployments and operational planning, decision-making, and execution.

Elements of a standardized process may include articulation of:

- End user requirements, expectations, and priorities
- Operational requirements
- Financial requirements and implications
- Technology requirements and implications
- Contractual requirements and other institutional commitments or constraints
- Policy considerations
- Decision-making authorities and sign-off processes

2. Support cross-functional planning and information exchange. Strengthen the exchange of ideas and institutional planning information across the consortium (across

substantially elsewhere, how do we position our fulfillment services to achieve the expected?

3. Model an open architectural model for CIC discovery-to-fulfillment systems.

Develop an open architecture model for discovery-to-fulfillment systems for the CIC.

The model, to be conceived of at an abstracted level, would take into consideration the rapidly evolving changes in information discovery environment, variety of specific solutions in use, the discrete role of specific architectural components, the roles of standards, APIs, resolution, and data services to achieve *full* interoperability across our diverse technology environments. The model would serve as an educational and planning vehicle, helping to establish a common understanding of and guideline for such interoperability moving forward.

Recommendation:

Commission an independent analyst to review the overall CIC discovery-to-fulfillment system environment and submit recommendations for maximizing interoperability and complementary use of diverse technologies and systems across the CIC. The model would be presented to the relevant CIC committees and early-referenced joint subcommittee for review, dissemination, and potential action.

4. Strengthen efforts to exert collective influence. Exercise intentional collective influence on external entities (i.e., software and system vendors, publishers and content-providers, standards-creating bodies, policymakers, etc.) that will, in turn, influence the direction and capabilities of discovery-to-fulfillment services moving forward.

Recommendation:

Strengthen coordinated efforts to identify, prioritize, and communicate CIC requirements of these systems and services to external entities of influence. In areas of critical need or opportunity, engage the Directors in exploring options for collective executive action.

Continue collaborative work with vendors, such as Relais, the UBorrow

development of standards-based open architectures and robust APIs that will, ultimately, enable highly functional discovery-fulfillment system integrations.

FULL REPORT

Framework for Discovery-to-Fulfillment Systems Planning in the Context of CIC Resource Sharing

PURPOSE AND ACKNOWLEDGEMENTS

In May 2012, the CIC Library Directors commissioned a small project team to report on the range of issues and challenges pertaining to providing modern resource sharing services in our consortial context. The team was asked to pay particular attention to the challenges of creating a

doing so have effectively come to the fore as a result of the recent CIC implementation of UBorrow, and by a variety of other factors such as the availability of the Rapid ILL service, and the introduction of web-scale discovery tools into our user environments.

A project team comprised of John Butler (Minnesota), Barbara Coopey (Penn State) and Lee Konrad (Wisconsin) was created to conduct this task. The team enlisted the help of CIC colleagues who work within the functions of public services, information technology, and resource sharing, working collaboratively to consider the challenge at hand. Ultimately, the team's work led to an exploration of the intersections, dependencies, and practices associated with facilitating discovery-to-fulfillment services within and across our libraries, and an attempt to identify themes and practices that might lead to improved integration of this work at the local and/or consortial level. The team submitted a *Preliminary Report on Resource Sharing Environmental Scan* to the Directors in November 2012, some of which is included here in order to provide context for the recommendations that follow. This final report and its recommendations serve as a suggested framework to guide the CIC libraries as we collectively strive to improve the experience of users as they set about the task of searching and finding information through local and global systems (discovery) and accessing and getting that information through a network of resource sharing providers (fulfillment).

The development of this report and its recommendations was made possible through the collective interest of CIC colleagues and in the key questions and considerations being raised around the interdependencies, challenges, and issues surrounding the provision of resource

The project team thanks its CIC colleagues who contributed insights, comments, and content for the report. In particular, the team thanks the CIC ILL Directors, Public Service Directors, and IT Directors for their efforts to engage in the process of producing this report, and in helping to explore the intersections of resource sharing, public services, and technology. Finally, the team thanks the CIC Library Directors, for the opportunity to consider these questions, and for their desire to lead discussion to identify principles and practices that facilitate improved collaboration across our institutions.

CONTEXT, ENGAGEMENT AND EMERGING THEMES

The CIC Library Directors have indicated a need for increased interplay between public services, resource sharing operations, and information technology units across the consortium to achieve greater harmonization of systems and services. Their overarching goal was to reduce fragmentation of effort and ensure decision-making processes that reflect the Directors' desire to align efforts where possible to meet broad CIC goals and objectives.

consortia. The ILL Resource Sharing Management software (ILLiad), a product of Atlas Systems and distributed exclusively through OCLC, is the most common software element in CIC interlibrary loan operations.

Engagement 2: CIC Resource Sharing Symposium

In October 2012, the project team was invited to attend the CIC Resource Sharing Symposium in Chicago. The team summarized their charge, presented the results of the

consideration for this report. Participants were asked to think aspirationally about the discovery-to-fulfillment resource sharing environment. The session was contextualized as a need to explore stakeholder understanding (and desires) in light of the interplay between traditional operational functions and a consideration of consortial-level solutions related not only to technology and architecture, but also to organization, processes, and governance.

This particular engagement proved to be quite informative on a number of fronts, particularly in discussions on the results and themes that emerged from the survey of the ILL directors. During the Q&A period, and through informal exchanges with colleagues throughout the symposium, the team was able to clarify and affirm their understanding of the emerging themes, and also able to develop a more cohesive and shared understanding of the complexity of operations, pressures, constraints, and nuanced decision-making that goes into providing resource sharing services to users. Perhaps most important, the meeting served as a true affirmation of our collective intent (as institutions and as librarians) to provide the best user experience possible given the challenges posed by available resources and constraints.

Engagement 3: Survey of the CIC Public Service Directors

In October, the project team initiated an online survey of the CIC Public Service Directors (Appendix B: CIC Resource Sharing Environmental Scan – Discovery Service, October 2012), exploring questions pertaining to their perceptions as to how their libraries have integrated their discovery and resource sharing systems, their sense of user expectations with respect to discovery-to-fulfillment, the preferred (or acceptable) number of interfaces/systems a user must navigate to move from discovery-to-fulfillment, preferred methods for making fulfillment options or parameters apparent to users, and instructional materials or sessions offered by the libraries for discovery and resource sharing. *Respondents indicated that users want a seamless interface, without redirects, between discovery and fulfillment.* Some noted that current systems can take up to five

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Emerging Themes: Preliminary Report to the CIC Library Directors and Stakeholder

Feedback In November 2012 the project team prepared a preliminary report for the Library Directors. In January 2013, a copy of the report was posted online, inviting comment from the stakeholder groups who had contributed to the earlier surveys. The objective in seeking comments was to ensure that the project team accurately reflected the range of opinions and issues that emerged from the stakeholder engagements and to gain an understanding of the inter-

period, possible option to purchase, etc.).

Communication to the user is a critical service element. As users cross into various institutional service environments, can there be common and user-friendly

In overall reflection of the issues, the UBorrow project and resource sharing in general, it became apparent that *while each CIC library explores technology and service implementations at a local level, it is increasingly important for each to weigh options within the consortial context.*

Recognizing the need for local review and principles, optimal outcomes from CIC may depend on local strategies aligning with consortial strategies towards the continued improvement areas of our various discovery-to-fulfillment services. While local decisions may advance or address particular goals of a single institution (e.g., cost savings, institutional principles), such decisions are rarely without service implications or financial consequences for CIC partners.

A POSSIBLE CIC FRAMEWORK FOR DISCOVERY-TO-FULFILLMENT PLANNING

Following the release of the preliminary report, the project team turned its focus towards developing a response. While the emerging themes and issues were not surprising, the problem space to be addressed was found to be highly complex. The intersection of institutional and consortial decision-making processes regarding services and technologies in this area is a matter of intricate governance. Raising the awareness level of functional and inter-institutional interdependencies *and* effects in our decision-making processes seems necessary. To do so, it is deemed important to foster a common understanding of interconnected service spheres like discovery and fulfillment as a kind of ecosystem -- of users, staff, systems, practices, policies, and institutional philosophies.

To advance this notion, the project team determined that a potentially useful course of action would be to develop a framework that CIC institutions and colleagues might find useful in

acknowledge that the CIC institutions strongly share a general commonality of mission, service intent, and broad strategic direction. The CIC libraries have a deeply-rooted service orientation and ethic, coupled with a commitment to providing high quality information resources to its academic communities. Viewing the totality of resource sharing as an ecosystem intends to facilitate greater understanding of the interdependencies in play as libraries work to create discovery and resource sharing environments that meet the needs and expectations of library users.

A Resource Sharing Ecosystem

Highly effective resource sharing services first depends on a clearer and shared sense of the total -makers, and staff. In addition to our staff and users, there are three primary functional components making up a resource sharing ecosystem: they are, discovery, fulfillment, and technology. Each of these components can be viewed as functioning independently *and* interdependently within the environment. Each faces pressures to perform with

operational excellence (smart, cost-effective, efficient operations) while upholding high *quality of service* standards (fast, accurate) to meet the ever-rising expectations of users.

1 - Discovery Layer

The literature and our direct experience with patrons tell us a number of things about the discovery needs of users. Library users seek a clear starting point for finding resources relevant to their research. They also want a single interface to easily search and access everything, and expect discovery and fulfillment services to coincide within this interface. Currently, libraries present a myriad of discovery options to users ranging from web-scale products to aggregator databases, the library catalog, collections lists, and resource sharing catalogs. This confusing environment leads many users to ultimately place an interlibrary loan request for locally-owned material. One improvement, however, has been in the use of web-scale products promoted as a research starting point to facilitate discovery of library resources first. Penn State Interlibrary Loan experienced the impact of their new web-scale discovery service by seeing a 35% reduction in the number of undergraduate requests for locally owned material in the year following the implementation.

While users uncover an abundance of material in web-scale discovery products, some do

often find it difficult to continue the search in a resource sharing catalog. To complicate this further, when a resource sharing product not intended for discovery has its own public discovery interface, it may not be clear to users when and why to use it. Prompting the CIC Library Directors to request this review and report were reflections on the CIC implementation of UBorrow (Relais) to support unmediated resource-sharing requests. As noted in a recently released report, the UBorrow service has achieved many successes, most notably those resulting in new efficiencies for users and resource-sharing staff. Yet, presenting UBorrow -- primarily a fulfillment service -- to users as a discovery tool has raised a dilemma. On the one hand, it neatly moves closer to the ideal of seamlessness between discovery and fulfillment functions for the user. On the other hand, UBorrow does not rise to meet the new standard of (and user expectations for) web-scale search and discovery services.

interoperability with local web-scale and database products, the ILS, ILL management system, or other resource sharing products.

3- Technology Layer

At both the local level and across the CIC, there are many technical systems that underlay the patron experience with respect to discovery and fulfillment. These systems are necessarily optimized and configured to integrate with systems and vendors in play at a given institution, and subsequently configured to integrate with consortium partners to

Given the range of local practices, vendors, licenses, and systems in play, there are significant technical challenges associated with realizing the idealized state of seamless resource sharing experience across the CIC.

**Appendix A: CIC ILL Directors Survey: CIC Resource Sharing Environmental Scan,
September 2012**

Yes, we have SFX (which can push users to our interlibrary loan and our local document delivery service). We also have a message (Didn't find the books you were looking for? Try UBorrow.) with a link to UBorrow.

UW System search, on-campus book retrieval, and ILL.

When a patron searches WorldCat Local, it simultaneously searches our local catalog, our statewide OhioLINK catalog,

Assuming they choose the right path, it takes 3 steps to get into the resource sharing system. They would go from Primo to SFX, then from SFX to ILLiad, and finally authenticate to ILLiad. I think that three steps probably isn't unreasonable (including authentication), but fewer would be better.

By using a SFX link attached to a record display in EDS: Click on SFX Choose ILL or Uborrow Log into ILLiad Submit prepopulated request 4 clicks. The number of clicks may not be as problematic as the SFX link displaying in the EDS. We use a button labeled Find It. Our patrons may not understand all of the options available by selecting that button (searching the catalog, finding full text, submitting ILL or Uborrow, exporting the citation, or even finding similar article, or even information about the journal).

Depends! If in Worldcat, 3 clicks to login, once logged-in a request takes 2 clicks. However, an online index may have no direct link to ILL system. So, have to find ILL page, click, login, fill out info by copying & pasting, then click. Patrons don't find this reasonable.

From a WorldCatLocal record for a work, only three clicks are needed to make an

remembers their ILLiad login info.

Three clicks to get to a form, and then the form must be filled in. One click to signal desire is optimum.

Between 3-5 clicks depending on the format and the source. Ideally, this would be cut down to 1-2 clicks.

4; I would like to see it down to 3

Would you like your users to stay in the same interface as the discovery system to submit their resource sharing/interlibrary loan request rather than being transported to the resource sharing/interlibrary loan interface? Please comment.

I do want users to be able to stay within the system or at the very least have easy access back to the system Absolutely. The goal is to have fewer clicks and prepopulated request forms.

Yes. This could be less disruptive to the user (workflow, adjusting to different interfaces, etc.)

Staying in the discovery service is desirable if it would be possible for the patron to authenticate and select which resource sharing service.

As long as interface is seamless, doesn't matter.

Yes. WorldCatLocal allows users to submit loan requests for local and OhioLINK titles directly from the discovery interface and embeds access to their ILLiad account with a prepopulated request form for easy requesting.

I would like the system to know what the user was looking for and take them directly to the appropriate form, with information already entered retained. They can then fill in the rest of needed info. Whatever happens behind the scenes should be unknown to the user. hen 2(t)1ge aien(n)-4(so)-3(u)-6(rc)4(eoe)4(p)-6(d-7(g)7())-6(ld)5()-2(si-2(f)p6(e)4(s-3(c)-8(k)7(s a

How do you instruct users about your discovery service and resource sharing/interlibrary loan service? Please supply the url of webpages of your library instructional material.

We feel that we should not have to instruct users but we provide the following:<http://www.libraries.iub.edu/?pageId=7435>

Our discovery service is new and, to the best of my knowledge, we have not created instructional resources for accessing resource sharing services from it.

There is not a separate instruction webpage for the discover service.ILL guide is

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Appendix C: CIC Resource Sharing Agreement

Approved by the CIC ILL Directors on November 22, 2011

SCOPE

The CIC Libraries who participate in this agreement consent to give priority to CIC requests and share items from their collections at no charge and as broadly as possible. Restrictions on types of material available for lending should be kept to a minimum in keeping with the philosophy of openness that the CIC libraries value. CIC libraries are encouraged to use this program in whatever fashion they believe will provide the fastest, most effective service for their patrons.

Certain types of materials (e.g. rare, fragile, non-print or otherwise non-circulating materials) might be lent through a negotiated process.

Individual libraries may set limits on the number of volumes, reels, fiche etc., which may be sent to fulfill any one request.

There is no limit to the number of requests a member library may submit.

A list of CIC participating libraries, resource sharing agreement policies and contact information may be found at: