Rapido Product Development Assessment

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Development Project Summary

Ex Libris approached the CSU Chancellor's Office in May of 2019 to participate in a development partnership for a new resource sharing product. Rapido was conceived as a new resource sharing experience, with an eye toward streamlined processes for library staff and users:

> "For staff, the solution automates and simplifies the borrowing and lending processes, thereby helping staff manage a high volume of requests efficiently. For patrons, Rapido provides a central location where they can find the materials they need with a frictionless experience for getting those materials quickly."[1]

Working as part of the North American cohort, 5 CSU libraries kicked off the partnership in October 2019. Due to resource constraints over the duration of the project, three libraries remained as partners accompanied by a member of the Chancellor's Office staff.

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[1] Ex Libris. (2020, January 24). *Ex Libris to Expand Its Offering with Cloud-Based, User-Centric Rapido Resource Sharing Solution*. https://www.exlibrisgroup.com/press-release/ex-libris-to-expand-offering-with-cloud-based-user-centric-rapido-resource-sharing-solution/

At the time of this writing the Development Project is still under way and Rapido is not yet ready for deployment. The Ex Libris team is regularly changing and updating Rapido using direct feedback and testing results from the regional development groups. The product is projected to be ready for release to early adopters by the end of 2020 and development of the Rapido product is expected to continue past the initial product release, through 2021.

Caveats

The timeframe of delivering this assessment is largely due to the departure of a key team member (Mallory DeBartolo) and poses disadvantages with regard to making a definitive, fully informed product recommendation. Therefore this assessment comes with a number of caveats.

1. Rapido is an unfinished product. New releases, which occur 1-2 times per month at this stage in product development, significantly impact functionality. Problems the Rapido Development Group identify now may not exist in December 2020 when the product is available to early adopters.
2. The Rapido Development Group has not tested how Rapido interacts with the CSU Network Zone configuration or how Rapido will behave if only some of the CSUs in the Network join Rapido. Ex Libris is currently assessing where problems may emerge but without testing, any predictions of unforeseen issues or anomalies are merely an informed guess.
3. Metrics used to demonstrate product robustness do not exist because Rapido has never been used by active libraries. As such important data points such as the fill rate and turn around time of Rapido requests, size of the Rapido network or cost savings provided by the product are unknown.

Product Evaluation

The Rapido Development Group used the functional requirements outlined in the final report from the Tipasa Task Force as a framework to evaluate the product. The Tipasa Task Force wiki and Final Report can be found here:
https://calstate.atlassian.net/wiki/spaces/COLD/pages/623378441/Tipasa+Task+Force. Out of the 27 functional requirements Rapido:
- Fully meets 17
- Partially meets 7
- Does not meet 2

The Rapido Development Group has been unable to fully test and categorize 1 requirement (D01 - Mobile Friendly). See appendix A for a detailed table of requirements.

In addition to considering how Rapido meets the non-exhaustive list of needs defined by the Tipasa Task Force, the Rapido Development Group created a direct comparison between

Rapido and the current implementation of a Peer-to-peer network/Broker combination. Findings are summarized below.

		Rapido	Peer to peer/Broker (ILLiad)
1.	Partner maintenance	Partner configuration maintained by Ex Libris.	Partner configuration maintained in the Network Zone by the CSUs.
2.	Partner maintenance	Network of lenders expanded by joining a pod with new lenders.	To expand the network individual partners are configured in the NZ and distributed to each institution.
3.	Partner maintenance	Lending terms and delivery expectations are set for each pod and agreed to upon joining the pod.	Lending terms and delivery expectations are determined on a lender-by-lender basis and negotiated by the two partners.
4.	Rota	Next lender is calculated when the request moves from one lender to the next, checking on-shelf item availability between potential lenders.	Rota calculated at the time of request creation, no availability checks done between potential lenders.
5.	Rota	Load balancing, time zone and opening hours of lending libraries are considered when figuring out which lender to request from next.	Rota options include unordered (randomized) rotas and various implementations of ordered rotas (rotas based on region are currently being tested by RSFC). Load balancing is not built into any rota option.
6.	Patron requesting	The request box for the item approximates how long a request will take to arrive and how long patrons can keep the item, depending on which pod is expected to supply the item.	Static estimates of the delivery time can be embedded in the text of the request link presented in the Get It window ("delivered in 3-5 days" or "delivered in 7-10 days" for CSU+ and ILLiad request links respectively).
7.	Discovery	Rapido holdings are discoverable and requestable through Primo via a new scope or an "expand your search" link.	CSU+ items are discoverable via Primo. Items requested in ILLiad are found in a separate discovery interface such as WorldCat or article databases.
8.	Discovery	Rapido requires Primo VE. CSU campuses are not implementing Primo VE due to consortial performance concerns (slow searching and problems with record updates). Ex Libris anticipates resolving these concerns at some time in the near future but a date has not been set for fixes.	CSU+ requests are made using Primo.

9.	Requesting Electronic content	Rapido includes physical resource sharing and electronic resource sharing out of the box. Electronic holdings are uploaded to the Rapido index and updated regularly by an Alma publishing profile.	CSU+ is currently only configured to share physical items. Electronic content is requested and processed using ILLiad, RapidILL, Get It Now and other products purchased and maintained by each campus.
10.	Staff request processing	Rapido uses the Alma interface for both CSU+ and Rapido processing and circulation	CSU+ requests are processed using the Alma interface. If ILLiad is integrated, Alma is used for checking in resource sharing requests and circulating physical items. Without integration ILLiad is used to process and circulate non-CSU+ requests. With or without integration the rest of request processing is handled in the ILLiad interface.
11.	Staff request processing	Each transaction cost and replacement fee needs to be individually invoiced, processed and tracked using Alma or a campus invoicing system. Rapido has no mechanism for currency tracking.	CSU+ does not generate any costs for CSU libraries. ILLiad costs are tracked and paid in ILLiad using IFM and billed by OCLC on a regular interval.
12.	Staff request processing	Rapido checks for requestability, availability and duplicate requests and places items requested for lending on pull lists.	CSU+ requests check for availability, duplicate requests and puts requested items on pull lists. ILLiad has the ability to check for request duplication but does not have item-level availability checks or integration with Alma pull lists.
13.	Analytics	Analytics for all transactions are stored and manipulated in one interface (Alma analytics).	Analytics maintained in two separate systems.

Effects of Partial CSU/Rapido Implementation

Representatives from Ex Libris warn against some CSUs implementing Rapido while others do not and the reasons for their hesitation are unclear. Aside from bringing up potential unknown issues of how Rapido interacts with our Network Zone environment, none of the discussions with Ex Libris have produced substantive reasons why a partial CSU implementation of Rapido would be problematic.

Based on current product knowledge, the Rapido Development Group does not see any way partial CSU Rapido adoption would disrupt current resource sharing practice between the CSUs. CSU libraries using Rapido will need to set up specific configurations to ensure seamless CSU+ workflows. Once everything is set up CSU+ and Rapido should operate seamlessly without any noticeable impact.

One example of a configuration requirement at a Rapido library would be to separate or otherwise identify CSU+ requests, originating from within and outside of Rapido in order to accommodate the CSU+ policy of processing requests within 2 days. The Rapido/Alma interface provides the ability to create sets of lending requests and borrowing requests using request criteria. A Rapido library would need to create a lending set using the Request Status (as we currently do in CSU+) and limiting the partner libraries to other CSUs, producing a CSU+ "queue" comprised of all requests from CSU libraries.

Another example of a Rapido library configuration will be prioritizing pods and lending partners to ensure CSU libraries are consulted for lending before non-CSU libraries. This means prioritizing the Rapido CSU pod, next the non-Rapido CSU+ libraries, then prioritizing the rest of the Rapido pods in whatever order makes sense for the library. As an alternative to multiple CSU pods, Ex Libris has floated the possibility of creating a single pod that includes all CSU libraries, marking the non-Rapido CSU libraries as "lenders only". This would mitigate the need for Rapido-originated borrowing requests to jump from one CSU pod to another and could allow the CSUs to take advantage of Rapido's load balancing capability.

Peer-to-peer/non-Rapido CSU partners would still be maintained the same way they are currently: in the Network Zone. No workflow changes are required for non-Rapido CSU libraries.

Recommendation

If the product functions as Ex Libris envisions, the Rapido Development Group gives a favorable review of Rapido. The reasons are as follows:

- Library patrons would benefit from streamlined presentation of discovering materials. Through a search in Onesearch, they have the ability to search and request from available offerings from all Rapido partners. The results include all formats available for request, expected delivery timeframe, and loan period, giving patrons an experience that is transparent and synonymous with current online shopping.
- Rapido is aiming to create a culture of reciprocal borrowing and lending, intending to create pods that have no transactional resource sharing costs. This would potentially lead to more cost-free ILL transactions for all Rapido libraries.
- Rapido allows libraries to optimize their borrowing experience without requiring ILL staff to have system configuration expertise. Many libraries don't take advantage of all possible customizations and optimizations in their current system, slowing down request turnaround time. This would not be an issue in a Rapido environment as ExLibris centrally handles both the pod structure and the system load balancing.

- Rapido checks real time availability and requestability of material. This will reduce lending staff time spent cancelling requests for unfilled items thus decreasing unfill rates, and reducing the turnaround time for borrowing libraries. It achieves this by creating and sending requests to potential lenders using an item-level index of Alma-based customers.
- Automation, and thus simplification, of request processing in comparison to mediated interlibrary loan requires less staff time and expertise in processing requests, allowing more general staff and student support of resource sharing workflows.
- All the benefits and functionality of RapidILL are built into Rapido. If a library is considering a RapidILL subscription it would be worth looking at the price of acquiring Rapido in addition to RapidILL.

The Rapido Development Group recommends any library considering Rapido adoption analyze and think critically about the following issues:

- The ability of Rapido to completely replace ILLiad depends largely on the number and types of libraries joining the Rapido network. This is assumed to grow over time - the existence of international test partners shows seeds of international growth - but in the short term, CSU libraries that sign onto Rapido should expect to maintain both ILLiad and Rapido to fill the same number of requests for their borrowers.
- The lack of a billing mechanism or currency tracking system in Rapido could present new, time-consuming processes for libraries that are not able to fill all their borrowing needs from cost-free pods or need to pay a lending library for replacement of lost items.
- Making electronic items in the Rapido network discoverable requires the borrowing institution to activate collections in the CDI, making items their patrons can't immediately access visible in Primo. The CSUs currently use the "Fully Flexible" model of activation which allows each library to pick and choose exactly which collections to activate. Rapido libraries would need to figure out which CDI collections to activate and maintain in order to allow their patrons to discover content they are able to request from Rapido partners.
- The benefits of Rapido are primarily related to transactions that involve libraries beyond the CSU rather than additional gains within our current CSU+ model. That said, Rapido could easily introduce sharing digital and digitized content to CSU+ as we don't currently have this configured.

Appendix A

Adapted from the Tipasa Task Force Final Tipasa Report found here:
https://calstate.atlassian.net/wiki/spaces/COLD/pages/623378441/Tipasa+Task+Force

Administrative Requirements

Feature Number	Feature	Description	Does Rapido meet this requirement? (Yes/No/Partial)
A01	Consortial pricing / contract	Solution must be available to be purchased and administered at consortial level by Chancellor's Office, as voted by COLD April 2018	**Yes**, the contract can be managed centrally if there are compelling reasons to do so (price advantage, majority of campuses participating, makes sense to fold into existing product portfolio). "Preferred partner pricing" available but may have a time limit on availability.
A02	Technical Support	Dedicated support familiar with CSU configuration, requirements, and use cases	**Partial.** Initial support through 2021 will be high touch, and handled by the Ex Libris development team. Long-term support would be similar to current Alma Support.
A03	Uptime guarantee	Required 99.5%+ uptime guarantee over contract period (12 months).	**Yes.** The uptime of Rapido will be the same as Alma.

Borrowing / Lending/Document Delivery

Feature Number	Feature	Description	Does Rapido meet this requirement? (Yes/No/Partial)
B01	Custom Reasons for Cancellation	System should allow operators to create a customized lists of reasons for cancelling borrowing and lending requests	**No**. Cancellation reasons are currently the same as they are in Alma and are not customizable.
B02	Z39.50 or comparable functionality	System should support search queries against the institutions own holdings to determine if items are held locally	**Yes**. Local holdings are known and requests are treated as locally owned or borrowed accordingly.

B03	Custom Borrowing Groups	System should allow operators to create sets of preferred lenders to facilitate or automate processing	**Partial**. Rapido operates similarly to RapidILL- libraries join pods. The pods have agreed upon terms that all participating libraries abide by. Libraries rank pods which determines routing of requests.
B04	Routing Rules	System should allow operators to create rules to route requests meeting specific criteria	**Yes**. Uses customizable sets to group/label requests for human handling. Using routing rules for workflow customizations isn't necessary or possible in Rapido.
B05	Cover Sheet	System should allow operators to include a default cover sheet for every electronically delivered articles which typically includes copyright statement and institutional branding	**Partial**. The Rapido workflow is the same as RapidILL which adds a cover sheet to all uploads. There is currently no way to customize the sheet. Another option to address copyright statements in Alma is to customize patron notifications to include a copyright statement.

Technical Requirements and 3rd Party Integrations

Feature number	Feature	Description	Does Rapido meet this requirement? (Yes/No/Partial)
C01	Cloud Based Architecture	Solution should be externally hosted and not require campus-provided hardware or software	**Yes.** Rapido is a cloud based solution.
C02	Secure / HTTPS support	Transport Protocol The circulation application and the ILL application	**Yes.**

		shall support the HTTPS transport protocol.	
C03	Integration with RapidILL	Ability to manage RapidILL lending and borrowing requests for both book chapters and articles	**Yes.** RapidILL is integrated into the product.
C04	Integration with Document Suppliers	System should support the acquisition and delivery of document suppliers including but not limited to Reprints Desk and GetItNow	**Partial**. Reprints Desk is already integrated with RapidILL. Others, such as Get It Now, could potentially be added but Ex Libris would handle new integrations.
C05	Support for SSO/SAML, including but not limited to: Integration with Shibboleth authentication/InCom mon		**Yes.** Same as Alma and Primo.
C06	Support for identifying active users through user registration automated user loads (e.g., from Alma), or API	Many users who can authenticate may not have authorization to place ILL requests. The system should enable checking for user expiration via 3rd party systems via API or other mechanism, or accomplish this requirement via automated user loads or other means	**Yes.** User information loads from Peoplesoft directly into Alma. Manually created users can be assigned user groups which will authorize requesting.
C07	Support for other authentication systems	including but not limited to: ● EZProxy authentication ● local authentication scripts (e.g., for use with LDAP) ● CAS	**Yes.** Alma/Rapido is open ended to integrate with other platforms.
C10	Identify New ILL Users	System should flag/ identify end-users who are	**Partial.** Alma analytics could identify if the user

		accessing the the system for the first time for administrative and analytics purposes.	has placed a Rapido request previously but there is no flag for a new user. Administrative, authentication and authorization needs are addressed by Alma.
C11	Support for Copyright Clearance (e.g., Copyright Clearance Center)	Ability to identify when copyright limits exceeded, track and manage billing for copyright clearance	**Partial.** Rapido/Alma provides mechanisms to identify when copyright thresholds are reached. There is no direct payment or billing integration with Copyright Clearance Center.
C12	Secure File Storage for Document Delivery	Files delivered to users through the solution must be stored securely and accessible only by intended users and library staff	**Yes.** Rapido emails the article directly to the user and is accessible through the request transaction in Alma.
C13	ILL Fee Management (IFM) or Comparable Process	System should support IFM transactions or a comparable billing method that facilitates the allocation of funds between borrowing and lending institutions	**No.** There is no fee management or comparable process in Rapido. Options for generating individual invoices exist within Alma.
C14	Customizable Print Templates	System should allow operators to create customized templates (e.g. Paging Slips, Mailing Labels)	**Yes.** Alma/Rapido allows customization of print templates. Customization requires some expertise in xsl/xml.

Alma Integration

Feature Number	Feature	Description	Does Rapido meet this requirement? (Yes/No/Partial)

C01	NCIP Integration	Solution must conform to version 2.0 or 1.0 of the NISO Circulation interchange Protocol (NCIP). Please specify which is NCIP version is supported and which NCIP messages, if any, are not supported. See https://developers.exlibrisgroup.com/alma/integrations/resource_sharing/broker/ncip/application_profile/v1 and https://developers.exlibrisgroup.com/alma/integrations/resource_sharing/broker/ncip/application_profile/v2 for expected NCIP message support by Alma by NCIP version.	**Yes.** Rapido is integrated in Alma rendering NCIP integration with the product unnecessary. The Alma platform, on which Rapido is based, allows NCIP messaging.
C02	Alma Link Resolver / OpenURL 1.0 Support	Solution must support the OpenURL 1.0 protocol for incoming request metadata. Please describe documentation for the solution's integration with the Alma link resolver	**Yes.** Rapido is integrated in Alma and is using Alma's current capabilities.

User Experience

Feature Number	Feature	Description	Does Rapido meet this requirement? (Yes/No/Partial)
D01	Mobile Friendly	System should be optimized for use on mobile devices including phones and tablets	**Unknown.**
D02	Text and Email notifications	Ability to customize language and appearance of text and email notifications	**Yes.** Functions at current Alma capacity.
D03	Request Tracking	System should enable end-users to track the status of their request	**Yes.** Users can see the status in their Primo user account. They are notified with updates.

Analytics

Feature Number	Feature	Description	Does Rapido meet this requirement? (Yes/No/Partial)

E01	Canned Reports	Reports should be available that enable reporting on dimensions for both borrowing and lending, including but not limited to:
		● Fill rate
		● Turnaround time
		● Most requested titles by material type (journal title, book, etc.)
		● Requests received / filled by day / hour
		● Requests finished or cancelled
		● Reasons for cancellation
		● Most unfilled items by material type (article, book, etc.)
		● Request by Library of Congress Classification
		
		For borrowing:
		● # of requests by user details including:
		  ○ User group type (e.g., undergraduate, graduate)
		  ○ Department (e.g., Chemistry, Biology)
		  ○ Custom populated fields
			Partial. Canned reports, when they exist, can be copied from the Ex Libris community center or created and shared by CSU staff to address specific interests and needs.

E02	Ability to Create Custom	Allows operators to access ILL data via an Analytics module or Open Database Connectivity	**Yes.** Rapido data will be available in Alma analytics.

	Reports	(ODBC)	