Dvir Hoffman – Corporate VP, RM Solutions
Asaf Kline – VP Product Management, RM Solutions
When I assumed the position of VP resource management solutions, I asked myself: How can we make the next leap and further improve your experience.
And so, together with the entire Ex Libris resource management team we decided to take a blank paper and rethink
Eventually, it all boiled down to one question....

It led us to a more philosophical state of mind....
And the answer is:
EVERYTHING
Because Everything Continues to Change

Technology
The Library
Students
So what did we learn?

That all of us need to make changes and improvements in how our business is conducted in order to help cope with shifts in market environment.

And this is exactly the definition of: TRANFORMATION
Causes for Transformation in our market

What’s happening in the technology world
- 100% Connected
- Virtual Reality
- Artificial Intelligence

What’s happening in the library
- The library is more than just a “library”
- Users expectations soars
- Doing more with less

What’s happening with Alma
- Reaching 1000’s of customers
- Big data
- SaaS experience

Consortium: 44
APIs: 65M/Month
Countries: 38
Bibs: 990M
Customers: 1216
Transformation creates opportunities but also challenges.
Alma is growing
A lot of ideas
Innovation is all around us
Security concerns is a world phenomena
Alma is becoming a platform

Big Data
Power to the users
Driving innovation & community
More secured solution
Library impact. Integrated solutions
OUR VALUES

Community

Innovation

Processes

FOCUS

CUSTOMER INTIMACY

SCALABILITY

OVERCOMING THE CHALLENGES
Opportunities are knocking....

- Big Data
- Power to the users
- Driving innovation & community
- More secured solution
- Library impact. Integrated solutions
DARA opening movie here (+ the beginning of the narration “hello my name is DARA”)
DARA - Data Analysis Recommendation Assistant
DARA - Data Analysis Recommendation Assistant
DARA - Data Analysis Recommendation Assistant

- **TYPE**
  - Behavior
  - Configuration
  - Usage
  - Statistics

- **LEVEL**
  - User
  - Institution
  - Consortia
  - Community

- **CONFIGURATION RECOMMENDATIONS**
- **FULFILLMENT RECOMMENDATIONS**
- **ACQUISITION RECOMMENDATIONS**
- **RESOURCE MANAGEMENT RECOMMENDATIONS**
We recommend SUSHI harvesting with Cambridge University Press instead of manual file uploads. Other institutions successfully harvested usage data from this vendor.
<table>
<thead>
<tr>
<th>File Name</th>
<th>Vendor</th>
<th>SUSHI Account</th>
<th>Upload Date</th>
<th>Uploading User</th>
<th>Subscriber</th>
<th>Status</th>
<th>Report Type</th>
<th>Data Start Date</th>
<th>Data End Date</th>
<th>Vendor URL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cambridge Core JR1a R4 2017.xlsx</td>
<td>Cambridge</td>
<td>-</td>
<td>22 Feb 2018 09:44:04</td>
<td>ex Impl</td>
<td>Alma University</td>
<td>Fully processed</td>
<td>JR1</td>
<td>Jan 2017</td>
<td>Dec 2017</td>
<td>-</td>
</tr>
<tr>
<td>Cambridge University Press JR1_201803.xml</td>
<td>Cambridge</td>
<td>-</td>
<td>13 May 2018 11:18:56</td>
<td>ex Impl</td>
<td>Alma University</td>
<td>Fully processed</td>
<td>JR1</td>
<td>Mar 2018</td>
<td>Mar 2018</td>
<td>-</td>
</tr>
</tbody>
</table>
SUSHI Account: Cambridge University Press
Vendor URL: http://sushi.cambridge.org/GetReport
Contact Information: http://www.cambridge.org
Status: Active
Subscriber: Alma University
DARA - Data Analysis Recommendation Assistant

- Configuration Recommendations
- Acquisition Recommendations
- Resource Management Recommendations
- Fulfillment Recommendations
What are we doing?

Introducing DARA

Voting priority on bugs

Hackathon, Idea exchange....

GDPR / IDP / Standards

Alma as a platform, Primo VE

Big Data

Power to the users

Driving innovation & community

More secured solutions

Library impact. Integrated solutions

OPPORTUNITIES
Prioritize It
Take Part in Prioritizing

- List of known issues per area will be shared with the community
- Each institution to place its priority
- Ex Libris ongoing review
- Include top priority issues in work plan
- Next focus area
What’s next?

- Working with product working groups on establishing process
- Trial Q4 and Q1 2019
- Evaluating results and next steps

List of known issues per area will be shared with the community

Each institution to place its priority

Ex Libris ongoing review

Include top priority issues in work plan

Next focus area
Introducing *Prioritize It*

Welcome, John Smith  |  Tuesday, July 24, 2018

Your dashboard is empty. Why not add a widget?
<table>
<thead>
<tr>
<th>Issue ID</th>
<th>Summary</th>
<th>Description</th>
<th>Component</th>
<th>Status</th>
<th>Target Release</th>
<th>Supported By</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 63759</td>
<td>GND authority records &gt; escape characters in some fields are not displayed correctly in Primo</td>
<td>Issue with publishing of authority information where the personal name in the entry contains elements like &quot;von&quot;, &quot;van&quot;, &quot;de&quot; and similar expressions</td>
<td>Authorities</td>
<td>Fixed and Released</td>
<td>2018 Q3</td>
<td>154</td>
</tr>
<tr>
<td>2 82302</td>
<td>In Browse Bibliographic headings, subfields $3$ is missing</td>
<td>Examples: Prolific authors: Auden, W. H. $S$sq (Wystan Hugh), $S$sq 1907-1973 Cummings, E. E. $S$sq (Edward Estlin), $S$sq 1894-1962 Prolific composers: Gade, Niels W. $S$sq (Niels Wilhelm), $S$sq 1817-1890 Glinska, M. I. $S$sq (Mikhail Ivanovich), $S$sq 1804-1857</td>
<td>MD Editor</td>
<td>Pending Release</td>
<td>2018 Q4</td>
<td>88</td>
</tr>
<tr>
<td>3 81168</td>
<td>‘Borrowing requests with active notes - unassigned’ task widget total appears to include not just active requests but also those with a status of cancelled by staff and rejected by partner, though requests with those statuses don’t display when you click the task link</td>
<td></td>
<td>Resource Sharing</td>
<td>Prioritize It</td>
<td></td>
<td>42</td>
</tr>
<tr>
<td>4 72981</td>
<td>&quot;Generate Accession Number&quot; list is not ordered alphabetically</td>
<td>In MDE, editing holding record while using the option &quot;Generate Accession Number&quot;, the prefixes are displayed not in the alphabetical order. It is a problem, when the Institution has several dozens of prefixes.</td>
<td>MD Editor</td>
<td>Prioritize It</td>
<td></td>
<td>16</td>
</tr>
<tr>
<td>5 60536</td>
<td>Manage Purchase Requests - export to Excel does not carry over the Requester names &amp; title in twice</td>
<td>Manage Purchase Requests, click on Tools &gt; Excel Spreadsheet that is generated contains a column called Requester but there is nothing in it and the title is duplicated in columns A and B.</td>
<td>Selection</td>
<td>Prioritize It</td>
<td></td>
<td>16</td>
</tr>
</tbody>
</table>
Actionable Analytics

Actionable recommendations in Alma

12 partners out of 34 may have a better ranking in Rota template NZRotaARC. This is based on shipping cost, fulfillment duration and number of requests.

Your fulfilling can be optimized.

Your Resource Sharing Rota can be optimized.
Don’t Touch the Mouse

Personalized keyboard shortcuts for Alma
Alma users will be able to consult an expert from within the Alma UI.

Who is an expert
- Alma user
- From any institution

Becoming an expert
- Voluntary
- Define areas of expertise (e.g. Acquisitions)

List of experts
- Online experts
- Filtered by area according to the page in Alma

Consulting an expert
- By choosing “Ask an expert”

Consultation
- Using chat
Rachel - Unillege
Expert in: Acquisitions: Purchase order line ...

10:02
the platform and allow multiple platform users to communicate with each other

Rachel

10:03
Ok, I will check with our team and let you know

10:08
10X
I'll need a key and a URL
Security is transforming the world

Compliant at all levels: Products, procedures, documentation, contracts, and services

Identity Provider - 0 Passwords policy by the end of 2019!

Supporting the following Standards: ISO 27001, ISO 27018, ISO 22301, ISO 27017, SSAE 18 SOC 2, ICO
High-Ed Cloud Platform

Primo VE
Leganto
Esploro

API

ExLibris Alma
Tangible Transformation starts with a clear roadmap

**OPPORTUNITIES**
- Big Data
- Power to the users
- Driving innovation & community
- More secured solutions
- Library impact. Integrated solutions

**VALUES**
- Community
- Innovation
- Processes
# of BIB Records (M)

- 2015: 356
- 2016: 570
- 2017: 846
- 2018*: 1184
- 2019*: 1658

Big Data
<table>
<thead>
<tr>
<th>Res. Sharing per Region</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>APAC</td>
<td>22881</td>
<td>45969</td>
<td>134162</td>
</tr>
<tr>
<td>EU</td>
<td>77821</td>
<td>299796</td>
<td>459355</td>
</tr>
<tr>
<td>NA</td>
<td>620971</td>
<td>766993</td>
<td>897942</td>
</tr>
<tr>
<td>Sum</td>
<td>721673</td>
<td>1112758</td>
<td>1491459</td>
</tr>
</tbody>
</table>

![# of Loans](image)

Big Data
<table>
<thead>
<tr>
<th>Product</th>
<th>Presentation</th>
<th># of Queries</th>
<th>Avg. Time in Secs</th>
<th>Avg. Row Count</th>
<th>Total Row Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>North America - OBI</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fulfillment</td>
<td>OBI</td>
<td>144,935</td>
<td>3</td>
<td>1,276</td>
<td>181,007,633</td>
</tr>
<tr>
<td>Physical Items</td>
<td>OBI</td>
<td>99,519</td>
<td>22</td>
<td>4,323</td>
<td>356,360,480</td>
</tr>
<tr>
<td>Funds Expenditure</td>
<td>OBI</td>
<td>90,360</td>
<td>3</td>
<td>1,453</td>
<td>144,176,401</td>
</tr>
<tr>
<td>Items and Items</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Users</td>
<td>OBI</td>
<td>16,569</td>
<td>1</td>
<td>2,925</td>
<td>33,761,241</td>
</tr>
<tr>
<td>Requests</td>
<td>OBI</td>
<td>18,183</td>
<td>3</td>
<td>480</td>
<td>8,656,912</td>
</tr>
<tr>
<td>Usage Data</td>
<td>OBI</td>
<td>13,480</td>
<td>8</td>
<td>2,267</td>
<td>22,155,467</td>
</tr>
<tr>
<td>E-Inventory</td>
<td>OBI</td>
<td>12,102</td>
<td>20</td>
<td>4,777</td>
<td>37,559,880</td>
</tr>
<tr>
<td>Course Reserves</td>
<td>OBI</td>
<td>5,783</td>
<td>0</td>
<td>255</td>
<td>1,547,857</td>
</tr>
<tr>
<td>Events</td>
<td>OBI</td>
<td>4,918</td>
<td>84</td>
<td>40</td>
<td>238,278</td>
</tr>
<tr>
<td>Titles</td>
<td>OBI</td>
<td>4,862</td>
<td>15</td>
<td>2,878</td>
<td>17,062,168</td>
</tr>
<tr>
<td>Lending Requests</td>
<td>OBI</td>
<td>2,086</td>
<td>2</td>
<td>362</td>
<td>973,022</td>
</tr>
<tr>
<td>Physical Items-Historical Items</td>
<td>OBI</td>
<td>2,710</td>
<td>2</td>
<td>200</td>
<td>500,770</td>
</tr>
<tr>
<td>Borrowing Requests</td>
<td>OBI</td>
<td>1,983</td>
<td>2</td>
<td>612</td>
<td>903,575</td>
</tr>
<tr>
<td>Circulation Requests</td>
<td>OBI</td>
<td>1,986</td>
<td>9</td>
<td>778</td>
<td>903,274</td>
</tr>
<tr>
<td>Analytics Usage Tracking</td>
<td>OBI</td>
<td>1,260</td>
<td>2</td>
<td>210</td>
<td>304,940</td>
</tr>
<tr>
<td>Link Resolver Usage</td>
<td>OBI</td>
<td>1,186</td>
<td>3</td>
<td>3,449</td>
<td>4,589,077</td>
</tr>
<tr>
<td>Benchmark</td>
<td>OBI</td>
<td>1,043</td>
<td>0</td>
<td>365</td>
<td>129,869</td>
</tr>
</tbody>
</table>

Analytic Queries

<table>
<thead>
<tr>
<th>Year</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>APAC</td>
<td>976,009</td>
<td>2,377,314</td>
<td>3,724,866</td>
<td>7,131,702</td>
</tr>
<tr>
<td>NA</td>
<td>1,241,682</td>
<td>3,560,346</td>
<td>3,724,866</td>
<td>6,053,322</td>
</tr>
<tr>
<td>EU</td>
<td>1,471,195</td>
<td>4,233,241</td>
<td>4,223,241</td>
<td>7,131,702</td>
</tr>
</tbody>
</table>

Diagrams showing data growth from 2015 to 2018.
CONFIGURATION RECOMMENDATIONS

“I recommend that you create a SUSHI account based on your activated collections”

FULFILLMENT RECOMMENDATIONS

“We see that a faculty member has requested a book. She can get it faster via resource sharing. Would you like to go ahead...?”

RESOURCE MANAGEMENT RECOMMENDATIONS

“I recommend you link the following local collection to the CZ”

ACQUISITION RECOMMENDATIONS

“There are 7 high demand titles with insufficient copies to provide access. Would you like to consider purchase options?”
Ex Libris is looking at a wide array of tools and approaches in order to provide recommendations:

- AI
  - Machine Learning
  - Deep Learning

- Statistical
  - Linear Regression
  - Cluster Analysis
  - Anomaly detection
Resource Sharing

- Global Rotas
- Support for New ISO 18626
Analytics

Overlap & Unique record comparison with Peer Institutions

- Benchmark Analytics
- Comparative Collection Development
Localization

- Netpunkt (DANBIB)
- SUDOC
- SBN
Power to the Users
Alma UX – Going Forward

Continuous Improvement with the UX focus group
- Already started
- Public Webinars
- User studies
- Survey as an input to the process

Metadata editor
- Inline editing, Menu, tree, split screen

Alma Workflows - Activity center
- System wide tool
- Enable more efficient work for the user
Alma UX – Preview
### Alma UX – Preview

#### Licenses and Amendments

<table>
<thead>
<tr>
<th>Name</th>
<th>License code</th>
<th>License type</th>
<th>License Code</th>
<th>Status</th>
<th>Review Status</th>
<th>Start date</th>
<th>End date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>AMAZON License type1</td>
<td>AMAZON_1</td>
<td>License -</td>
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<td>01/02/2015</td>
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</tr>
<tr>
<td>4</td>
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<td>Active</td>
<td>Pending</td>
<td>01/02/2015</td>
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<tr>
<td>5</td>
<td>AutoLicense,0102151256_1</td>
<td>AutoLicense,0102151256</td>
<td>License -</td>
<td>Active</td>
<td>Pending</td>
<td>01/02/2015</td>
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<tr>
<td>6</td>
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<td>AutoLicense,0102151256</td>
<td>License -</td>
<td>Active</td>
<td>Pending</td>
<td>01/02/2015</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>AutoLicense,0130115129_1</td>
<td>AutoLicense,0130115129</td>
<td>License -</td>
<td>Active</td>
<td>Pending</td>
<td>01/02/2015</td>
<td></td>
</tr>
<tr>
<td>8</td>
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<td>AutoLicense,0130115129</td>
<td>License -</td>
<td>Active</td>
<td>Pending</td>
<td>01/02/2015</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>AutoLicense,0130115129_3</td>
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<td>Pending</td>
<td>01/02/2015</td>
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<tr>
<td>10</td>
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<td>AutoLicense,0202114131</td>
<td>License -</td>
<td>Active</td>
<td>Pending</td>
<td>01/06/2014</td>
<td></td>
</tr>
<tr>
<td>11</td>
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<td>AutoLicense,0202114131</td>
<td>License -</td>
<td>Active</td>
<td>Pending</td>
<td>01/06/2014</td>
<td></td>
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<tr>
<td>12</td>
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<td>Active</td>
<td>Pending</td>
<td>01/06/2014</td>
<td></td>
</tr>
<tr>
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<td>License -</td>
<td>Active</td>
<td>Pending</td>
<td>02/02/2014</td>
<td></td>
</tr>
<tr>
<td>14</td>
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<td>AutoLicense,030214243</td>
<td>License -</td>
<td>Active</td>
<td>Pending</td>
<td>02/02/2014</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>AutoLicense,030214243_3</td>
<td>AutoLicense,030214243</td>
<td>License -</td>
<td>Active</td>
<td>Pending</td>
<td>02/02/2014</td>
<td></td>
</tr>
<tr>
<td>16</td>
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<td>AutoLicense,030214243</td>
<td>License -</td>
<td>Active</td>
<td>Pending</td>
<td>02/02/2014</td>
<td></td>
</tr>
</tbody>
</table>

#### Recent Entities

- **PO-202112 / Elasco & B**
  - Total price: 484.00 USD
  - Invoice
  - 01:45 PM

- **PO-15704 / Abbey Library**
  - Total price: 31.00 USD
  - Purchase Order
  - 01:45 PM

- **100 works of art that will define our age / Grover, Kelly Thames & Hudson New York; NY : 2013.**
  - Physical Item
  - 01:45 PM

- **Through Streets Broad and Narrow - Karen James, Vol. 2**
  - Purchase Request
  - 01:45 PM

- **PO-202112 / Elasco & B**
  - Total price: 484.00 USD
  - Invoice
  - 01:45 PM

- **PO-15704 / Abbey Library**
  - Total price: 31.00 USD
  - Purchase Order
  - 01:45 PM
Alma UX

• We are looking at specific workflows too
  • Acquisitions (e.g. PO Line, Invoicing)
  • ERM (e.g. Activation task list, activation wizard)
  • Fulfillment (e.g. Scan In)

User studies in these areas will begin in Oct 2018
Digital Self Service Migration

Migrating from OAI-PMH compliant system
More Secured Solutions
Security

- Support for OpenID Connect for Authentication
- Ex Libris Identity Service
Digital Data Safeguarding

- Amazon S3
- Extraction of File Metadata
- Checksum/Fixity
- Benchmarking in Alma
Value to the Users / Innovation
Idea Exchange

- Enhanced Holdings Record Search, Sets, and Jobs
- Improved Efficiency in Transit Process
**NERS**

- Enhanced Printing Setup and Configuration
- Online Print Queue
BIBFRAME and LD for Staff Users

- Linked Data API – BIB / RDA / RDF
- BIBFRAME record editing (prototype)
Alma provides API endpoints for these linked data formats:

- JSON-LD
- RDA/RDF
- BIBFRAME

Once activated the APIs are open and available to everyone (no keys required!)

Records are automatically enriched with URIs for language, identifiers, names, and subjects.
Library Impact. Integrated Solutions
Alma – Rosetta Integration
Summary

Introducing DARA

Voting priority on bugs

Hackathon, Idea exchange....

GDPR / IDP / Standards

Alma as a platform, Primo VE

Big Data

Power to the users

Driving innovation & community

More secured solutions

Library impact. Integrated solutions
“Happy Almaing”