Hello, and welcome to this session on Primo Normalized XML.
1.2 Agenda

Notes:

We'll start with an introduction to Primo Normalized XML. Then we'll see how to access the PNX in both the Primo Front End and the Primo Back Office. And then we will take a closer look at each of the sections that make up the PNX record.

After a session review, there will be a short quiz to test your knowledge.
1.3 Primo Normalized XML

Notes:

Primo Normalized XML

1.4 Primo Normalized XML

What is Primo Normalized XML?
- XML format for Primo records

Why do we convert source records into PNX?
- Different data sources, different formats
- All records end up in the same format
- Allows Primo to search all records at once
- Consistent display
- Scopes, facets, browse
Notes:

Primo Normalized XML, also known as PNX, is the XML format for records that are stored and displayed in Primo.

During Primo's publishing process, records are harvested then converted, or normalized, into Primo Normalized XML records.

So why do we need to convert source records into PNX?

While it's possible to extract data from library catalogs in various forms of MARC, Primo can harvest data in other formats as well, such as Dublin Core, XML, and the Web Archive format. This allows us to load different types of data into Primo, and have all of the records end up in the same format.

Having all of the records formatted the same way allows Primo to search across all records at once, and display them consistently in the discovery layer. It also allows us to organize and group records in different ways to create search scopes, facets, and enable virtual shelf browsing.

1.5 How to see the PNX

Notes:

How to see the PNX
1.6 Using the web browser

Notes:

There are several different places where we can go to see the Primo Normalized XML in its raw form. For both Primo Central and local records, we can see the PNX in the Primo Front End. Right now we’re looking at the search results for the search for creativity and science. Let’s say that I wanted to see the PNX for this item, *Explaining creativity, the science of human innovation*.

First, I would click on the title to open the full record. Now that I’m in the full record, I would go up to the URL and add &showPnx=true to the end of the URL. This string is case sensitive, so we need to be sure we’re using a capital ‘P’ and lowercase ‘nx’.

We can hit enter to refresh the page, and here we have the PNX. Notice that this is in XML format, and there are different sections which make up the PNX record - control, display, links, and more.
1.7 Using the PNX Viewer

Notes:

Before we look more closely at the PNX, I’d like to demonstrate how to see the PNX for local records in the Primo Back Office. Keep in mind that we cannot see the PNX for Primo Central records in the Back Office, because these records are stored on a different server. So this method will only work for records that have been harvested and loaded into Primo.
First we’ll need the record ID. We can see the record ID here in the PNX in the control section, but it also appears in the URL, as well. Taking a closer look at the control section, we can see that the recordID in Primo is a combination of the Primo Data Source code and the record ID from the source system.

So even if we’re not able to find the record in the Primo Front End, it’s possible to figure out what the record ID would be in Primo by combining the sourceid and the sourcerecordid.

Now that we have our record ID, let’s go to the Primo Back Office.

From there, we go to the PNX Viewer. In this screen, we have several options. I could decided to enter in the data source code with an asterisk to see the full list of records. This is useful if we are just looking for a random record, or a series of records that were loaded during a specific time frame. Today we’re going to use the recordID we found in the Primo Front End to look at the PNX of our example record.

I can view the PNX by clicking here. One of the advantages to viewing the PNX in the Back Office is that it is easier to read. I can select each section of the PNX in this dropdown, and the content of each section will appear in the Fields area below.

Another advantage to viewing the PNX in the Back Office is that we can also see the source record by clicking here. The new window that opens contains the PNX of the record at the top, and the original source record in the bottom. This is quite useful when we are trying to determine if changes need to be made to the normalization rules, or the source data itself.
Recordid in URL (Slide Layer)

Control section (Slide Layer)
Primo Back Office (Slide Layer)

Using the PNX Viewer

PNX viewer (Slide Layer)

Using the PNX Viewer
PNX viewer search (Slide Layer)

Using the PNX Viewer

PNX result (Slide Layer)

Using the PNX Viewer

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PNX (Slide Layer)

Using the PNX Viewer

PNX - sections dropdown (Slide Layer)

Using the PNX Viewer
PNX compare to source record (Slide Layer)

Comparison (Slide Layer)
1.8 PNX Sections

Notes:
PNX Sections

1.9 PNX Sections

Notes:
Thirteen different sections are created in the PNX during the normalization process. These sections are populated with the data from the original record in various ways. Each section serves a different purpose in Primo, whether it's to present the record for display, optimize it for searching, or provide information about its delivery.

Let's take a closer look at each of the sections of the PNX.

**sections list (Slide Layer)**

1.10 Control Section
Notes:
The Control section includes data about the record and its source, as well as the unique identifier within Primo.

We've already had a brief look at several of these fields - namely those that have to do with the id of this record, but let's look at all of them in context.

The sourcerecord ID is the unique identifier that is used in the source system - which in this case is Alma. There is also a control field specific to Alma, the almaid, which shows the full record ID in that system.

The sourceid, originalsorceid, source system, and source format were defined when the Data Source was configured in Primo.

And again, the recordid in Primo is the combination of the sourcerecordid and sourceid fields.

1.11 Display Section

Notes:
The display section includes data used in the brief and full displays of the record in the Front End.

Let's look at our example record in the front end.

The title of the item appears in both the search result citation and the details section. The title here reflects the content in the display:title field of the PNX.
The author fields are present in both areas as well, and correspond to the display:creator and display:contributor fields.

In the full display, we have display:subject, display:description, and so on.

Though the availability statement itself relies on other functionality in Primo, there are three display fields that contribute to its display.

**Display in FE (Slide Layer)**
1.12 Links Section

Notes:

The Links section contains links that can be used to create the GetIt! functionality as well as the links in the Links section.

Here we have the links to the table of contents in Amazon, and the link to the table of contents provided in the MARC data.

Then we have additional links that were also in the 856 field of the MARC data.

And then we have links to this item in Amazon and WorldCat.
Notes:

The search section includes the data being indexed for search. You'll notice that much of the information in the display is also in the search section, like the title and creator/contributors, but the fields are formatted differently to allow for better searching.

For example the creator contributor fields contain the version that's displayed, but it also contains the author's
name in several different standardized formats.

### 1.14 Sort Section

![Sort Section Image]

**Notes:**

The contents of the sort section are used as the basis for sorting the search results set. The fields in the Front end are sort creationdate, sort author, and sort title.
1.15 Facets Section

Notes:

The facets section contains data used to form facets in the Front End. The data in these fields represents all of the data that can potentially be used to generate a facet.

Here in our display we have our top level facets, which allow us to filter on how the item is delivered, and then we have the resource types facet, the topic, or subjects facet, the author/creator facet, the creation date facet, the
library facet, the collection facet, the language facet, and the journal title facet.

Facets in FE (Slide Layer)

Facets in FE 2 (Slide Layer)
1.16 Dedup Section

Notes:

The dedup section contains values that are used during the deduplication process during publishing. More information on how this section is used can be found in the Primo documentation.

1.17 FRBR Section
Notes:

And the FRBR section contains values that are used during the FRBR process during publishing. Again, more information on how this section is used can be found in the Primo documentation.

1.18 Delivery Section

Notes:

The Delivery section includes information that Primo uses to manage the delivery of resources, namely the institution of delivery, and the category of the item to be delivered.

There are a variety of delivery categories, each of which has its own method of delivery in Primo. The delivery category plays a part in determining which sections will display for each record.
Notes:

The Enrichment section includes data that is used during the enrichment process. The results of the enrichment are not stored in this section - they are stored in the Display, Search, Facets, or Links sections.

For example, here we have a value from the original record - in this case, it's a call number. The enrichment process uses this call number to determine what will appear in the Facets > Classification LCC section.
facets (Slide Layer)

1.20 Ranking Section

Notes:

The Ranking section includes two booster fields that can be used to boost the ranking of the record. More information about how these boosters work, as well as additional information on how Primo’s ranking technology works can be found in the product documentation.
1.21 Addata

Notes:

The Additional Data section contains data elements that are required for a number of functions in Primo that cannot be extracted from other sections of the PNX.
1.22 Browse Section

And lastly, the contents of the Browse section are used to support the Virtual Browse and Browse functions in Primo. More information on how this section is used can also be found in the product documentation.
1.23 Summary

PNX, or Primo Normalized XML, allows us to load records into Primo from various sources and consistently discover, display, and deliver them in the Primo Front End.

Each of the sections of the PNX are populated with information from the source record during the normalization process. The PNX records for local data can be seen in the Front End as well as the Back Office, which allows us to customize the data if desired, and troubleshoot if needed.
1.24 Session Review and Quiz

Notes:

Session Review and Quiz

1.25 Session Review

Session Review

In this session we covered:
- What Primo Normalized XML is
- How to see the PNX
- What the PNX includes

Next Steps:
- Take the quiz
- Perform the exercise
- Review the recommended articles
- Continue to the next training session

Notes:
In this session we covered what Primo Normalized XML is, how to see the PNX, and what the PNX includes.

After the brief quiz that begins on the next page, please complete the exercise that is provided in the Knowledge Center where you launched this training. Please refer to the Recommended Articles section for additional information.

After finishing the exercise, you can continue on to the next training session in this series.

**1.26 Question 1**

*(Multiple Choice, 10 points, 1 attempt permitted)*

<table>
<thead>
<tr>
<th>Correct Choice</th>
<th>Choice</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>X</strong></td>
<td>Allows us to load records into Primo from various sources and consistently discover, display, and deliver them in the Primo Front End</td>
</tr>
<tr>
<td></td>
<td>Does not duplicate data across PNX fields</td>
</tr>
<tr>
<td></td>
<td>Is a variation of MARC XML</td>
</tr>
<tr>
<td></td>
<td>Contains 20 fields of data mapped from the source data</td>
</tr>
<tr>
<td></td>
<td>Can be customized to contain different PNX fields</td>
</tr>
</tbody>
</table>
Feedback when correct:

The PNX format allows us to load records into Primo from various sources and consistently discover, display, and deliver them in the Primo Front End

Feedback when incorrect:

The PNX format allows us to load records into Primo from various sources and consistently discover, display, and deliver them in the Primo Front End

Notes:

Correct (Slide Layer)
Incorrect (Slide Layer)

1.27 Question 2

(Multiple Response, 10 points, 1 attempt permitted)

<table>
<thead>
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<th>Correct</th>
<th>Choice</th>
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</thead>
<tbody>
<tr>
<td>X</td>
<td>Display</td>
</tr>
</tbody>
</table>
Feedback when correct:
Display and Search are PNX fields.

Feedback when incorrect:
Display and Search are PNX fields.

Correct (Slide Layer)
1.28 Question 3

(True/False, 10 points, 1 attempt permitted)

<table>
<thead>
<tr>
<th>Correct Choice</th>
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</thead>
<tbody>
<tr>
<td>True</td>
</tr>
</tbody>
</table>

Incorrect (Slide Layer)
Feedback when correct:

Primo stores the original record as well as the PNX record. This allows the records to be renormalized without re-harvesting them, and allows us to see the original record alongside the PNX for troubleshooting purposes.

Feedback when incorrect:

Primo stores the original record as well as the PNX record. This allows the records to be renormalized without re-harvesting them, and allows us to see the original record alongside the PNX for troubleshooting purposes.

Notes:

Correct (Slide Layer)
Incorrect (Slide Layer)

Quiz: Primo Normalized XML

Primo can only store PNX records.

- True
- False

Primo stores the original record as well as the PNX record. This allows the records to be renormalized without re-harvesting them, and allows us to see the original record alongside the PNX for troubleshooting purposes.

Incorrect

1.29 Thank You!

Thank You!

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Notes:
Thank you for joining this session!
1.30 About this Training

Notes:

1 (Slide Layer)

This presentation assumes that you have viewed these training sessions:
- Primo Getting Started Sessions
- Primo Back Office Overview
- Primo Administrative Structure
- Primo Publishing Platform
- Primo Files Configuration
2 (Slide Layer)

By the end of this training session, you will be able to:
- What Primo Normalized XML is
- How to use the PNX
- What the PNX includes

3 (Slide Layer)

Target Audience:
- Staff implementing and maintaining Primo