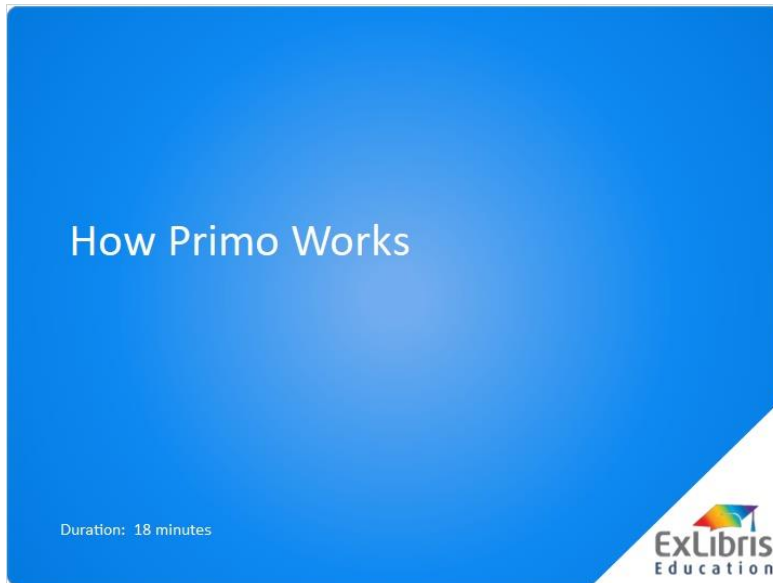


# How Primo Works

## 1. How Primo VE Works

### 1.1 Welcome



#### Notes:

Welcome to how Primo works.

## 1.2 Objectives

### Objectives

**By the end of this session, you will know:**

- What discovery, delivery, and optimization are in Primo
- How the library's collections and e-resources are presented in Primo
- How to understand search results
- How the user experience can be optimized in Primo

### Notes:

By the end of this session, you will know

- What discovery, delivery, and optimization are
- How the library's collections and e-resources are presented in Primo
- How to understand search results, and
- How the user experience can be optimized in Primo

## 1.3 Agenda

### Agenda






- **Discovery, Delivery, and Optimization**
- Library collections in Primo
- E-resources in Primo
- Understanding Search Results
- Optimizing the User Experience

### Notes:

Discovery, Delivery, and Optimization

## 1.4 Discovery, Delivery, and Optimization

### Discovery, Delivery, and Optimization

 <b>Discovery</b>	 <b>Delivery</b>	 <b>Optimization</b>
Fast, intuitive, and personalized discovery of physical, electronic, and digital resources	Integrated, end-to-end workflow that provides access to materials, regardless of their source or format	Insights that support continuous enhancement of the user experience and analyses that inform collection development

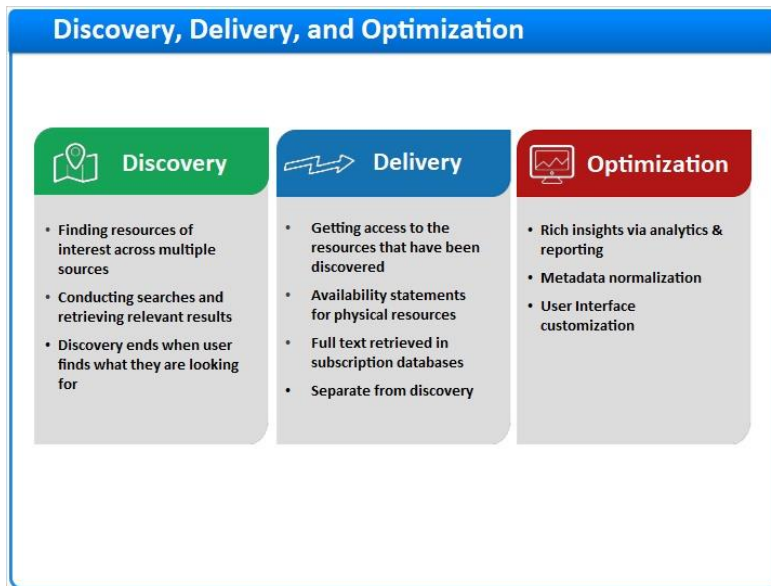
### Notes:

Primo allows fast, intuitive, and personalized discovery of physical, electronic, and digital resources.

Once users find the resources they're looking for, Primo provides access or information on how to access the resource, regardless of its source or format.

And Primo also provides insights that support continuous enhancement of the user experience, and analyses that inform collection development.

## 1.5 Discovery, Delivery, and Optimization



### Notes:

To understand how Primo works, it's important to understand the concepts of discovery and delivery, and how Primo can shape the discovery experience.

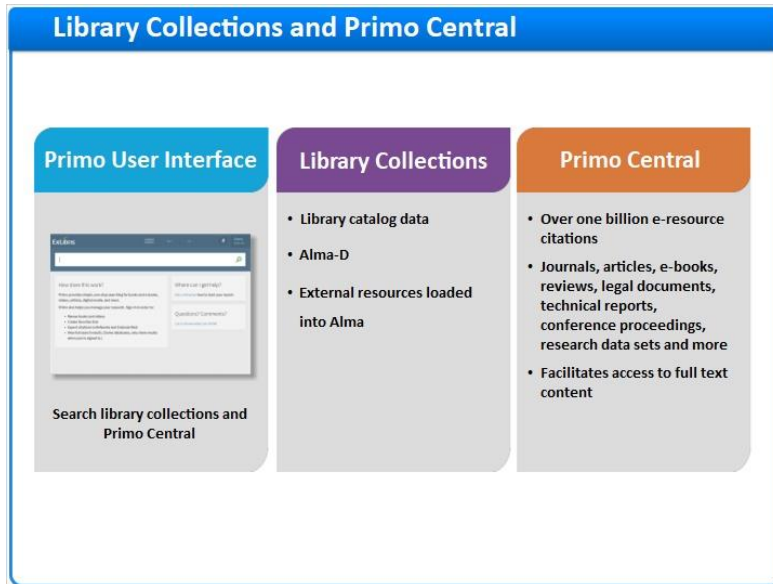
Discovery is about finding resources of interest across a broad variety of sources - the library catalog, subscription databases, open access repositories, and more. To do this, we need a way to enter our search and a way retrieve and view relevant results. Discovery ends when the user finds the citation or record for a material that they are interested in, regardless of where it's located.

Delivery is all about getting access to the resources that have just been discovered. While researchers are using Primo to find the resources, they will be using the availability statement to guide them to where the physical resource resides, or even connecting directly to databases to retrieve the full text. Discovery and delivery are separate functions in Primo (and in other Discovery Services).

Since Primo contains robust reporting functionality, libraries can take their unique collections as well as their users'

behaviors into account when optimizing the discovery experience. This can be done through metadata normalization as well as user interface customization in Primo.

## 1.6 Library Collections and Primo Central



### Notes:

Searching in Primo takes place in the Primo User Interface. This user interface allows you, your staff, and your patrons to search both the library's collections and Primo Central.

Library collections contain your local data. These include the catalog records, any digital collections that are part of Alma Digital, and any external resources that have been loaded into Alma.

The Primo Central Index (or just Primo Central) is a database of over one billion e-resource citations from various aggregators, publishers, and open access repositories. Primo Central includes citations for journals, articles, e-books, reviews, legal documents and technical reports, conference proceedings, research data sets and more. These citations facilitate access to full-text content in both open access repositories and your subscription databases.

Let's take a closer look at how local and remote resources are implemented within Primo.

## 1.7 Library collections in Primo

**Agenda**

- Discovery, Delivery, and Optimization
- **Library collections in Primo**
- E-resources in Primo
- Understanding Search Results
- Optimizing the User Experience

### Notes:

Library collections in Primo

## 1.8 Library Collections Display in Primo VE

**How Library Collections Display in Primo VE**

**Library Collections**

- Alma
- Alma-D
- External resources loaded into Alma

**Primo User Interface**

Indexed within 15 minutes

### Notes:

Your library collections consist of the data you have loaded into Alma. These records are indexed in Alma and are available for viewing within 15 minutes in the Primo user interface.

## **1.9 E-resources in Primo**



The slide features a blue header with the word "Agenda" in white. Below the header is a white rounded rectangle containing a list of five items. To the right of the list is a colorful graduation cap icon. The list items are: "Discovery, Delivery, and Optimization", "Library collections in Primo", "E-resources in Primo" (bolded), "Understanding Search Results", and "Optimizing the User Experience".

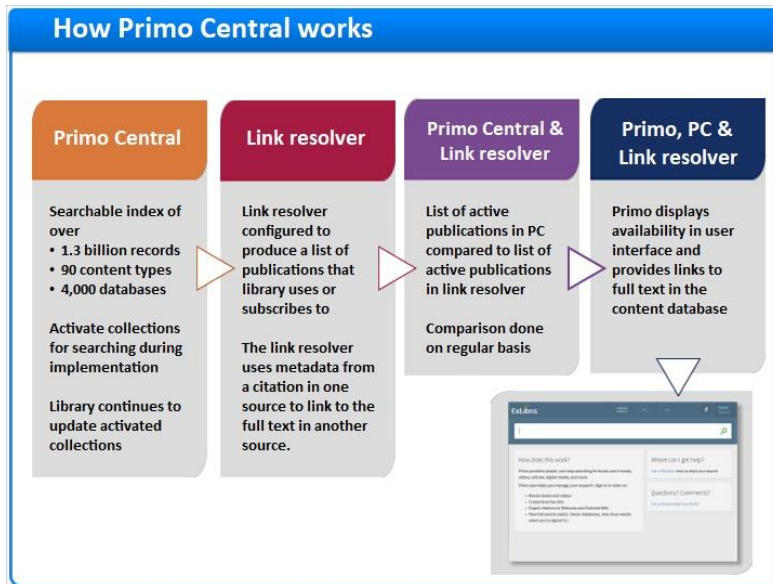
**Agenda**

- Discovery, Delivery, and Optimization
- Library collections in Primo
- **E-resources in Primo**
- Understanding Search Results
- Optimizing the User Experience

### **Notes:**

E-resources in Primo

## 1.10 How Primo Central works



### Notes:

Primo is also used to discover and display records in subscription and open-access repositories as well. Primo Central is a searchable index of over 1.3 billion records, with 90 content types and 4000 databases.

During a Primo implementation, Ex Libris and your library work together to activate collections for searching in Primo Central. After implementation, the library will continue to update these activations when needed.

We also configure the library's link resolver to produce a list of publications that the library uses or subscribes to. The link resolver can use metadata from a citation in one source to link to the full text in another source.

The list of active publications in Primo Central collections is then compared to the list of active publications in the link resolver. This comparison happens on a regular basis, as the library continually updates both the collections in Primo Central, and the active collections and publications in the link resolver.

The results of this comparison allows Primo to determine whether or not any given e-resource result will be available. Generally, if a given publication is active in both Primo Central and the link resolver, Primo will show the resource as 'full text available'.



## 1.11 Getting to the full text

**Getting to the full text**

**Getting full text using the link resolver**

- Preferred method of delivery
- Use citations in one source, link to full text in any of the library's subscription databases

**Getting full text using link in the citation**

- Link resolver not the best option for every collection
- May not have enough data in citation to form request
- Database with full text may not be able to handle LR
- In these cases, we use the URL provided in the citation
- Called 'fixed availability'

### Notes:

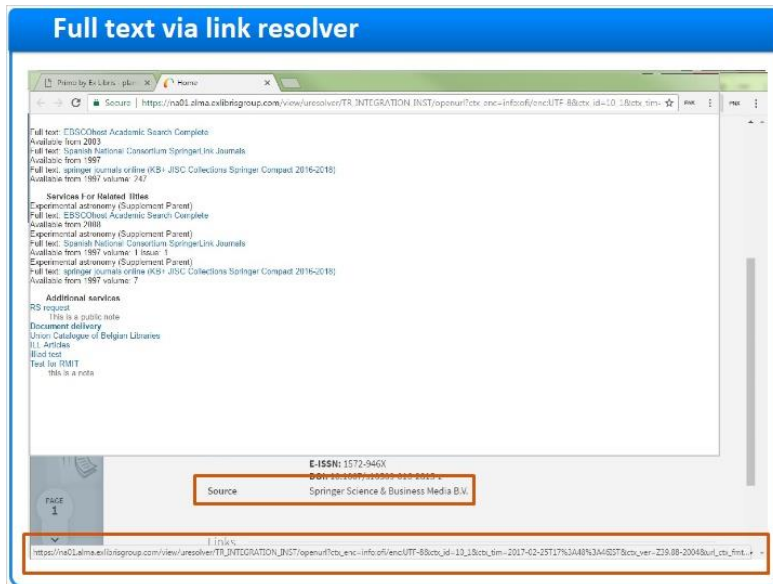
For the most part, Ex Libris prefers this method of linking to the full text.

Primo can use the citations in Primo Central to provide metadata to the library's link resolver, and the link resolver in turn uses that metadata to provide all of the possible links to the full text - whether it's in the same database or a different one. In other words, we might get a citation from one vendor or publisher, and the link to the full text may go to a different vendor or publisher's website.

This isn't always the best option for every collection, though. Sometimes there isn't enough information in the citation to pass along to the link resolver. And sometimes the database with the full text can't interpret the link resolver's request.

So in these cases, we use the URL provided in the citation. We call this type of delivery 'fixed availability'.

## 1.12 Full text via link resolver



### Notes:

Let's take a look at a few examples in Primo.

In the search results for 'planet nine', we can see the first three results all show that full text is available.

Clicking on any of these links will bring me to the full text in a different database - but first, let's look at each record in the full display.

Here's the full record for *Planet Nine, dark matter and MOND*. The source of the citation is Springer Science and & Business Media B.V. - this means that the citation is from this collection in Primo Central.

The link to the full text, however, is using the Alma link resolver to go to the full text. If I mouse over the link I can see the URL it will go to down here at the bottom of the screen - notice that it contains 'openurl'.

Once I click on the link, I'm brought to a separate tab that contains multiple links to the full text - in both EBSCO, and several SpringerLink Journal databases. It's possible to bypass this screen and just go to the first link in the list, but I've enabled this screen for demonstration purposes.

This is an example of a Primo Central citation coming from one source, and the link resolver providing access to the full text in multiple databases.

## 1.13 Full text via fixed availability

The screenshot shows a Primo Central search result for the article "Solar Obliquity Induced by Planet Nine" by Elizabeth Bailey, Konstantin Batygin, and Michael E. Brown. The page is titled "Full text via fixed availability" and includes a search bar, navigation links, and a "Download" section with options for PDF and other formats. The article abstract discusses the six-degree obliquity of the sun and the potential role of Planet Nine in explaining the physical alignment of distant Kuiper Belt objects.

### Notes:

Let's take a look at the second search result.

Here's the full record for *Solar Obliquity Induced by Planet Nine*. The source of the citation is Cornell University, which means that the citation is from this collection in Primo Central.

The link to the full text in this case is fixed - it goes directly to the article in Cornell University's Arxiv database. If I mouse over the link I can see the URL it will go to down here at the bottom of the screen.

Once I click on the link, I'm brought to a separate tab that goes to the article.

This is an example of when we use the link provided by the publisher in the Primo Central citation to link to the full text content.

## 1.14 Understanding Search Results

### Agenda

- Discovery, Delivery, and Optimization
- Library collections in Primo
- E-resources in Primo
- **Understanding Search Results**
- Optimizing the User Experience

### Notes:

Understanding search results

## 1.15 Search Query

### Discovery – Search Query

#### Query

**Types of search**

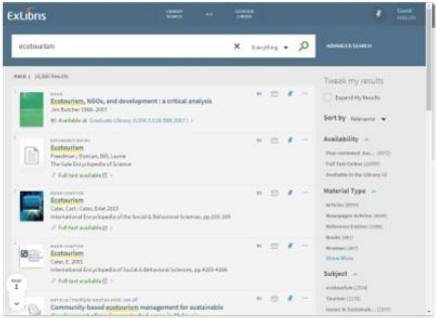
- Simple
- Advanced

**Query options**

- Keyword / Title / Author / Subject
- Contains / starts with / exact match
- Pre-filters
- Boolean operators
- Stop words (a, and, the)
- Phrase searches
- Wildcard searches
- Stemming (ed, ing)
- Typos

**Records that match query**

- Searches the <search> section in the PNX



The screenshot shows the ExLibris search interface. The search bar contains the term 'economics'. The results page displays a list of search results with columns for 'Title', 'Availability', and 'Material Type'. The first result is 'Economics, NGOs, and development: a critical analysis' by Paul H. Jones (2007). The second result is 'Economics: Systems, 9th Edition, The SAGE Encyclopedia of Science' by Paul H. Jones (2012). The third result is 'Economics: Cases, 8th Edition, International Encyclopedia of the Social & Behavioral Sciences, pp.433-438' by Paul H. Jones (2012). The fourth result is 'Economics: Community-based approaches management for sustainable' by Paul H. Jones (2012).

### Notes:

Let's take a closer look at how searching works in Primo, and what happens when search results are returned.

Primo's search allows us to quickly type in a keyword and conduct a search in simple search. And we can conduct advanced searches using multiple search terms and methods. Advanced search includes keyword, title, author, and subject searches.

Context can be applied to the search terms as well - we can search the entire record with a contains search, search the beginning of a record with starts with, and also do an exact match search. In the advanced search, we can also apply pre-filters to our terms, like material type, language, and publication date.

Primo includes boolean operators - AND, OR, and NOT, and also knows not to include common stop words like a, and, and the in the search.

Phrase and wildcard searches are also possible in Primo.

When the number of search results returned is low, Primo can expand the search to include word variants by removing word endings like 'ed' and 'ing'.

And Primo can suggest alternate terms for searching to correct typos and misspellings.

When a user enters a search query, Primo takes all of these functions into account and matches the term to the values in the search section of the PNX.

## 1.16 Relevance

The image shows a screenshot of the Primo search interface. On the left, a sidebar titled "Relevance" explains the algorithm. On the right, the search results page for the query "ecosystem" is displayed, showing several search results with details like title, author, and availability.

**Discovery - Relevance**

**Relevance**

Degree to which item matches the query

- More weight to terms based on field in record (title, author, subject)
- Order of query terms

Score representing an item's academic significance

- Peer reviewed?
- Times cited?
- Type of material

Item's relevance to the type of search

- Broad topic search -> Primo boosts overview material
- Known item search -> Primo boosts appropriate item

**ExLibris**

ecosystem

Found 3,343,000 results

**ecosystem, NGOs, and development : a critical analysis**  
with Taylor (2000, 2007)  
Available at Cambridge Library (2274, 4239, 5869, 28871) +

**ecosystem**  
Paganini, Giovanni, 1812, Lettere  
The Gale Encyclopedia of Science  
Full text available! +

**ecosystem**  
Cohen, David, 1940, 2003  
International Encyclopedia of the Social & Behavioral Sciences, pp.4103-4108  
Full text available! +

**ecosystem**  
Cohen, David, 1940, 2003  
International Encyclopedia of the Social & Behavioral Sciences, pp.4103-4108  
Full text available! +

**ecosystem-based ecosystem management for sustainable**  
Community-based ecosystem management for sustainable  
International Encyclopedia of the Social & Behavioral Sciences, pp.4103-4108  
Full text available! +

**Tweak my results**

Expand My Results

Sort by: Relevance

Availability

Full text available (2000)  
Full text available (2000)  
Available in the library (0)

Material Type

Articles (0)

Magazines & Journals (0)

Reference (0)

Books (0)

Reference (0)

Show More

Subject

ecosystem (214)

ecosystem (214)  
ecosystem (214)  
ecosystem (214)

## Notes:

Primo uses a set of proprietary algorithms to determine the relevance of each result., and ranks the result accordingly.

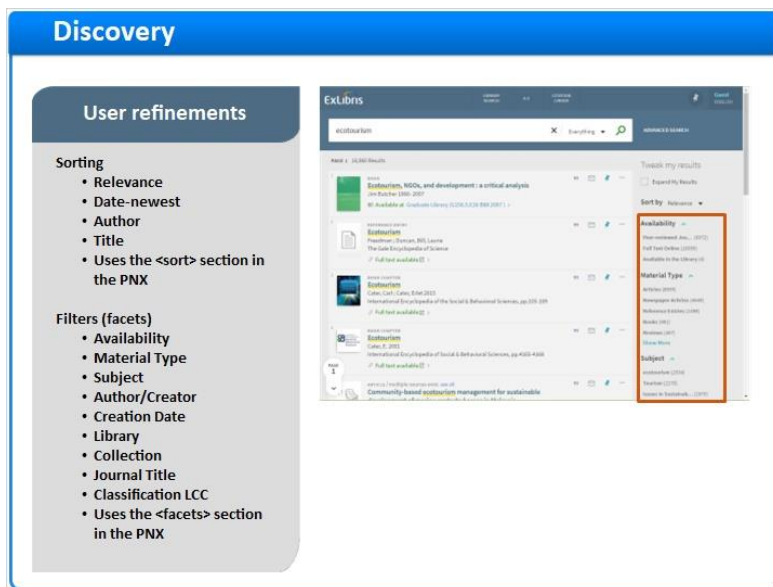
When we determine relevancy, we make a series of calculations based on several factors to produce a Relevancy Score.

The first is how well an item matches the query. For example, Primo assigns more weight to an item if the query terms occur in certain fields in the item's record-primarily the author, title, and subject fields. Primo also takes into account the order of the query terms or phrases, and if that order is the same in the record.

A value score representing an item's academic significance. The item's academic significance is calculated from factors unrelated to the query, such as whether the item was published in a peer-reviewed journal, how many times it has been cited, and what type of material it is, for example a journal article is considered more significant than a newspaper article.

An item's relevance to the type of search. Primo infers the type of search that the user is conducting, such as a known-item search or a broad-topic search, and takes the type of material into account. In broad-topic searches Primo boosts overview material, such as reference articles. In known-item searches Primo takes into account authors, exact titles or other variations including entire citations to boost the appropriate item to the top of the result list.

## 1.17 User refinements



The image shows a screenshot of the Primo Discovery interface. On the left, there is a 'User refinements' panel with two sections: 'Sorting' and 'Filters (facets)'. The 'Sorting' section lists: Relevance, Date-newest, Author, Title, and a note that it uses the <sort> section in the PNX. The 'Filters (facets)' section lists: Availability, Material Type, Subject, Author/Creator, Creation Date, Library, Collection, Journal Title, Classification LCC, and a note that it uses the <facets> section in the PNX. The main search results area shows a search for 'exclusion' with 11,840 results. The results list includes items like 'Exclusion, NGOs, and development: a critical analysis' and 'Exclusion: The Case for a Global Perspective'. On the right, there is a 'Sort by' dropdown menu with 'Relevance' selected, and a 'Facets' panel with 'Availability' and 'Material Type' highlighted by a red box.

## Notes:

And finally researchers can refine their results in a few ways.

By sorting the results, the user can control the order of the results. Sort options include relevance, date, author, and title. The sort section in the PNX includes the values used to sort the record.

The user can also refine results using filters, or facets. Facet options include availability, material type, subject, author or creator, creation date, the library, the collection, journal title, and the Library of Congress Classification. The facets section in the PNX contains the values available for filtering.

## 1.18 Sign in

**Discovery – Sign In**

**Sign In**

- See library account information
- Place requests, renew items
- Get complete results

**Local record search restrictions**

- Available only to specific users after sign in
- e.g., restricted course reserves, staff only, etc.

**Restricted to search resources in Primo Central**

- e.g. Web of Science
- Available only to users affiliated with the library
- Allows users to search when not in the library

**Extlibris**

wodnotion

Sign in to get complete results and to request items

Found 2,318,000 results

Sort by: Relevance

Availability: Free online, etc. (100%)

Material Type: Article (100%), Newspaper Article (100%), Reference (100%), Book (100%), EBook (100%), Other (100%)

Subject: vodnotion (100%)

### Notes:

When a user signs in, they can see their library account information, place requests, and renew items. But signing in can also have an effect on the search results.

It's possible for libraries to configure local record search restrictions.

This means that certain search results would only be available to specific users - and the only way Primo would show those results is if the user was signed in. This functionality is useful if the library has collections that are restricted to certain groups of users, like course reserves or staff only resources.

Some collections in Primo Central are considered restricted to search - usually this happens when the vendor or

publisher provides their data for searching, but only wants libraries who subscribe to the collection to be able to search it. Web of Science is an example - since Thompson requires a subscription to access the citations in their database, they require it in Primo Central as well.

This means that these citations would only return in the search results if Primo could tell that they were affiliated with the library. Though a user wouldn't necessarily need to sign in if they were on campus, they would need to sign in to see results outside of the library.

## 1.19 Availability for local results

**Delivery – Availability for Local Results**

**Local results**

**Physical materials**

- **Statuses:**
  - Available
  - Checked Out
  - Check Holdings
- Real time availability (RTA) based on current status in library catalog

**Online materials**

- Provides link to online material based on the URL in the record

**BOOK**  
Ecotourism, NGOs, and development : a critical analysis  
Jim Butcher 1996-2007  
Available at Graduate Library (G156.S.E26 B88 2007)

**BOOK**  
The emerald planet : how plants changed Earth's history  
D.J. Beerling 2007  
Checked out from Graduate Library (QE905 .J64 2007)

**JOURNAL**  
American journal of medicine  
1946  
Check holdings at Main Library Periodicals Room

**JOURNAL**  
Polar bioscience.  
Kokurthu, Kyoakuchi Kenkyukai.; NIPR Symposium on Polar Biology. c1999.  
Online access

### Notes:

Once the search results have returned, the user can start accessing the resources.

In Primo, physical materials in the library will have an availability statement that provides the status and location of the resource. It may be available, checked out, or show 'check holdings'. Check holdings usually indicates that more information is needed to determine whether or not the material is available. In this case, we have a journal with multiple holdings.

This status is updated in real time. As the search result displays in Primo, it's making a real-time call into the library catalog to see if the material is available.

For local online materials, we'll see the 'Online access' link. This link takes the user to the URL that was provided in local record. In this case, the link will take us to the journal website, as indicated in the 856 field in the MARC record.



## 1.20 Availability for PC results

### Delivery – Availability for PC results

#### Primo Central results

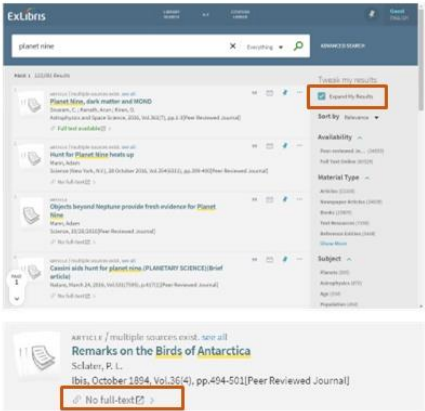
**Full text available**

- Using link resolver
  - Publication is active in Primo Central collection AND link resolver
- Using fixed availability
  - Citations will always show as available

**No full text results show when results are expanded**

**No full text available**

- Using link resolver
  - Publication is active in Primo Central collection, but not the link resolver



The screenshot shows the ExLibris search interface. The search bar contains 'planet blue'. The results list includes several items, with the first one being 'Planet Blue, dark matter and SOHO'. The 'Expand My Results' button is highlighted with a red box. The 'Availability' filter is set to 'Full text available'. The 'Material Type' filter is set to 'Book'. The 'Subject' filter is set to 'Planets'. The 'Remarks on the Birds of Antarctica' result is highlighted with a red box, and its status is 'No full-text'.

### Notes:

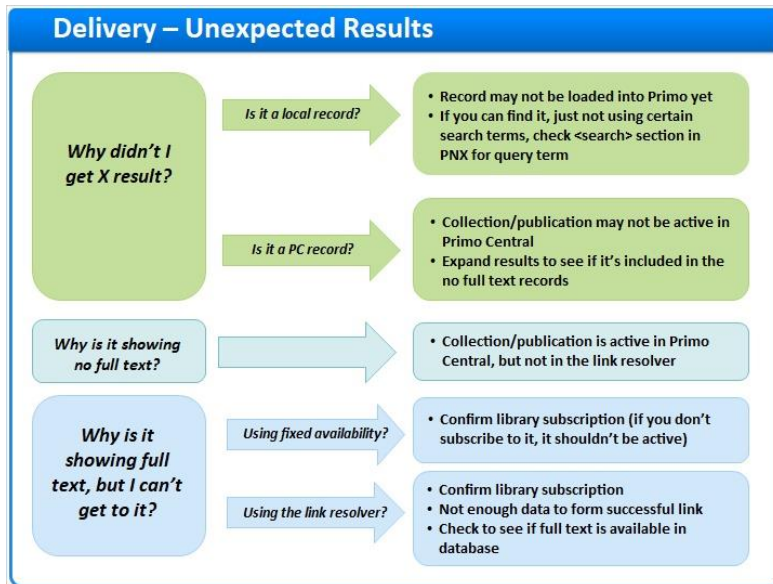
The Primo Central resources show availability a bit differently.

When the result is from a Primo Central collection that uses the link resolver, the citations will show as 'full text available' if the publication is active in both Primo Central and the link resolver.

If the Primo Central collection uses fixed availability, the citations will always show 'full text available'.

No full text results show when the 'Expand My Results' option is selected. No full text results only appear if the publication is active in a Primo Central collection, but not the link resolver.

## 1.21 Unexpected results



### Notes:

Occasionally in Primo, you may encounter unexpected results. If you do, check with your Primo Administrator - they can help you determine the cause and if a fix is needed.

But in the meantime, let's walk through a few scenarios, and what might cause them.

Let's say you searched for a specific resource, and didn't find it in the search results. First, you would want to determine if the resource should be in the local repository, or Primo Central.

If it's a local record, it may not be loaded into Primo yet. On the other hand, the record may be in Primo, but the values in the record didn't match your query. If this is the case, you could check the search section in the PNX to see the values that were indexed for searching.

If it's a Primo Central record, the collection that contains the publication may not be active in Primo Central, or full text may not be available. Try expanding the results to see if it's included in the no full text records.

If it's showing no full text and you know that you should be able to access it, it means that the collection is active in Primo Central, but may not be in the link resolver.


The last scenario is when a record shows full text, but you can't access it. You would want to determine what type of delivery the resource used. If the collection was using fixed availability, try confirming whether or not the library is still subscribed to it.

If the collection is using the link resolver, there are several potential causes. If the library is still subscribed to the

collection, there may not be enough data in the citation to form a successful link. Try checking in the subscription database directly to see if the full text is available there.

Again, your Primo administrator can help you understand unexpected results in Primo.

## ***1.22 Optimizing the User Experience***



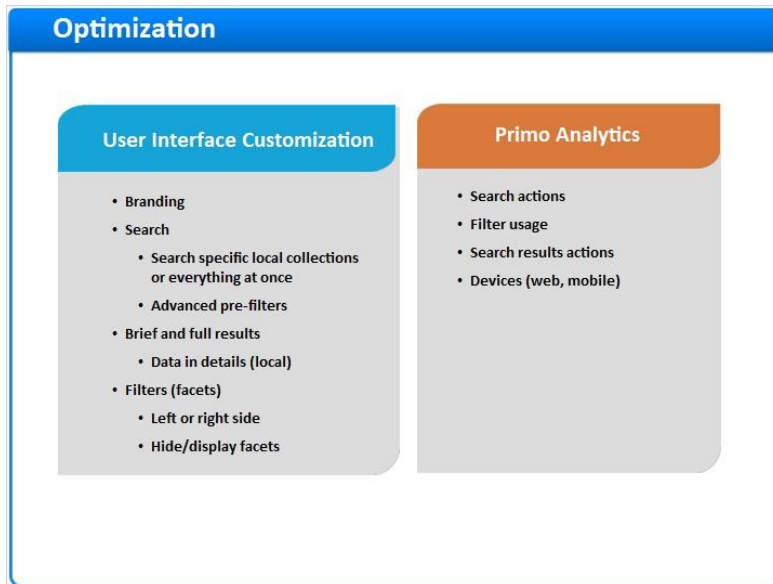
The slide features a blue header with the word "Agenda" in white. Below the header is a white rounded rectangle containing a list of five bullet points. To the right of the list is a colorful graduation cap icon. The list items are: "Discovery, Delivery, and Optimization", "Library collections in Primo", "E-resources in Primo", "Understanding Search Results", and "Optimizing the User Experience" (which is bolded).

- Discovery, Delivery, and Optimization
- Library collections in Primo
- E-resources in Primo
- Understanding Search Results
- **Optimizing the User Experience**

### **Notes:**

Optimizing the User Experience

## 1.23 Optimization



### Notes:

Libraries can optimize the user experience in several ways.

Through user interface customization, the library can brand the interface, using their own institution's logos and color themes.

Search options can be customized - for example collections can be grouped various ways for searching. The pre-filters in Advanced search can also be customized - for example, pre-filters can be hidden or added if necessary.

The way the brief and full results can be displayed is customizable as well.

Filters can show either on the left or right side of the screen, and it's possible to show, hide, and re-label these facets

Primo Analytics allows the library to see how patrons are searching, how they're using filters and facets, what they're doing with their results, what devices they're using to access Primo, and more.

## 1.24 Summary

### Summary

- What discovery, delivery, and optimization are in Primo
- How the library's collections and e-resources are presented
- How to understand search results
- How the user experience can be optimized

### Notes:

In this session, we covered what discover, delivery, and optimization are in Primo, how the library's collections and e-resources are presented, how to understand search results, and how the user experience can be optimized in Primo.

## 1.25 Additional Resources

# Thank You!

### Additional Resources

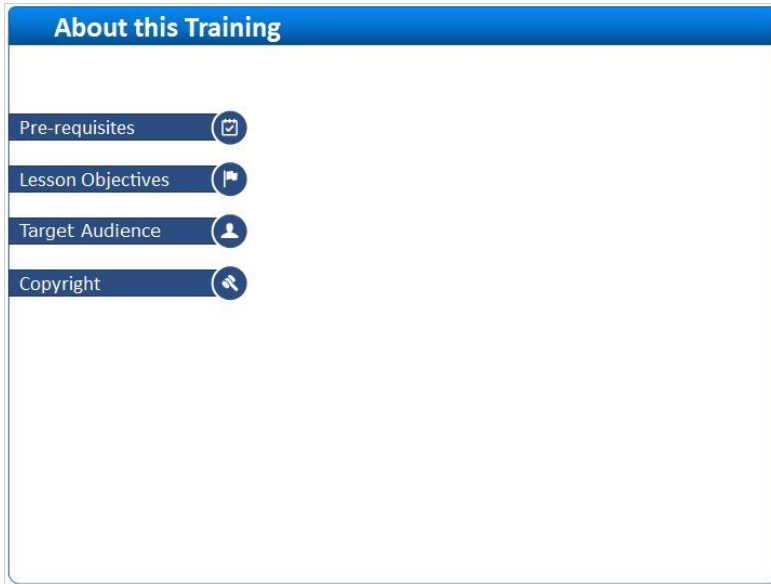
- Online Help
- Ex Libris Knowledge Center: <http://knowledge.exlibrisgroup.com>



**Notes:**

Thank you for watching How Primo Works. For more information about Primo, please visit the Knowledge Center.

**1.26 About this Training**



**Notes:**

## 1 (Slide Layer)

**About this Training**

- Pre-requisites
- Lesson Objectives
- Target Audience
- Copyright

This presentation assumes that you have viewed these training sessions:

- Using Primo

## 2 (Slide Layer)

**About this Training**





- Pre-requisites
- Lesson Objectives
- Target Audience
- Copyright

By the end of this training session, you will know:

- What discovery, delivery, and optimization are in Primo
- How the library's collections and e-resources are presented in Primo
- How to understand search results
- How the user experience can be optimized in Primo

### 3 (Slide Layer)





#### About this Training

- Pre-requisites 
- Lesson Objectives 
- Target Audience 
- Copyright 

- Staff responsible for maintaining Primo
- Staff responsible for ensuring data is correctly represented in Primo
- Staff responsible for customizing the appearance of Primo

### 4 (Slide Layer)

#### About this Training

- Pre-requisites 
- Lesson Objectives 
- Target Audience 
- Copyright 

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