Main focus of the presentation

- What a Discovery Tool is
- How they work (are empowered) - Knowledge Bases and Link Resolvers
- Opinion - How & who should use them

Note: Discovery tools functionality is too technical and complicated... therefore the focus will be based on a summarised and simplified version of these concepts.
### Examples of Discovery Tools & their Knowledge Bases & Link Resolvers

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*Note: The presentation is NOT about any of these tools specifically, BUT is generally about the functioning of a discovery tool and its infrastructure.*
A Discovery Tool

- A Discovery Tool is a new breed of library search tool/interface that provides a simple unified keyword search of the combined:
  - Catalogue
  - Online resources the library subscribes to (or offers its clients), such as:
    - Full text articles
    - Institutional repositories
    - Archives
    - Traditional bibliographic sources (journal articles, subject databases, course material, ETDs, etc.)
A Discovery Tool...

- A Discovery Tool operates in the same manner as Google by indexing metadata from different library resources into a single searchable database or index.
- It also uses facets to further refine search results.
- Therefore this means:
  - Faster, more convenient and more accurate results than the Library Catalogue alone.
  - Increased scope and depth of the results.
Why a Discovery Tool

• Libraries need a discovery tool to:
  – Enable them to compete with Google; clients want a single search box for everything
  – Demonstrate to clients the advantages of using the Library services rather than Google
  – Ensure that the catalogue has a friendly interface for clients to use and access its excellent resources
  – Ensure that clients do not have to know the databases names, or to sift through long lists of resources to do their searches
  – Offer increased opportunities to get more out of the library resources
The Current Library Electronic Resources Scenario

• The coverage of e-content packages is constantly changing, and it demands a systematic and collective approach - managing such data manually is no longer feasible

• The increasing volume of electronic resources and their changing nature makes it difficult to provide access to e-journals and their articles via manually encoded links

• Therefore, to provide access to large electronic collections, a library requires a reliable and efficient mechanism to directly link clients to individual resources...
A Link Resolver & a Knowledge Base

• A Link Resolver and a Knowledge Base of e-resources’ holdings are the essential library infrastructure required to manage electronic resources and to facilitate client access to those resources.

• The Link Resolver and Knowledge Base rely on each other, and can be integrated with a discovery tool, federated search, electronic resource management and other library automation products.
A Link Resolver

- A Link resolver is an information ecosystem based on OpenURL, and its functions are to:
  - Source OpenURL links from database platforms
  - Efficiently manage linking in a scalable manner
  - Interpret OpenURLs and calculate the best link to connect the clients to full texts, or to other relevant resources
- Instead of using hard-coded links, OpenURL uses a standardised structure to present links to the resource metadata
A Knowledge Base

• A knowledge base is required in order to:
  – Track contents of subscription packages by describing specific materials that the library has access to
  – Describe and manage the coverage dates for each title
  – Describe and manage the details relevant to linking to specific electronic resources
A Knowledge Base...

• There is no freely available central database that comprehensively describes the electronic holdings of a library’s content package

• Instead, various independent knowledge bases have been developed to support resources discovery

• The creation and maintenance of a knowledge base requires:
  – An ongoing comprehensive, consistent, and correct automated and manual archival process
  – A continual flow of updated information from publishers
  – Library staff’s effort to eliminate errors and to ensure its completeness
Knowledge Base & Link Resolver Challenges

• There are structural dependencies between discovery services and their knowledge bases and link resolvers.

• Even though it is possible to mix and match link resolvers and knowledge bases between various discovery tools, it comes with a heavy burden of staff maintenance.
Knowledge Base & Link Resolver Challenges...

- Each knowledge base provider has access to **different source data** from different content providers
  - Therefore:
    - A specific vendor’s knowledge base might not be compatible with other discovery tools
    - Using a third-party knowledge base might require repetitive synchronisation of the library’s electronic holdings or links to resources
- The OpenURL linking process is **very fragile**, often resulting in dead-end links and other end-user frustrations
The Solution

• The development and advancement of KBart - (Knowledge Bases and related tools) working group

• KBart is a joint initiative tasked with exploring data problems related to OpenURL

• KBart’s recommended practices will ensure that:
  – Content providers make their resources lists KBart compliant
  – Content providers make their resources lists available to all Knowledge Bases producers
  – Knowledge Bases become similar in terms of the quantity and quality of their coverage
  – Each knowledge base provider is granted access to similar source data from content providers
Conclusion

- Who should use Discovery Tools (empowered by Knowledge Bases and Link Resolvers)?
- How they function (Discovery Tools, Knowledge Bases and Link Resolvers)
- How they are integrated (Discovery Tools, Knowledge Bases and Link Resolvers)