Key Standards and the Information Chain

A Library Perspective

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Discovery and Access: Standards and the Information Chain

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To cover...

Libraries and standards

Standards development, take-up and use in libraries

- Influences from real life
- Patterns
- Focus

The future of standards in libraries

Libraries and standards

Libraries are no strangers to standards

- Classification schemes, thesauri, cataloguing standards & guidelines
- Standards help library users to find the information they need

Standards in libraries

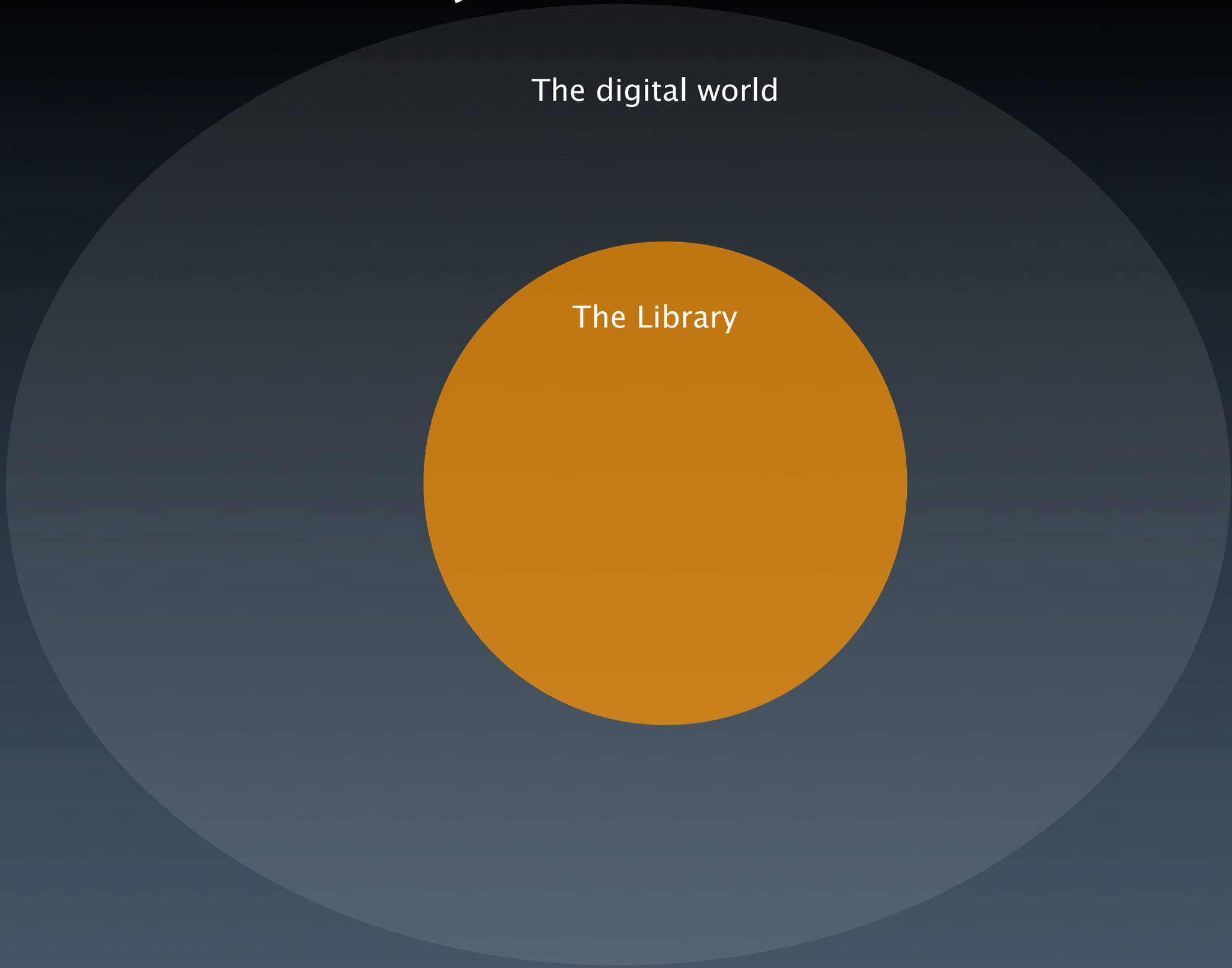
- Standards that are specific to libraries
  - Used to manage physical resources
  - e.g., MARC, AACR2/RDA, MeSH, Dewey
- General standards that libraries can make use of
  - Increasing in range in the digital world
  - e.g., XML, RSS, Web services
- Standards that libraries develop that others can use
  - Wider applicability in the digital world

Standards used by libraries

Standards used by libraries

The digital world

Standards used by libraries



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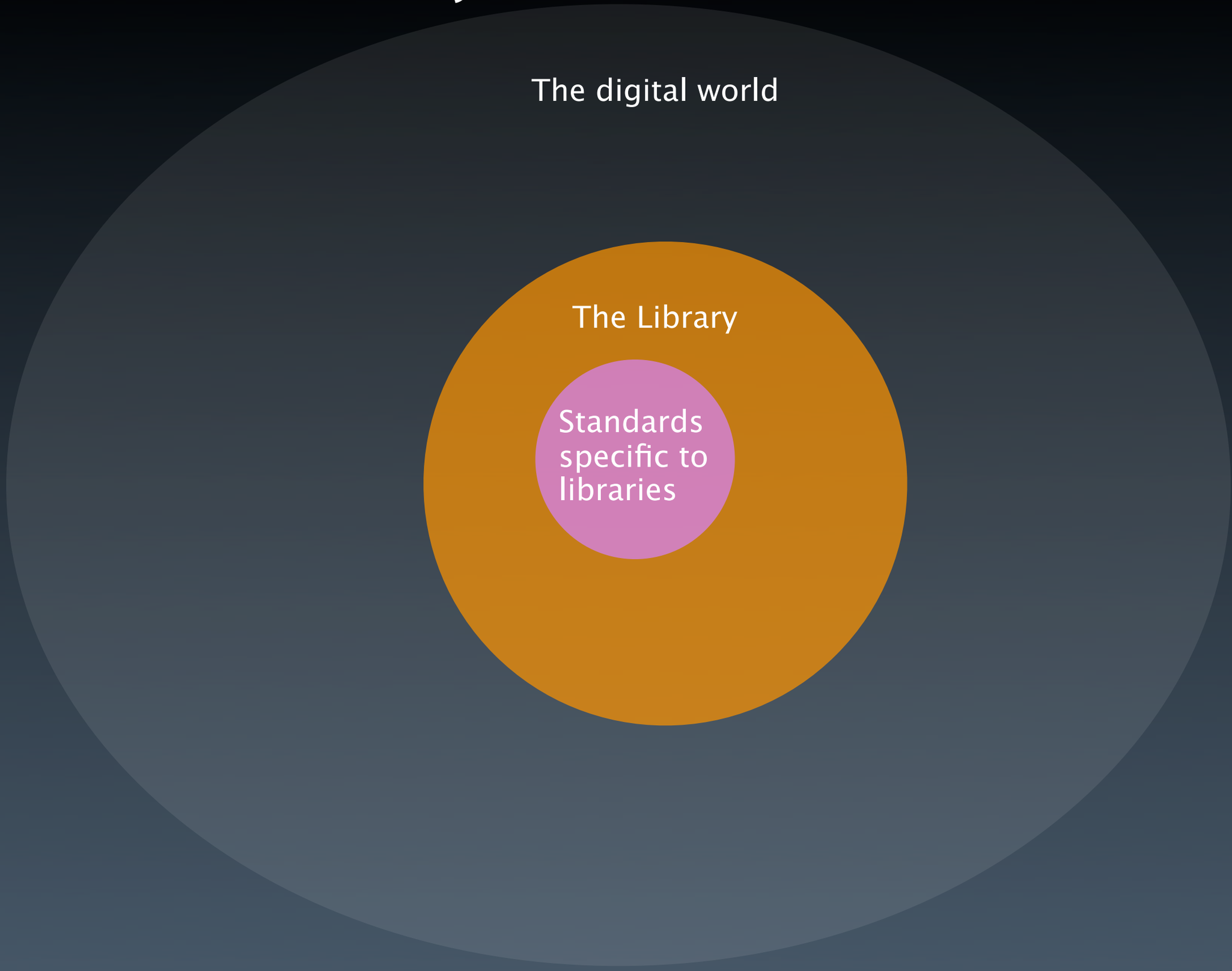

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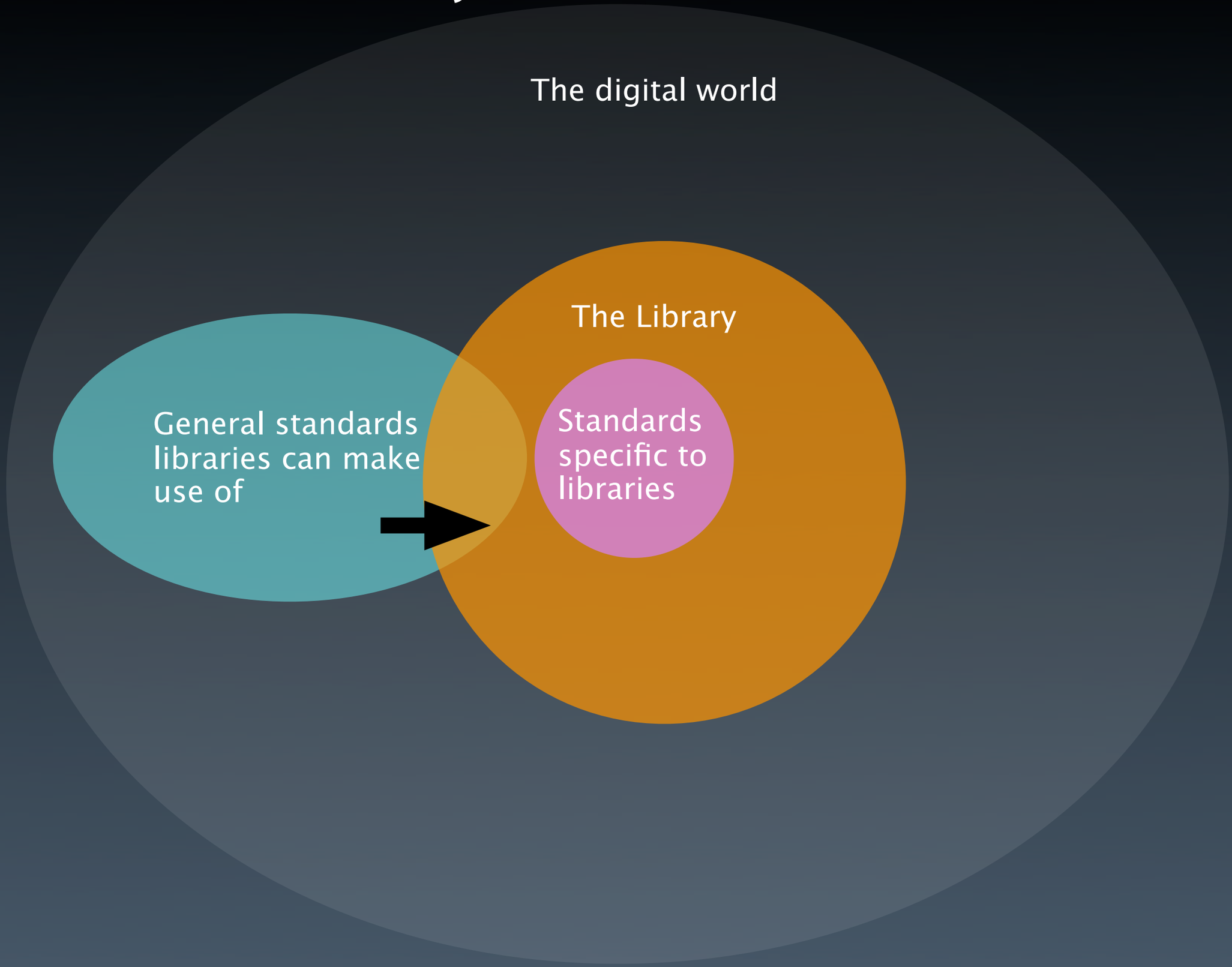

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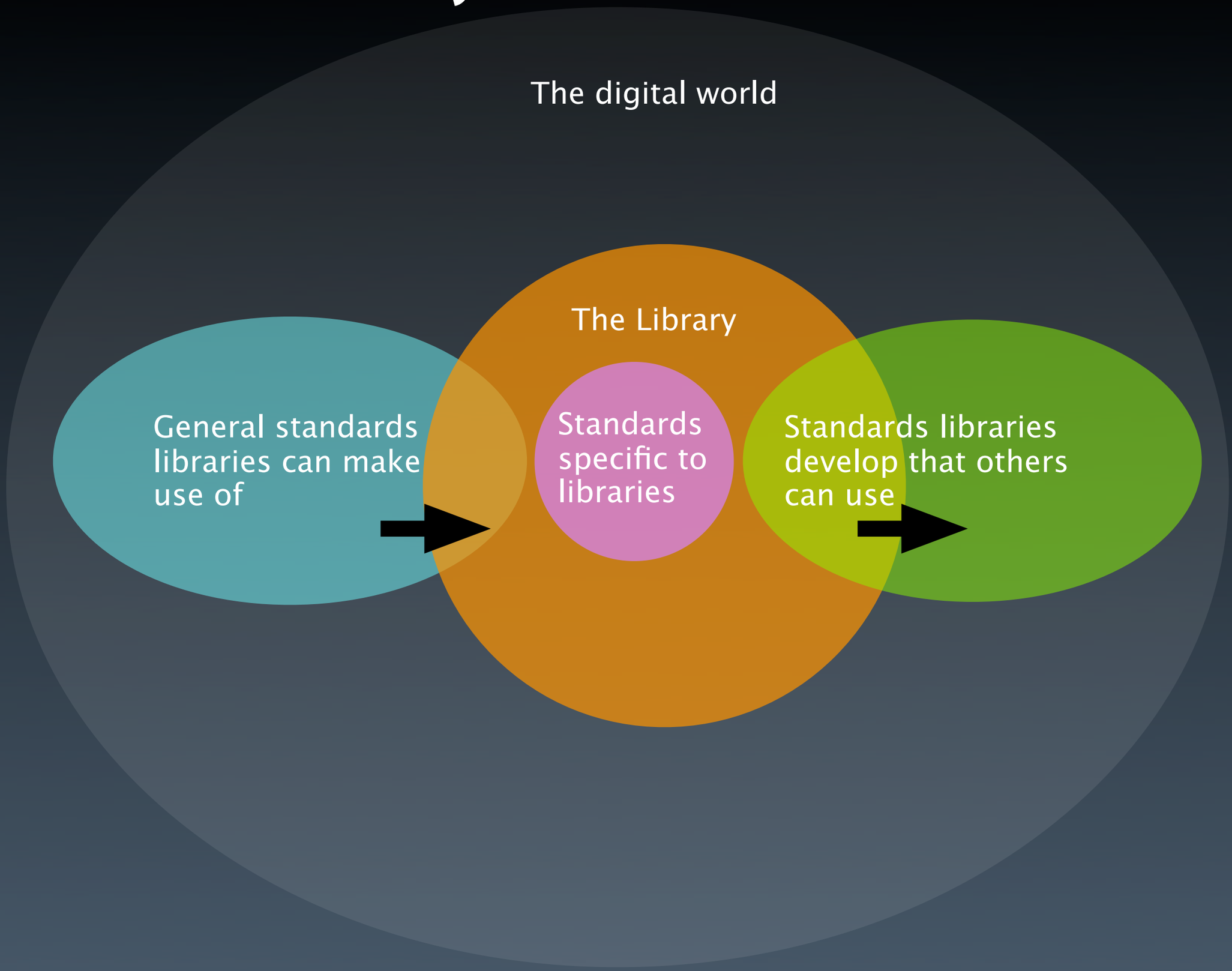

Searching multiple sources of information

Desire to search across many databases

- Acceptance that databases are different
- Needed a way of providing a common (standard) way to *interact* with them

Z39.50 standard developed in 1988

- Developed by NISO
- Influenced by Linked Systems Protocol work by OCLC, LoC, RLG, and Washington (Western) Library Network
- Search/retrieval has emerged as primary use of the standard

Developed prior to the Web

Using Z39.50

Library systems

- Allows remote searching of library catalogues and searching across multiple catalogues
  - e.g., Local library system configuration, Clumps projects - InforM25, RIDING, CAIRNS, Music Libraries Online
  - CCInterop project highlighted scaleability and quality limitations of the standard

Bibliographic databases

- Allows complex searching of bibliographic and other databases in a standard way
  - e.g., searching from within EndNote or a portal
- Allows metasearching
  - Accuracy limitations when presenting results across different resources

Searching in a standard way

Z39.50's limitations suggested another method was required

- Greater scaleability to search multiple resources
- More web-friendly
- Easier to implement and configure

Library of Congress launched Z39.50 International: Next Generation

- Developed Search/Retrieve on the Web (SRW) and companion Search/ Retrieve via URL (SRU) protocols
- Both are based on XML
- Both are underpinned by flexible Common Query Language (CQL)
  - Different levels of conformance for ease of implementation

Using SRW and SRU

Early project take-up

- The EU Artiste and The European Library project both made successful early use of SRW/U
- Digital repository development is looking to use SRW/U as the basis for searching repositories
  - e.g., DSpace and Fedora

Acting as the basis for NISO Metasearch Initiative investigations

- Seeking to identify a common standard that can be used to provide more harmonised metasearch query results sets
  - Overcome implementation hurdles, whilst maintaining potential for richness

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Known deficiencies, but ‘known’	More efficient system, but lacking a champion

Locating information post-discovery

Search protocols tell a user something exists, but what comes next?

There is a desire to link the user to the information

- This can be hard-coded
  - Inefficient
  - Link is controlled by resource provider
- This can be dynamic and context-sensitive
  - Adaptive and therefore more efficient
  - Link is controlled by library

OpenURL developed in 1999 at the University of Ghent

- Herbert Van de Sompel & Patrick Hostenbach, SFX project
- Bottom-up standards development based on identified need

Using OpenURL

SFX licensed and commercialised by Ex Libris

- Many OpenURL resolvers now available
- OpenURL an established part of many library services

OpenURL standardised by NISO in 2004 (Z39.88)

- Original specification focused on bibliographic materials
  - linking reference to full-text
- Standard is now more abstract in its design
  - Can facilitate linking between almost any types of material and locations
  - Early days to assess how this will be used

COinS allows OpenURLs to be embedded in web pages

The library as content provider

Institutions are producing many digital materials

- There is a desire to manage this locally
  - Internally for efficiency and preservation
  - Externally to expose materials produced by the institution

Digital repositories offer a capability to support this

- Repositories are not ‘standards’ themselves
  - But there is a desire to manage digital materials in a standard way to facilitate interoperability - future-proofing

Changing role for a library

- Previous emphasis has been as an information intermediary

Digital repositories and standards

Metadata standards

- Dublin Core, MARC(XML), EAD, TEI, MODS, etc. (ONIX?)

Packaging standards

- METS, MPEG-21 DIDL, IMS CP

Identifier standards

- DOI, Handles, ISBNs, ISSNs, etc.

Disclosure standards

- OAI-PMH, RSS, ATOM

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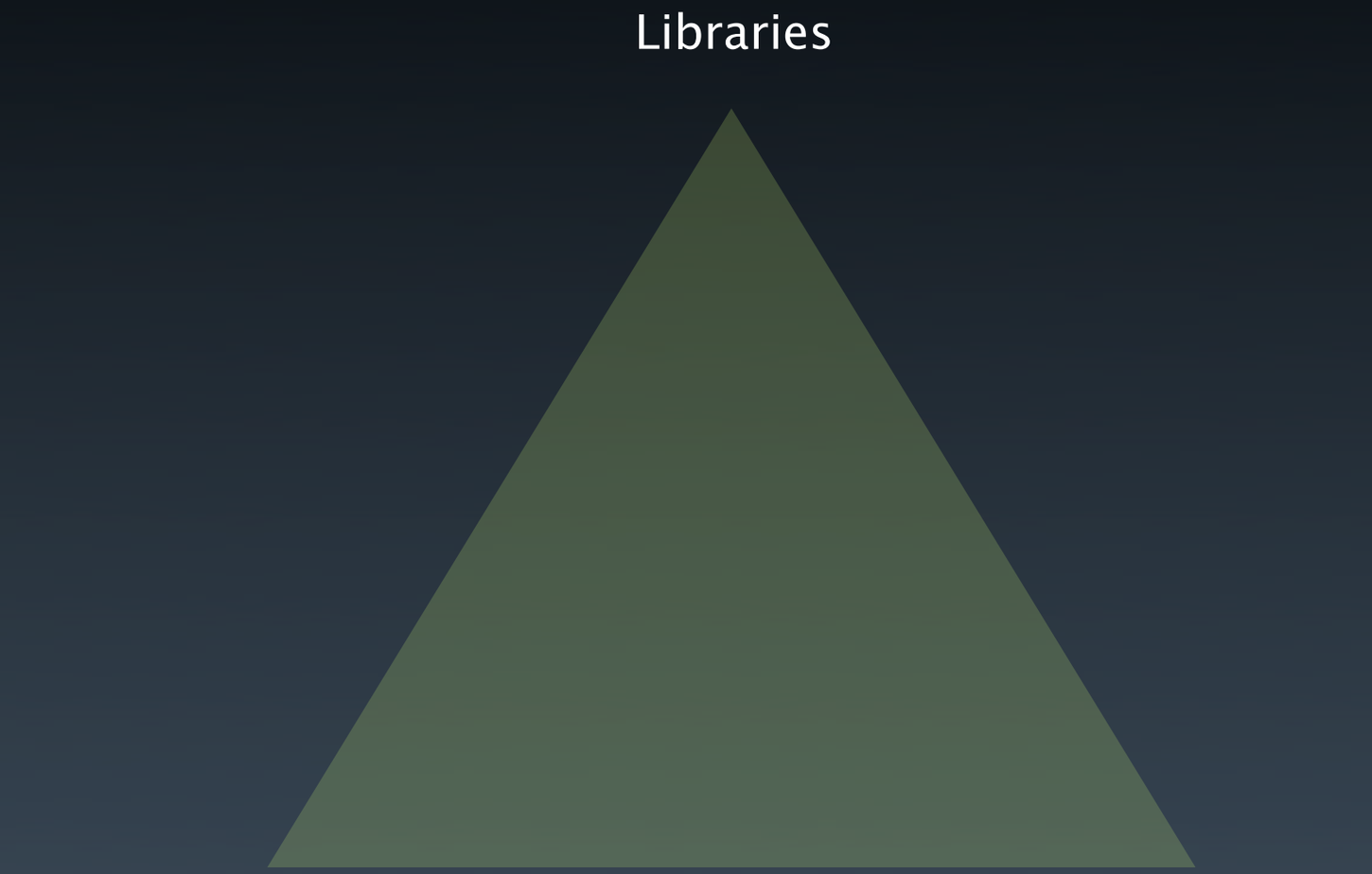
Appear to have been more successful overall	Often struggle for take-up and application

Library focus in standards development



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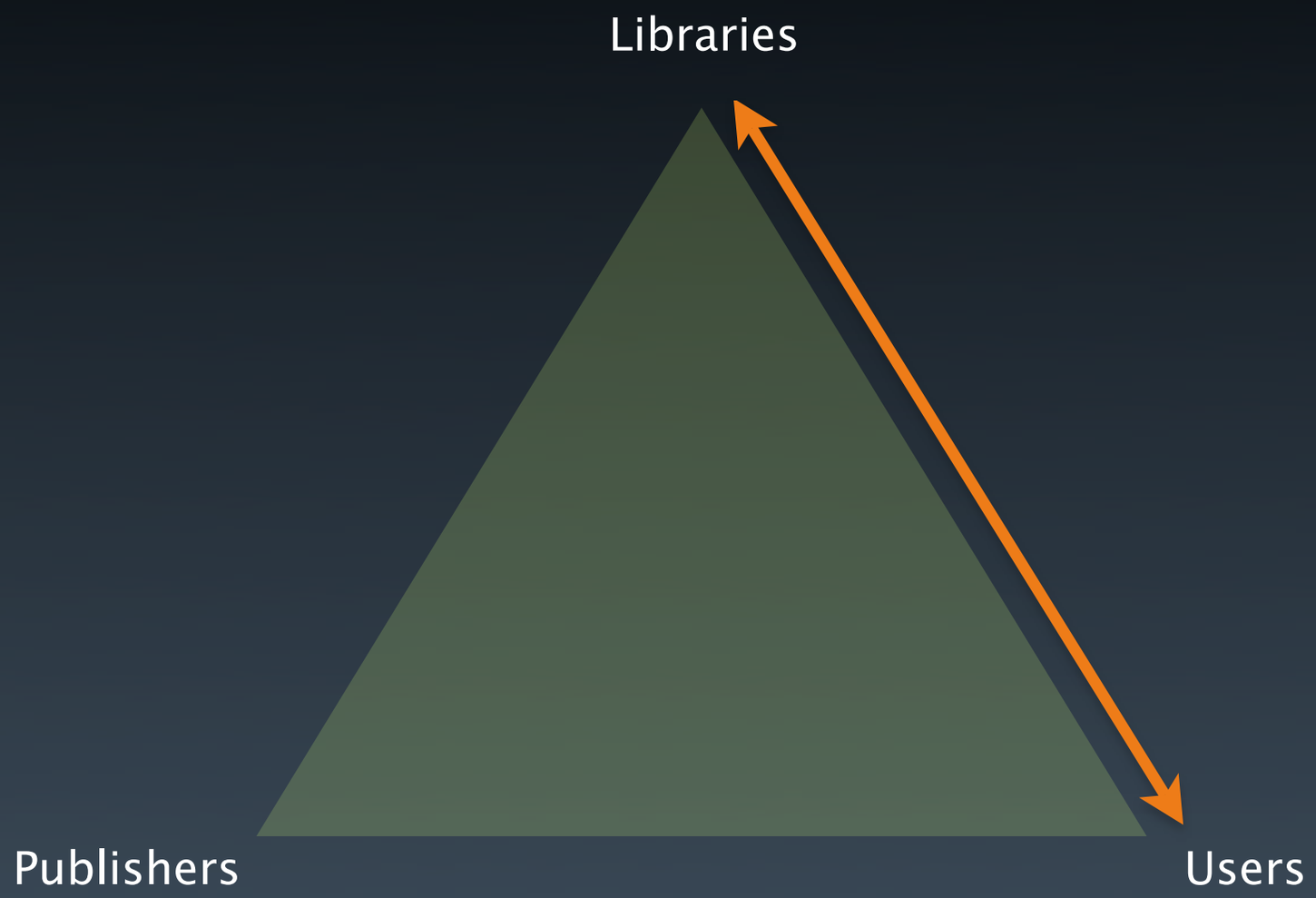

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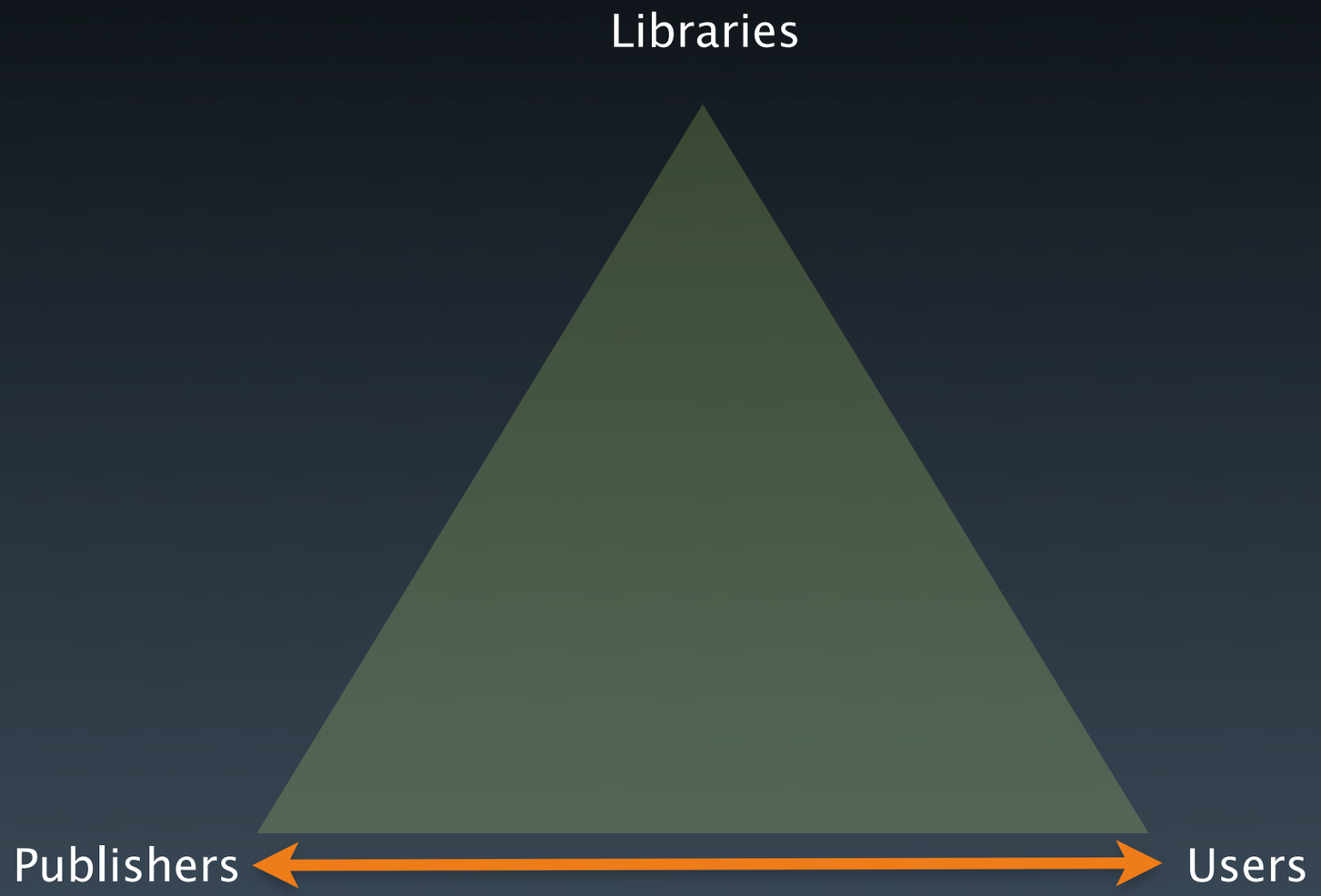

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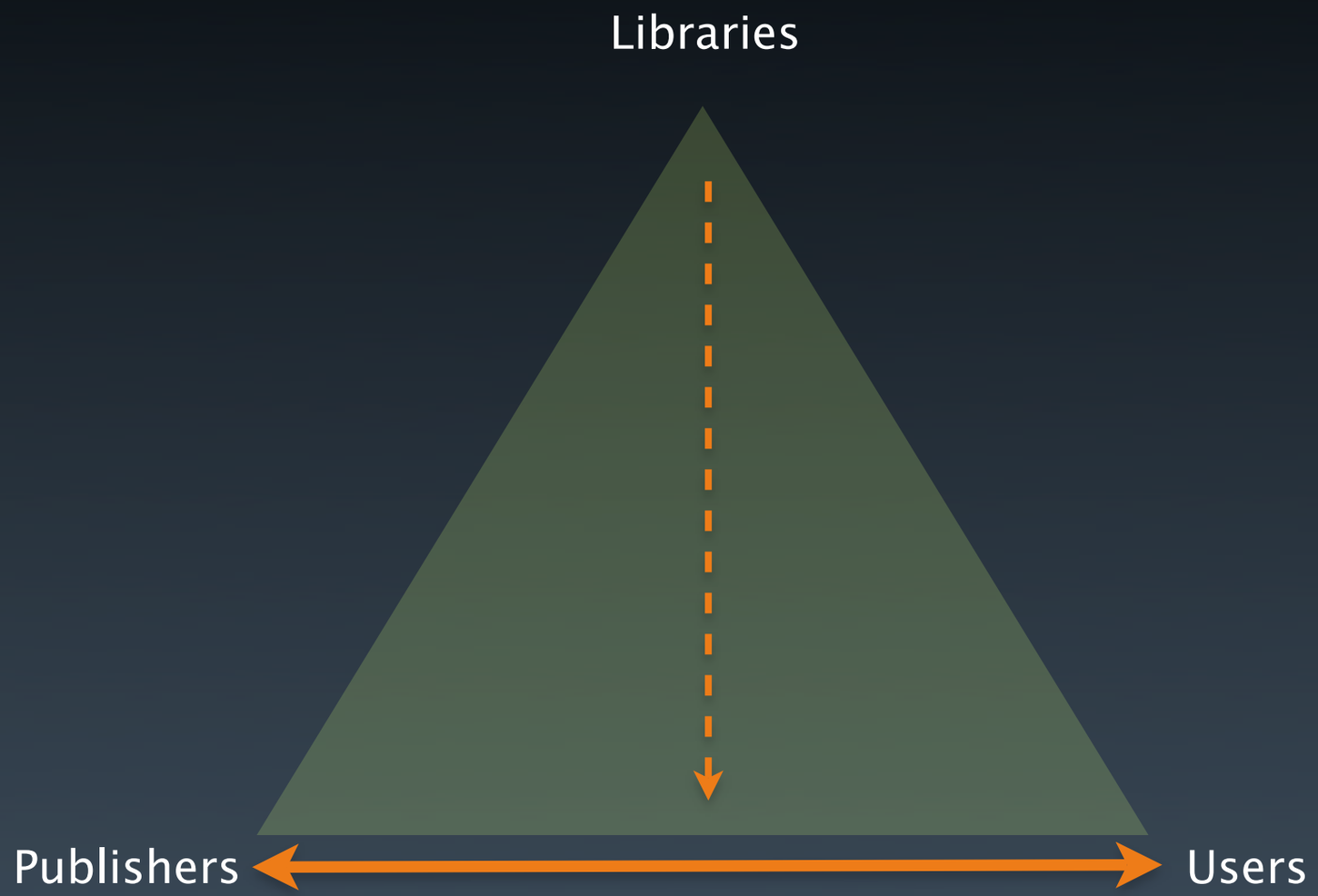

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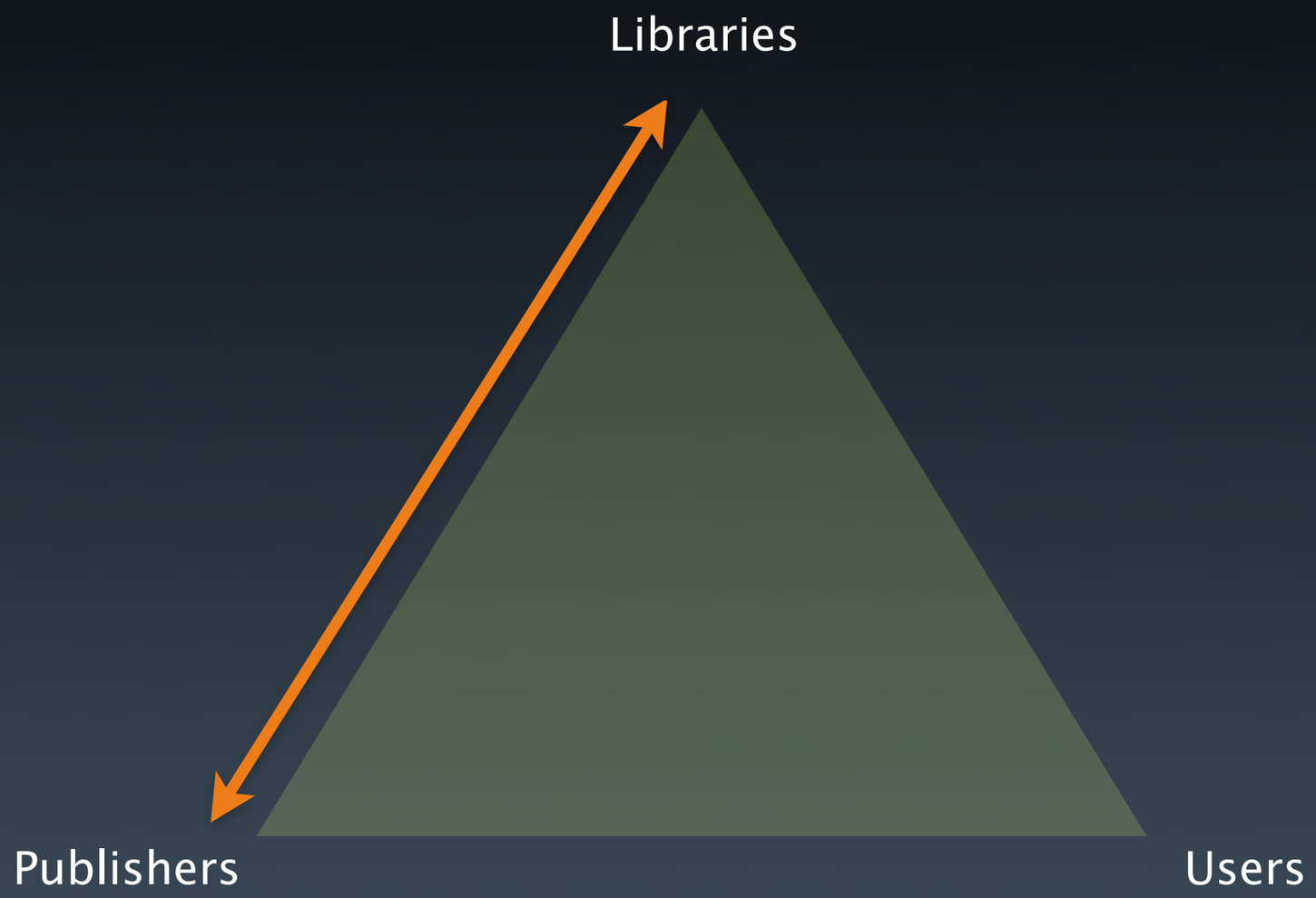

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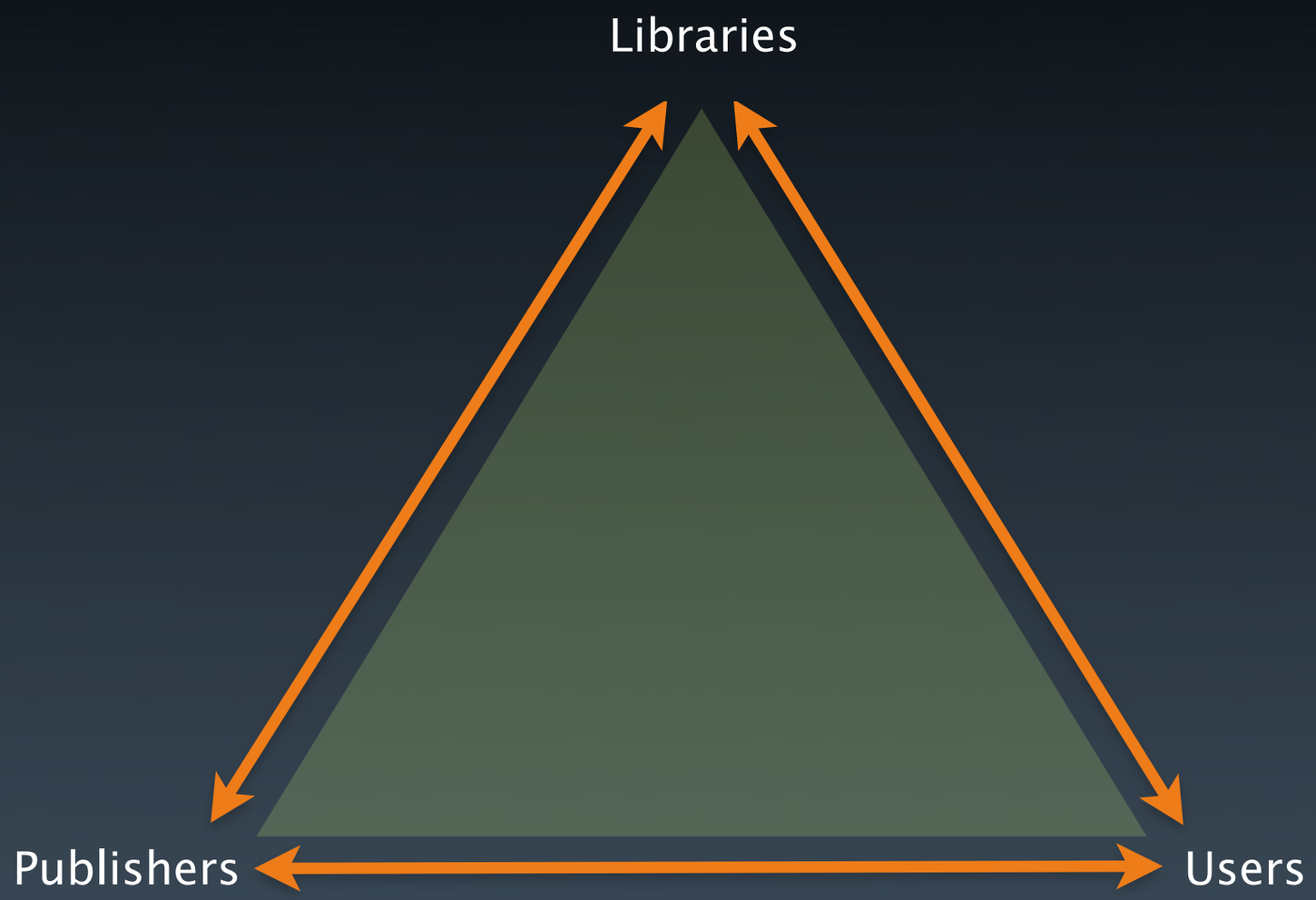

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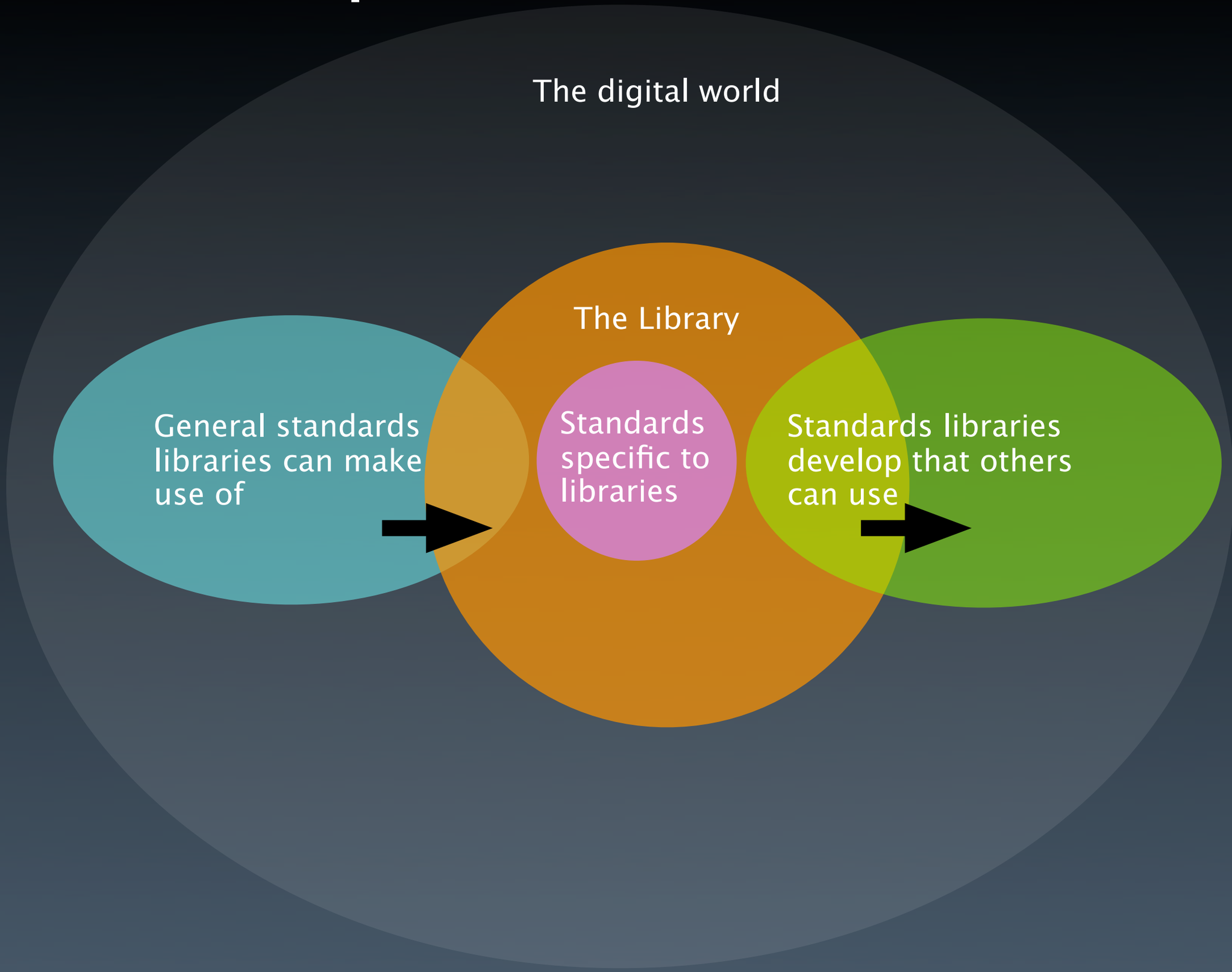

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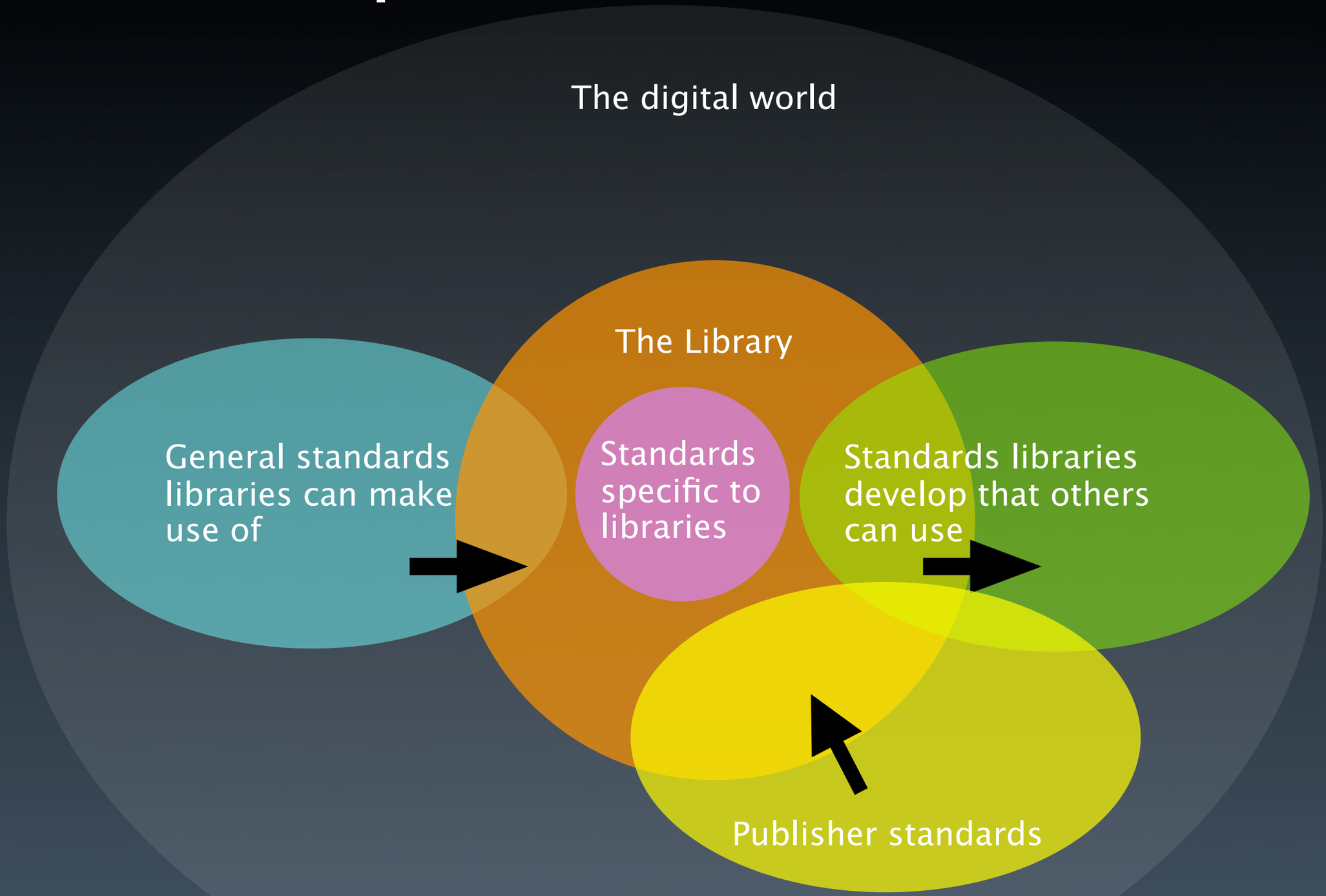

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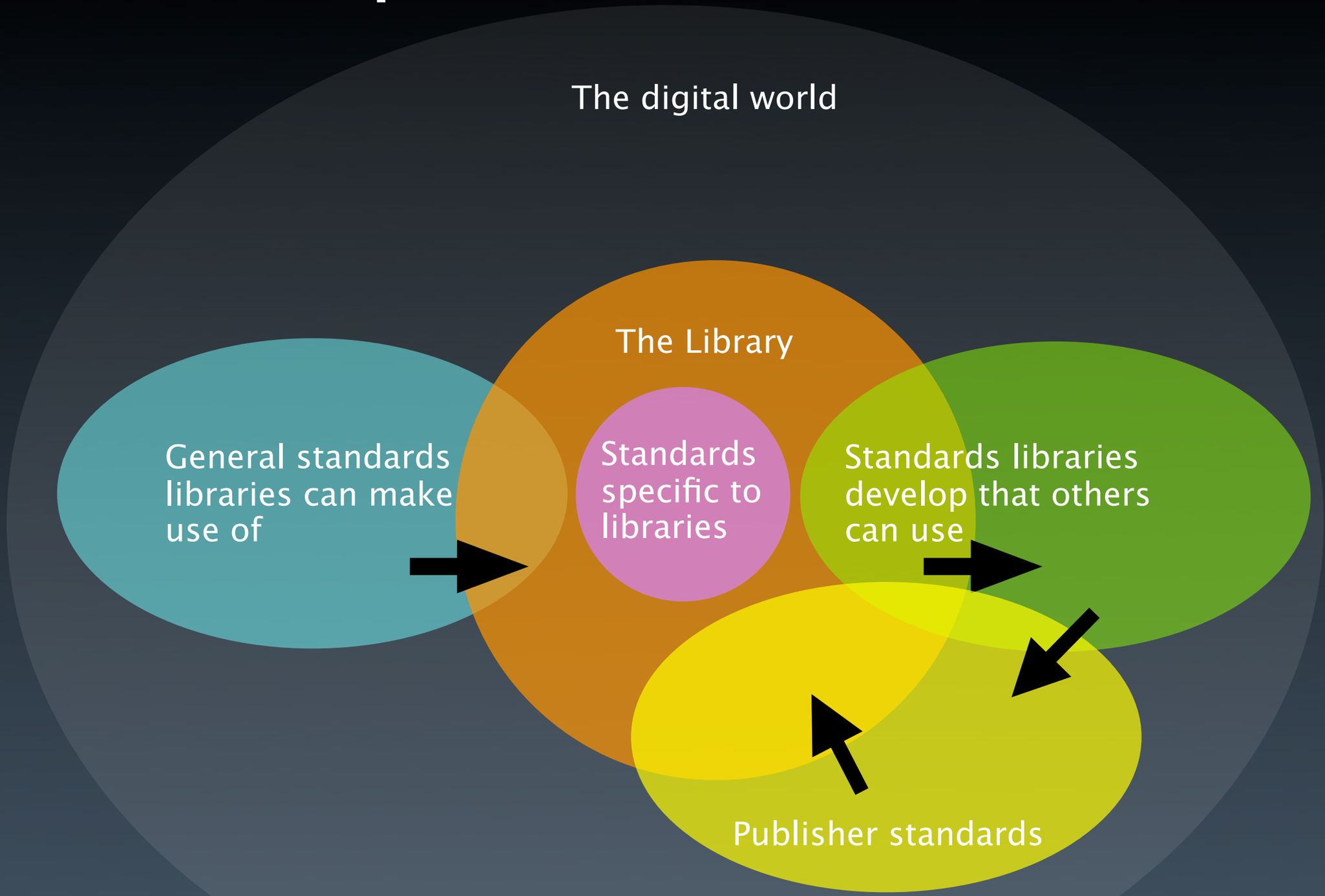

The future of standards development in libraries

As in the past, standards will be vital to ensure common access to library collections

Standards will not solely originate in the library field

- Libraries will benefit from standards development in other fields
  - e.g., publishing, business, commercial
- Libraries may also suffer from standards development in other fields
  - e.g., preference for OpenSearch over SRW
  - Battle between good enough and high quality

Libraries need to articulate what they want to do to inform standards development that enable high-quality services

- Testing grounds are needed to base these standards and their use on experience, e.g., PALS

Thank you

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