Effective Ingestion of Digital Objects in Institutional Repositories Using Subject Repositories

Moonga HABUKALI · Mathews MBEWE · Nozyenzi MWALE · Mathews MWEWA · Nandi SIKAZINDU · **Lighton PHIRI**

The University of Zambia

Zambia

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Who Am I? (1/2)

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Who Am I? (1/2)

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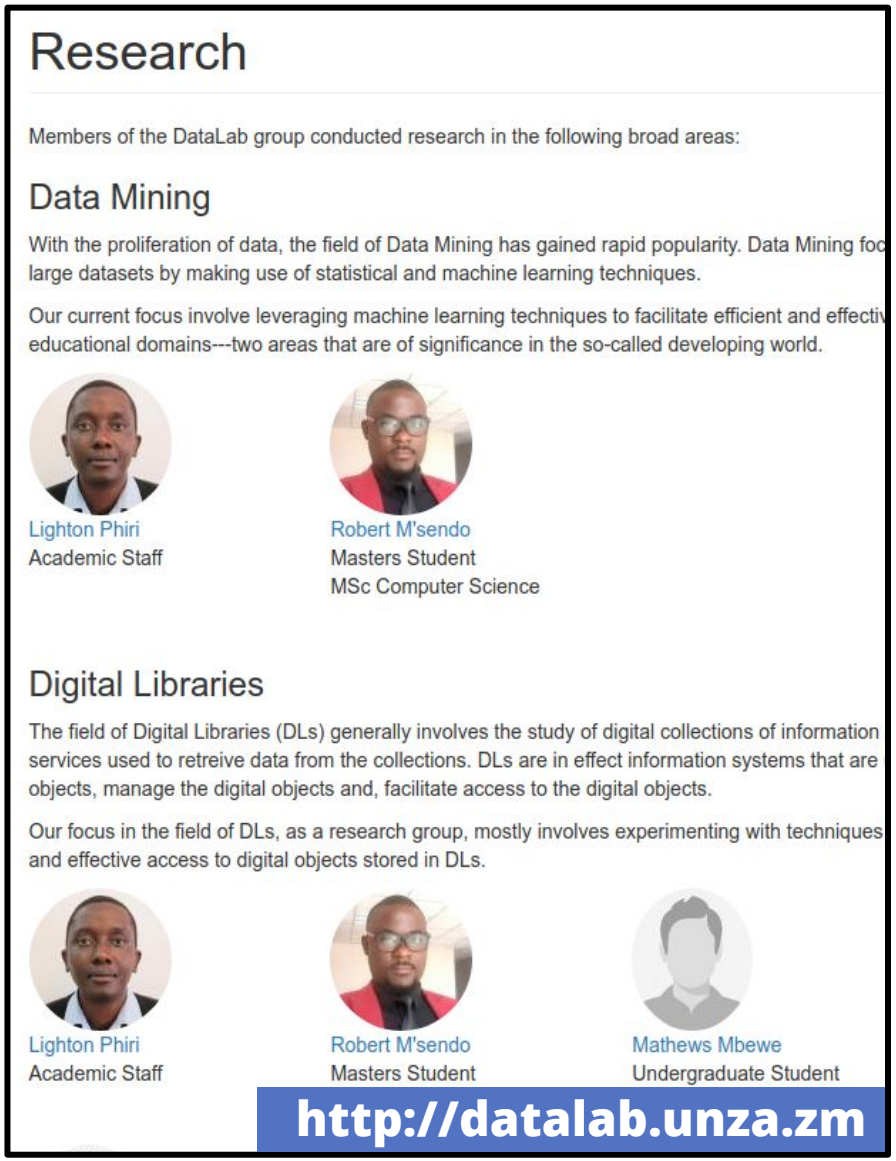
Who Am I? (2/2)

- Currently a faculty staff at The University of Zambia
- Previously a graduate student at The University of Cape Town
- Founding member of The DataLab Research Group, comprising of academics and students, working in three main areas:
  - Data Mining
  - Digital Libraries
  - Technology-Enhanced Learning



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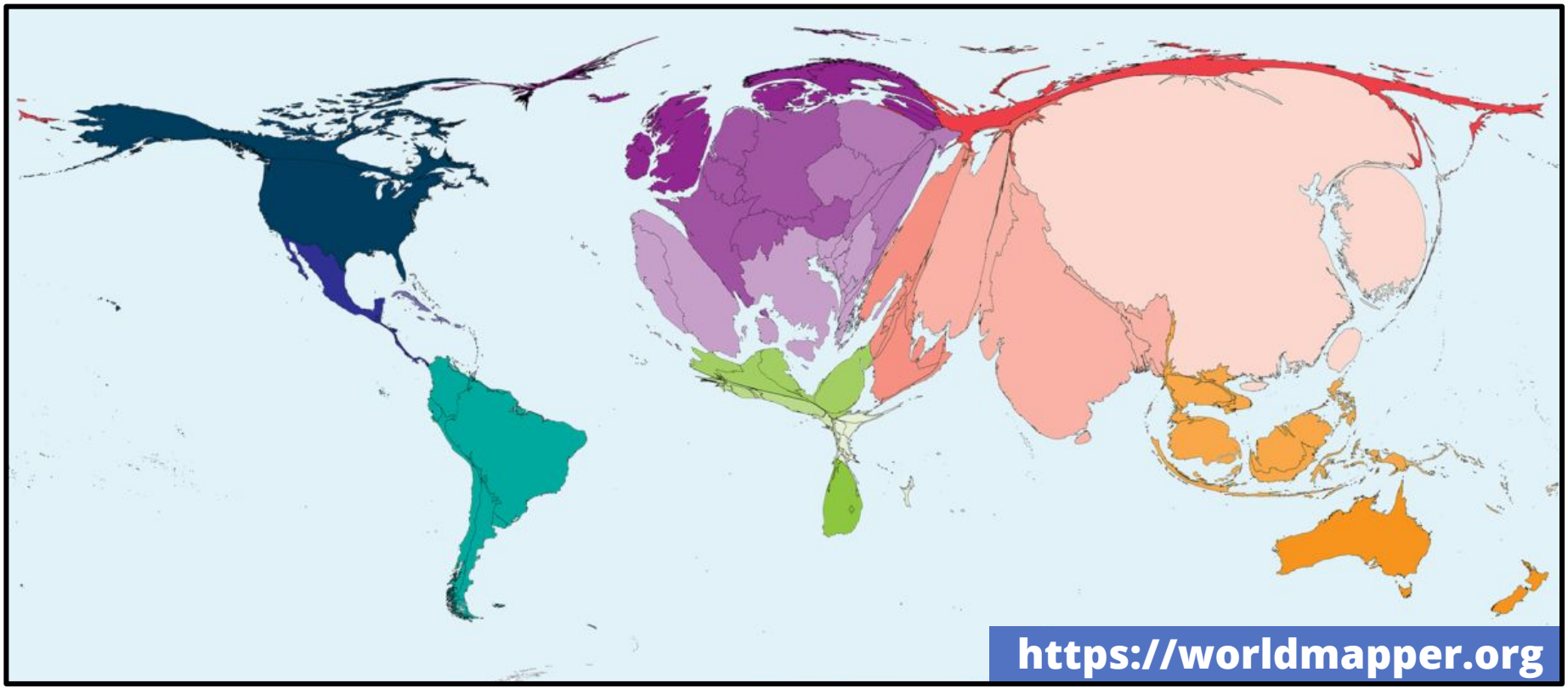
Motivation, Problem Area (1/4)



- **Online visibility of research output produced in the so-called Global South is noticeably low [...]**
  - **Recent studies show that Africa generates less than 1% of the world's research**

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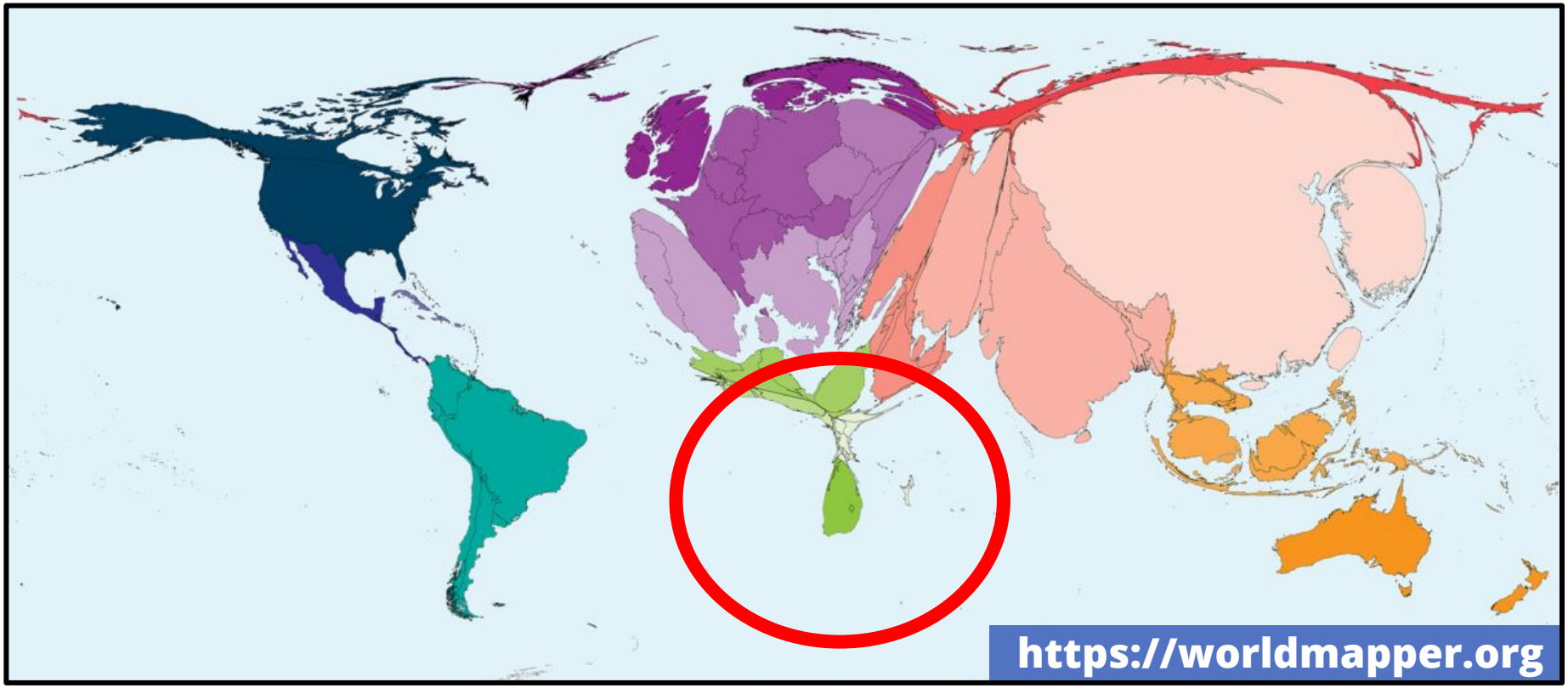
Motivation, Problem Area (1/5)



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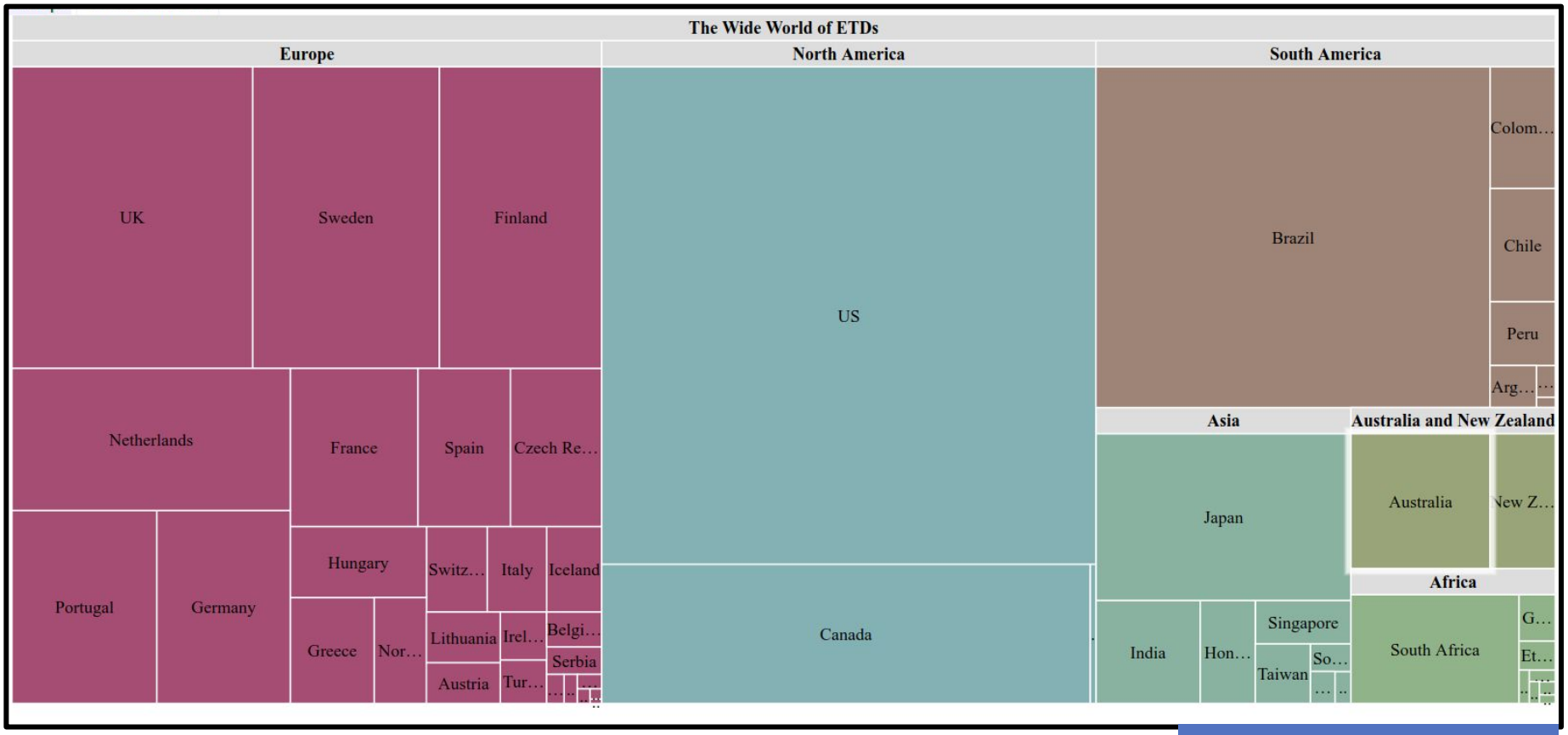
Motivation, Problem Area (2/5)



- **Disproportionate online representation is apparent in most academic databases and is especially concerning [...]**

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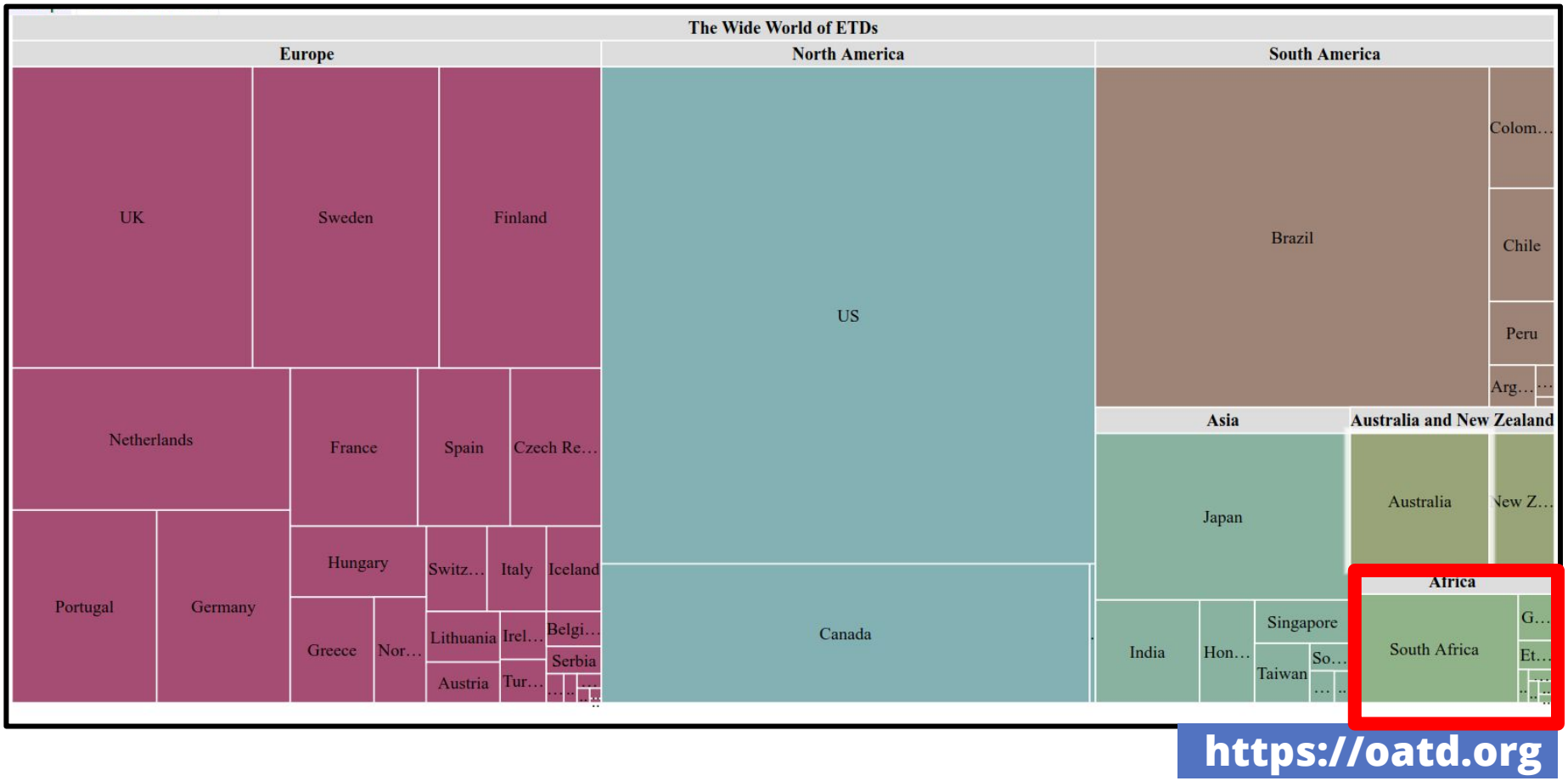
Motivation, Problem Area (2/5)



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Motivation, Problem Area (3/5)

Research Visibility in the Global South: Towards Increased Online Visibility of Scholarly Research Output in Zambia

View/Open

paper-icict18-online_visibility.pdf (199.6Kb)

Date

2018-12

Author

Phiri, Lighton

Type

Preprint

Scholarly research and publication form an integral part of the core functions of Higher Education Institutions (HEIs). It is generally standard practice for HEIs to deposit scholarly output into publicly accessible Institutional Repositories (IRs). While Zambia has seen a rise in the number of HEIs, with a total of six Public HEIs and 60 Private HEIs, there is little online visibility of scholarly output generated by these HEIs. A bibliometric analysis, focused on electronic theses and dissertations (ETDs), was conducted by harvesting scholarly publications from HEIs IRs, in order to demonstrate the low online visibility of scholarly research output in Zambia. We also outline technological initiatives, by using case examples from The University of Zambia, that can be employed to potentially increase the online visibility of HEIs scholarly output. Specifically, we illustrate how subject repositories and downstream aggregate services can be utilised to increase the visibility of scholarly output. The study shows that only two HEIs have established IRs, with noticeably low scholarly publications by academic staff. Furthermore, there is a noticeably long delay between the publication date of the ETDs and the ingestion date into the IRs. In addition, while not comprehensive, the proposed initiatives demonstrate technological initiates that could be employed to increase the visibility of scholarly research output.

URI

http://dspace.unza.zm/handle/123456789/5723

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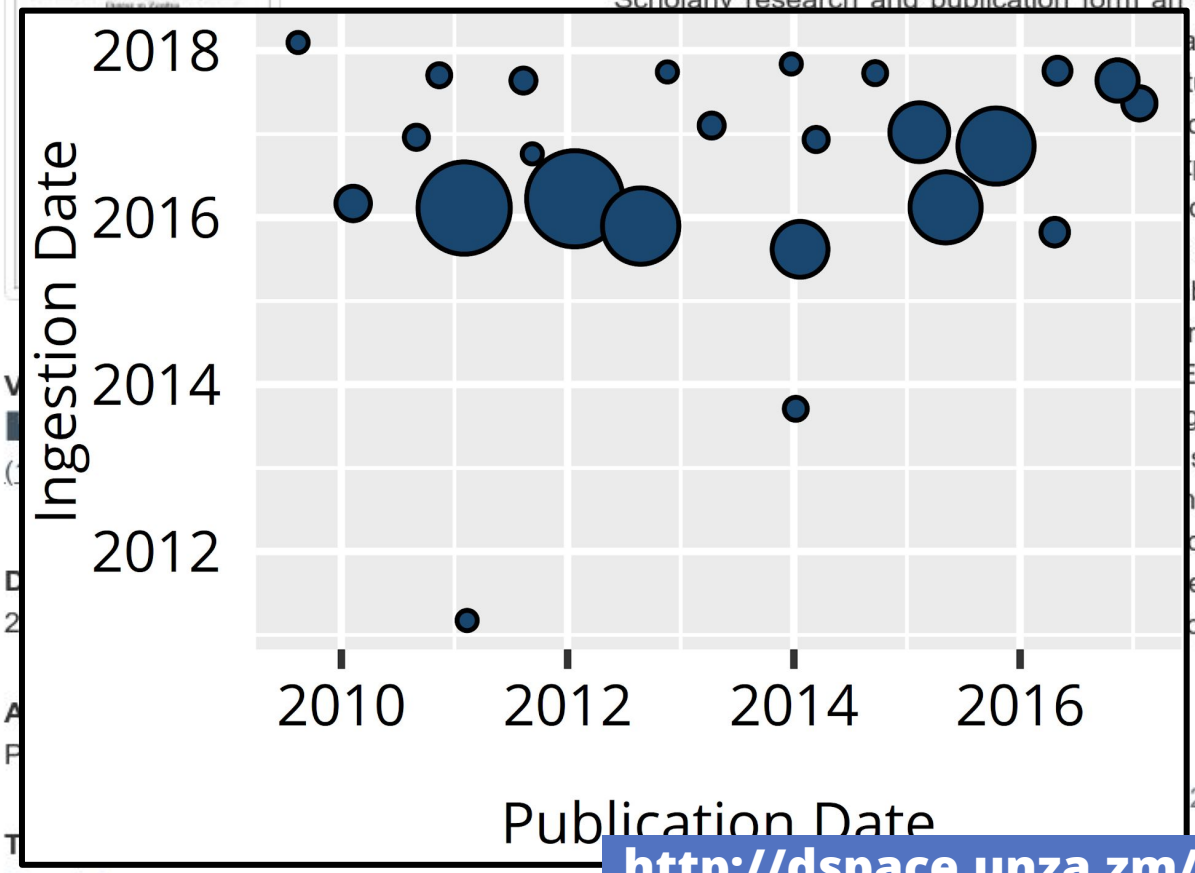
Motivation, Problem Area (3/5)

Research Visibility in the Global South: Towards Increased Online Visibility of Scholarly Research Output in Zambia



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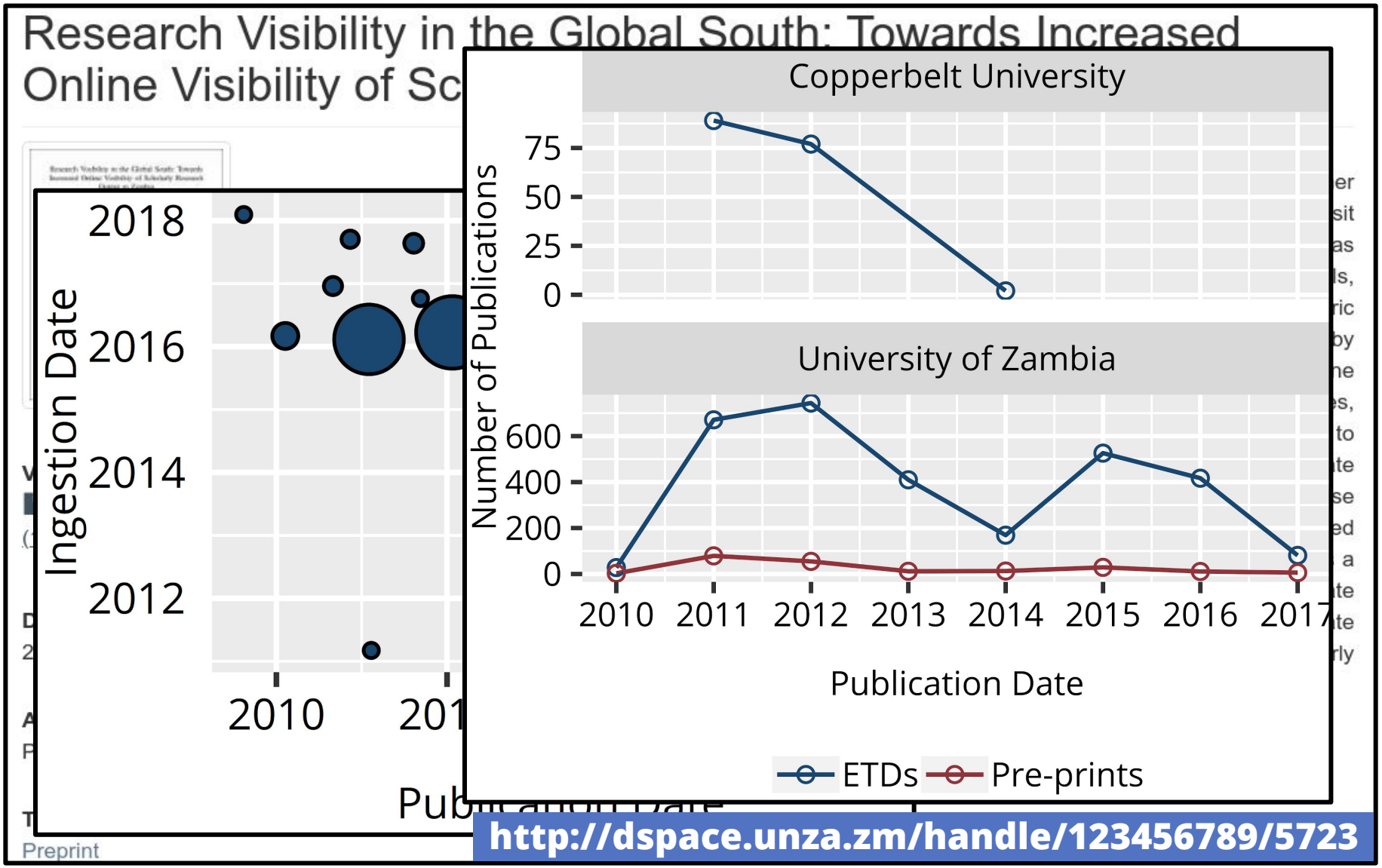
Motivation, Problem Area (3/5)



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Motivation, Problem Area (4/5)

Open Access Electronic Publishing for Increased Online Visibility: Tooling Challenges and Potential Solutions

Lighton Phiri <lighton.phiri@unza.zm>
Department of Library and Information Science
University of Zambia

ZCAS Colloquium on "Sharing Knowledge and Best Practices"

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Motivation, Problem Area (4/5)

Open Access Electronic Publishing for Increased Online Visibility:

Towards Open Access Institutional Repositories in Zambian HEIs

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University of Zambia

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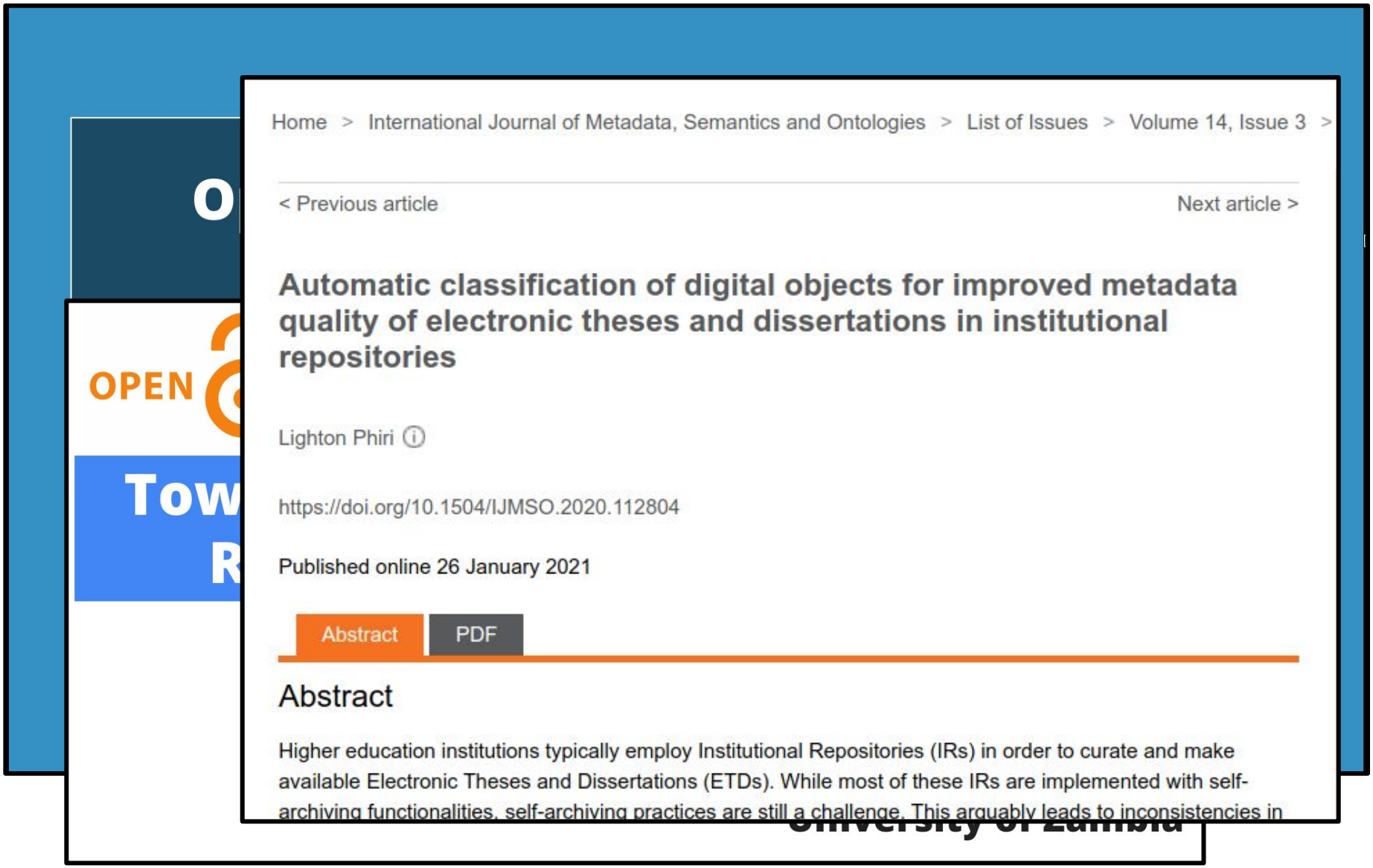
Motivation, Problem Area (4/5)



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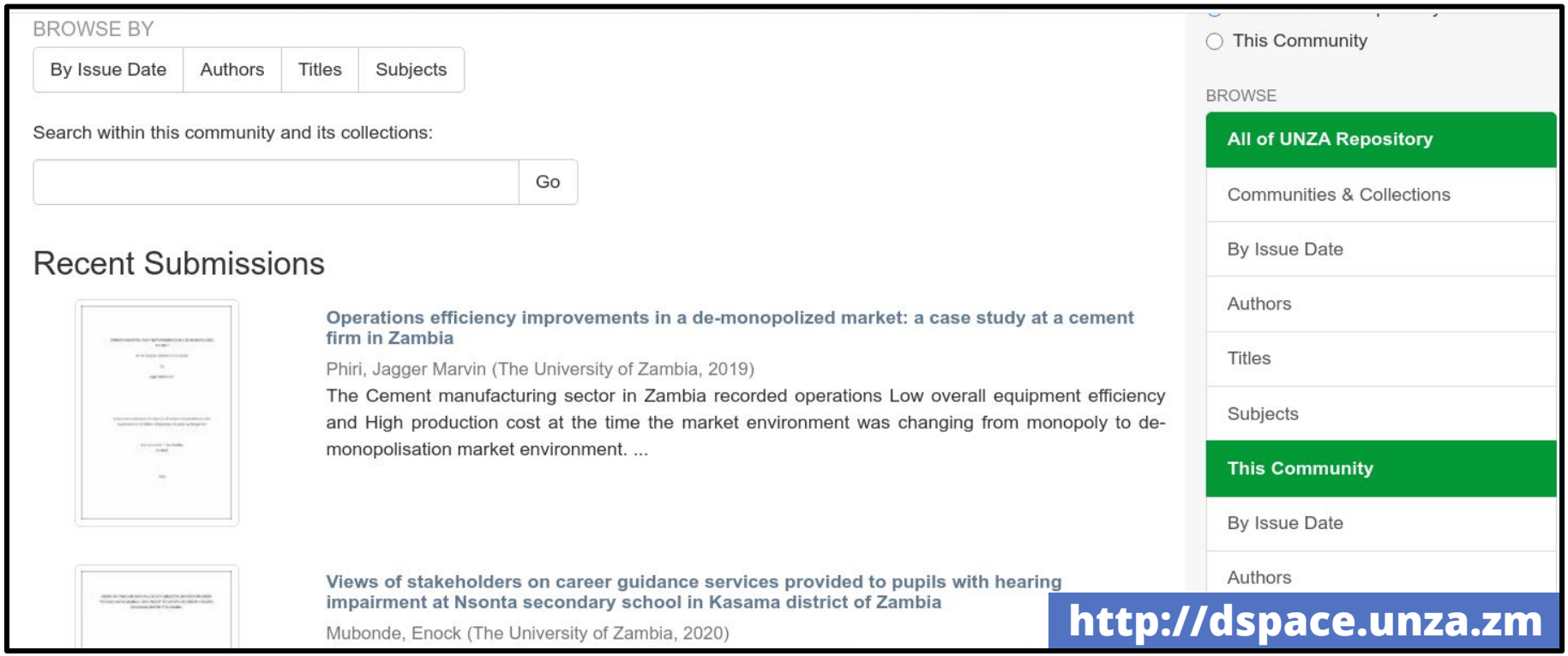
Motivation, Problem Area (5/5)



- **Ingesting digital objects into The UNZA's IR is challenging**
  - **Ingestion is time consuming due to the complex ingestion workflows**
  - **There is a backlog of digital content not yet ingested**

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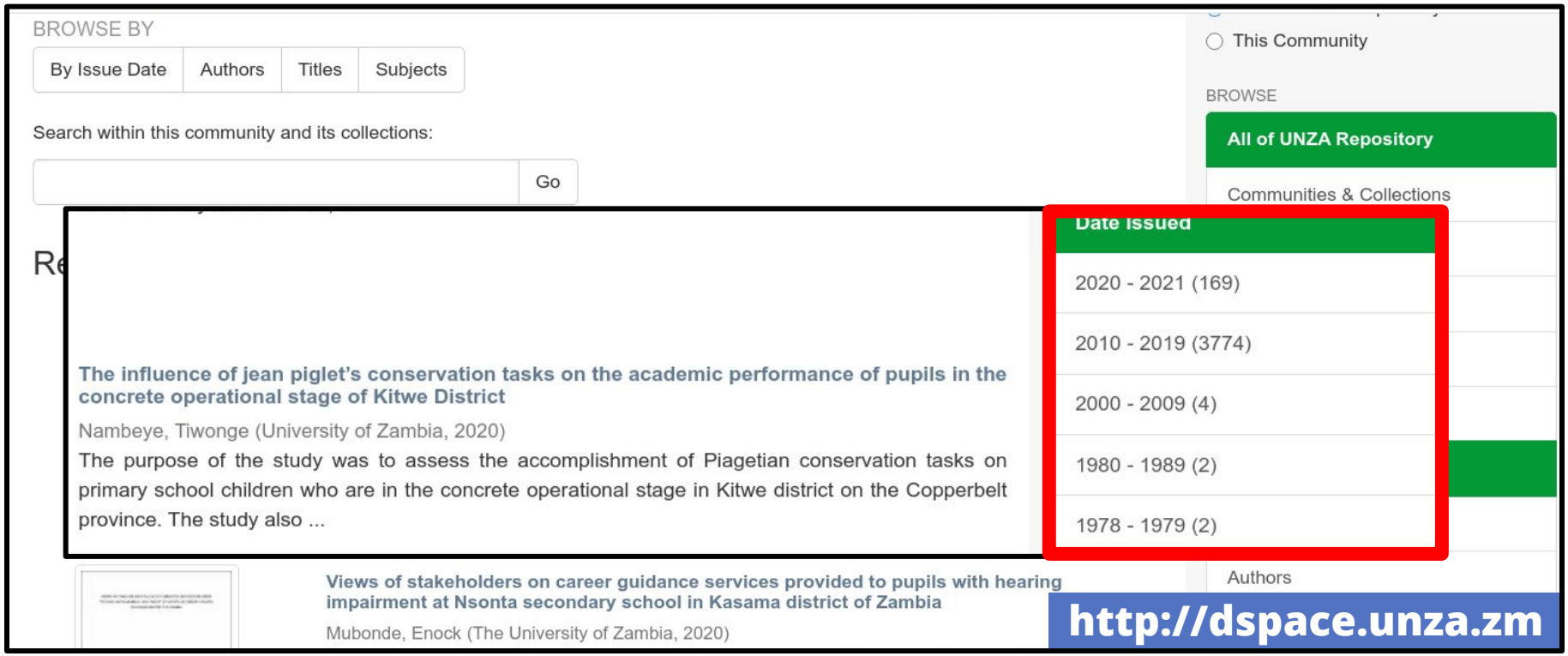
Motivation, Problem Area (5/5)



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Research Objectives

- **The main objective of this study was to investigate the feasibility of using subject institutional repositories for ingesting digital objects**
  - **To what extent is scholarly research output visible via the institutional repository?**
  - **What is the feasibility of implementing a subject repository as part of an institutional repository ingestion workflow?**
  - **What is the perceived usability of a subject institutional repository?**
- **Main contributions of this work**
  - **Evaluating IR ingestion practices, using a content analysis approach of IR digital objects**
  - **Results from usability studies conducted to determine the outcome of using subject repositories**
  - **Demonstration of the feasibility and efficacy of using subject repositories**

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Research Approach (1/4)

The study employed a mixed methods approach that involved undertaking a situational analysis, in order to understand the current state of the problem and, implementation and subsequent evaluation of a subject institutional repository

1. **Content analysis of repository objects**
2. **Interview sessions aimed at understanding the ingestion workflow**
3. **Implementation of subject institutional repository**
4. **Usability evaluation of subject institutional repository**

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Research Approach (2/4)

```
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xmlns:oai_dc="http://www.openarchives.org/OAI/2.0/oai_dc/" xsi:schemaLocation="http://www.openarchives.org/OAI/2.0/oai_dc/
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<dc:identifier>ISSN: 3471-7102</dc:identifier>
<dc:identifier>http://dspace.unza.zm:8080/xmlui/handle/123456789/5248</dc:identifier>
```

- **Content analysis**
  - **Dublin core descriptive metadata harvested using the OAI-PMH protocol**
  - **Metadata elements analysed**
- **Interviews with staff responsible for ingestion of digital objects**

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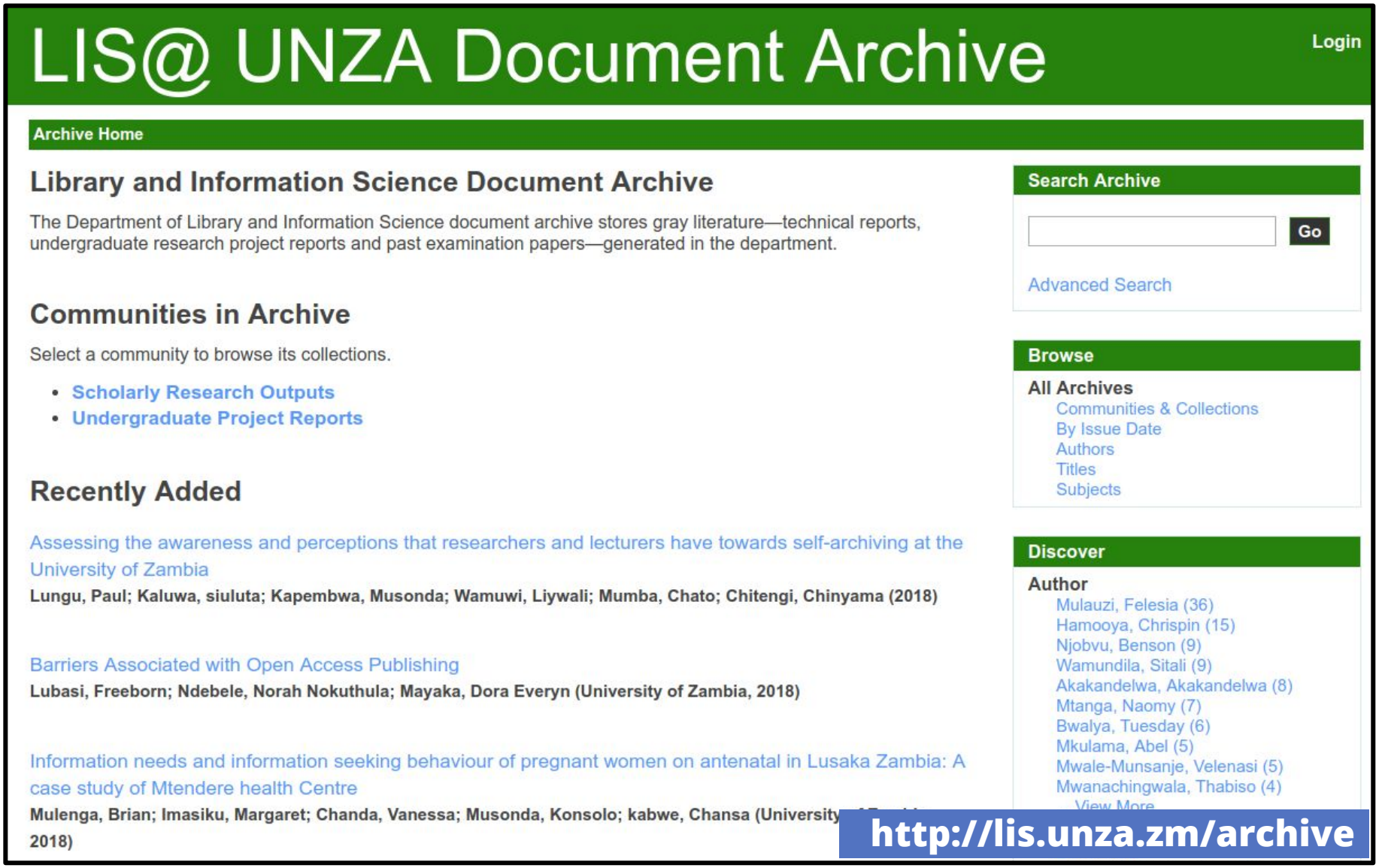
Research Approach (3/4)



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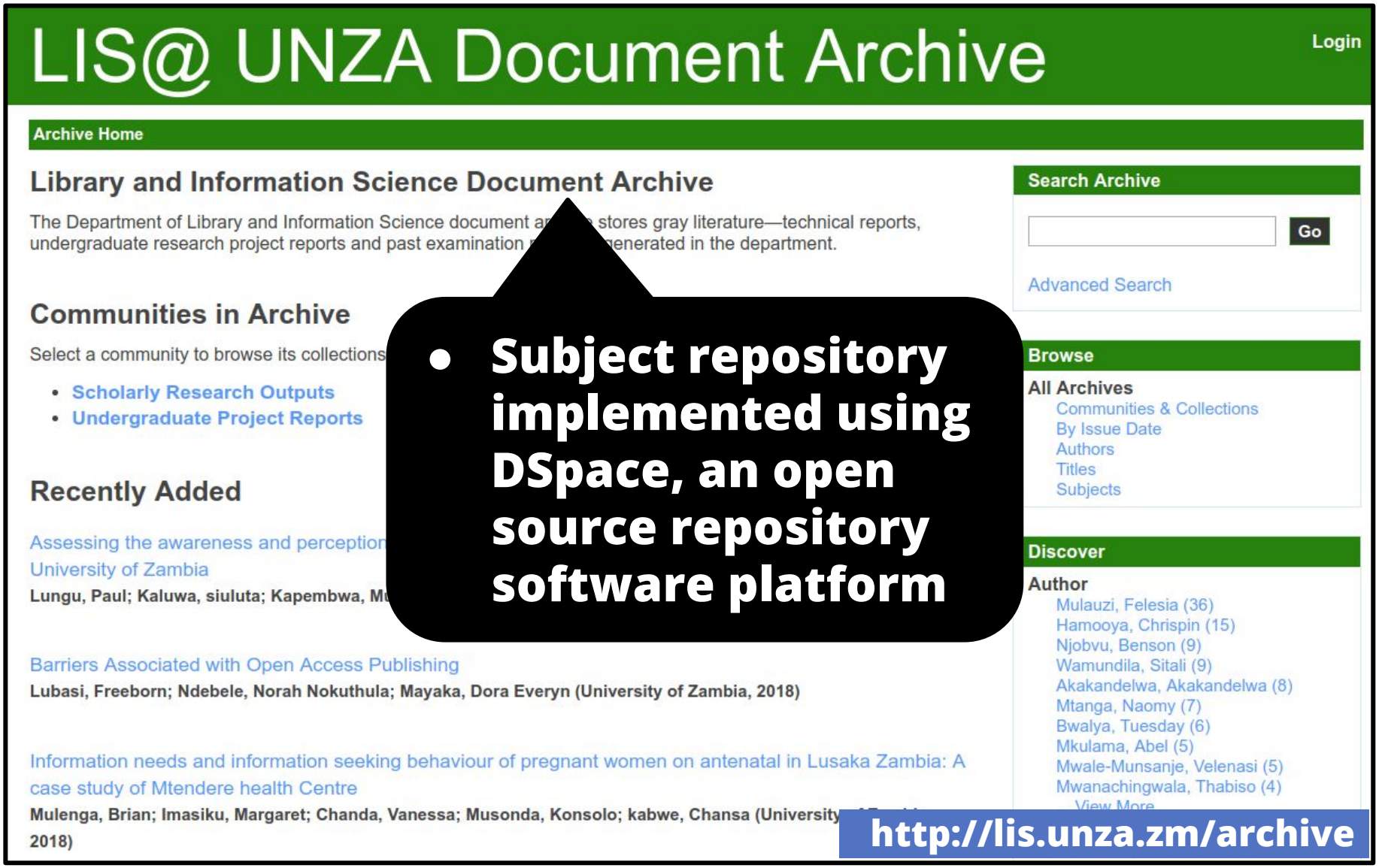
Research Approach (3/4)



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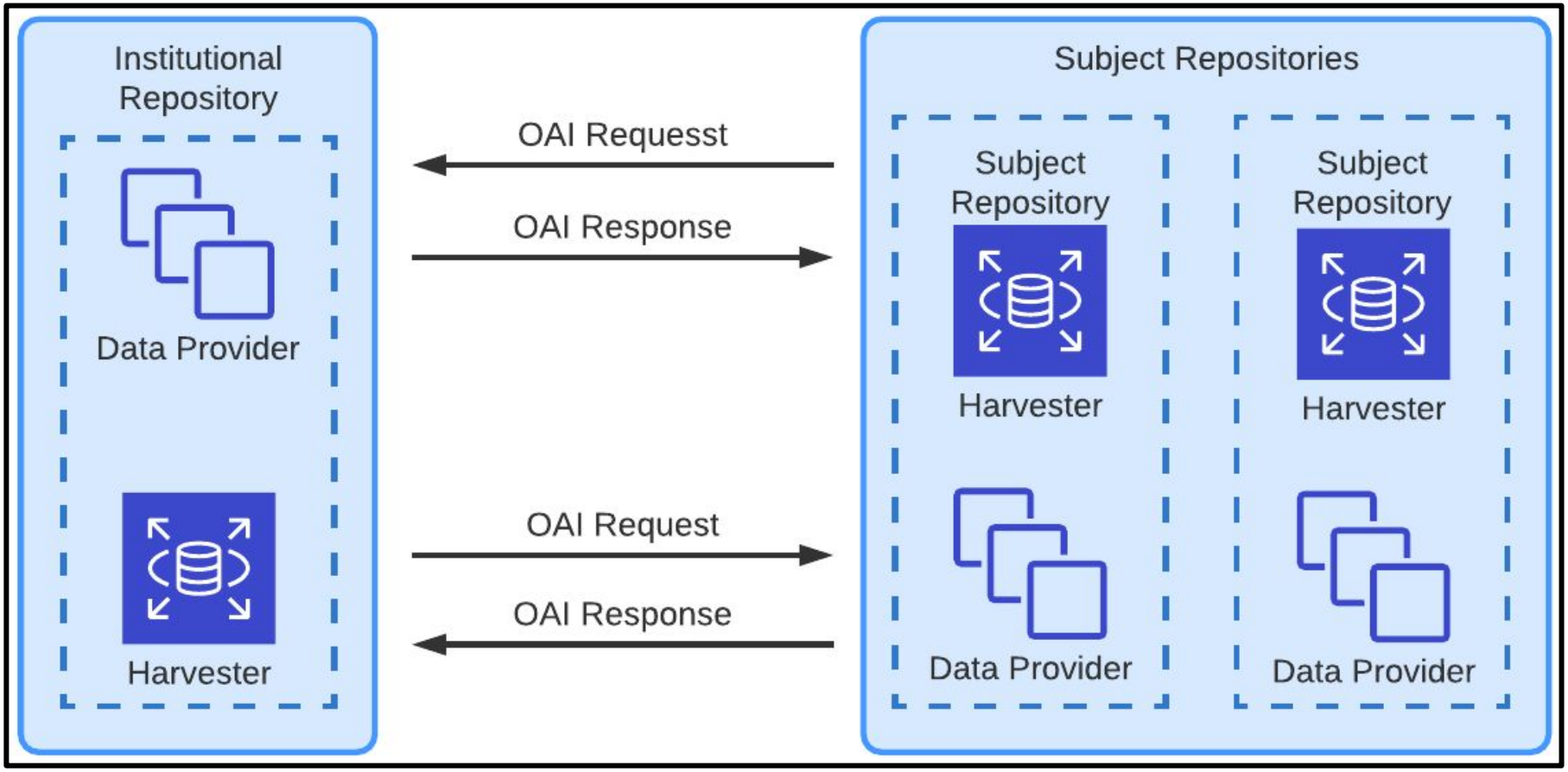
Research Approach (4/4)



- **Subject repository integrated with institution-wide repository using OAI-PMH and OAI-ORE protocols**
  - **Two-way synchronization of digital objects**

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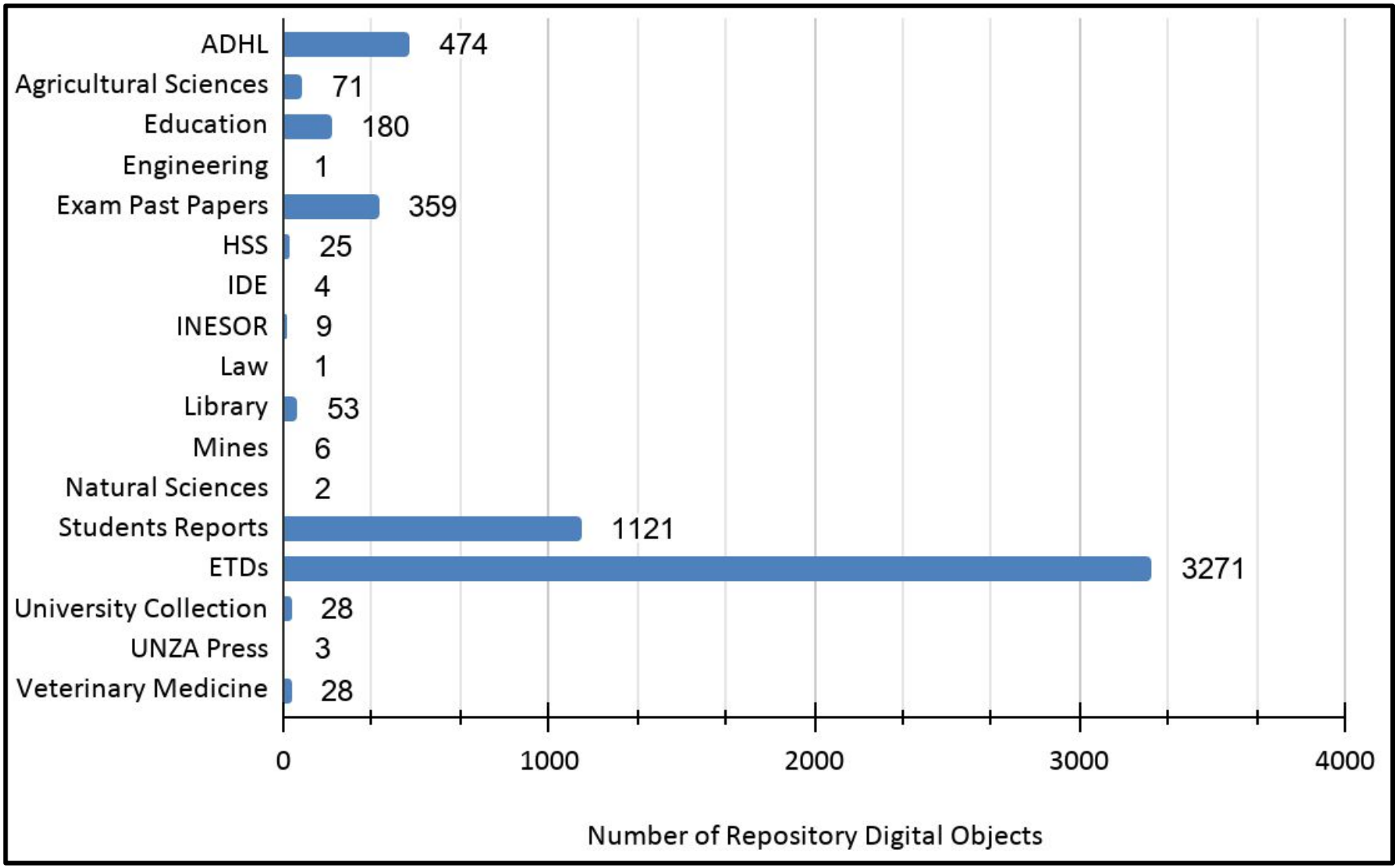
Major Outcomes/Results (1/4)



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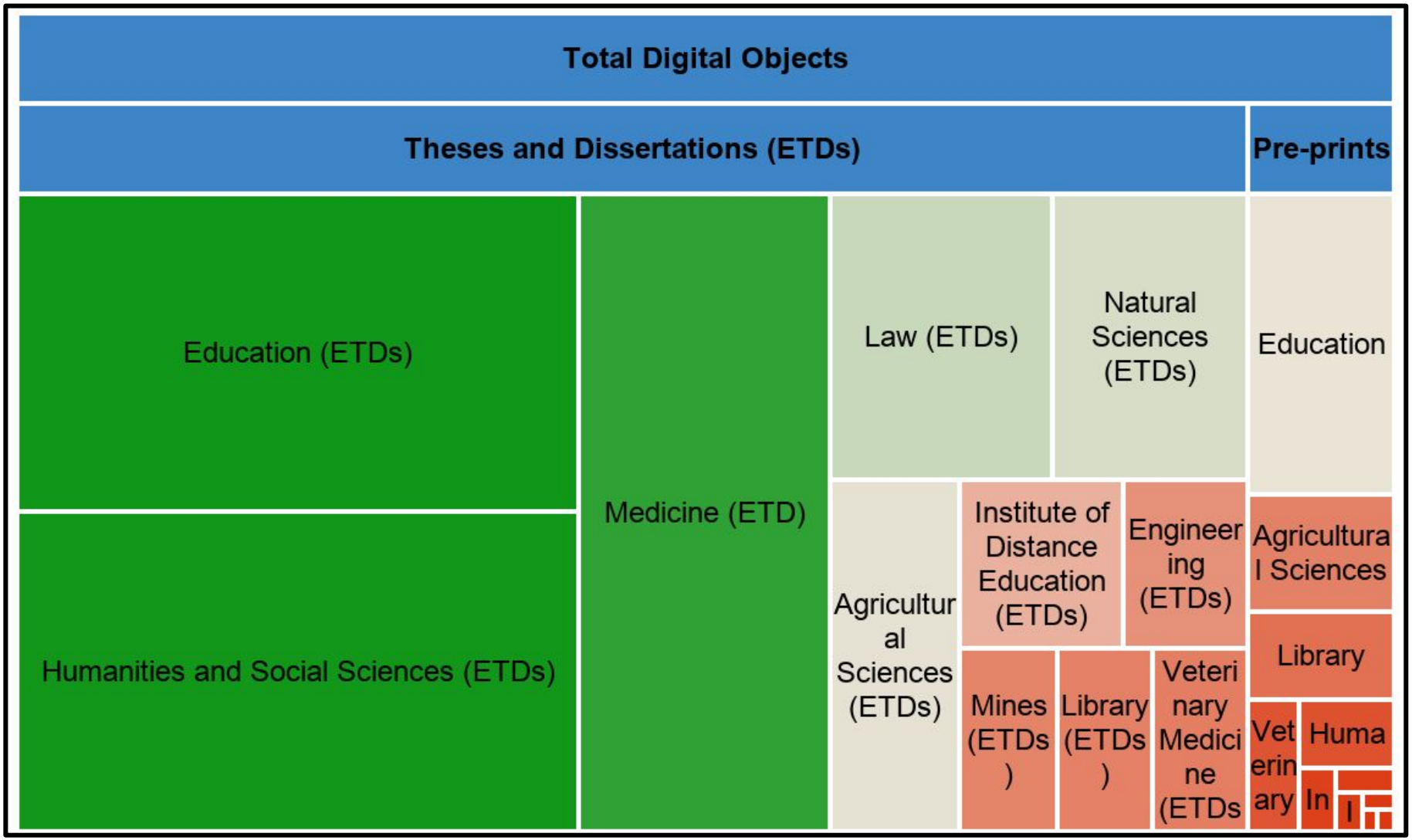
Major Outcomes/Results (2/4)



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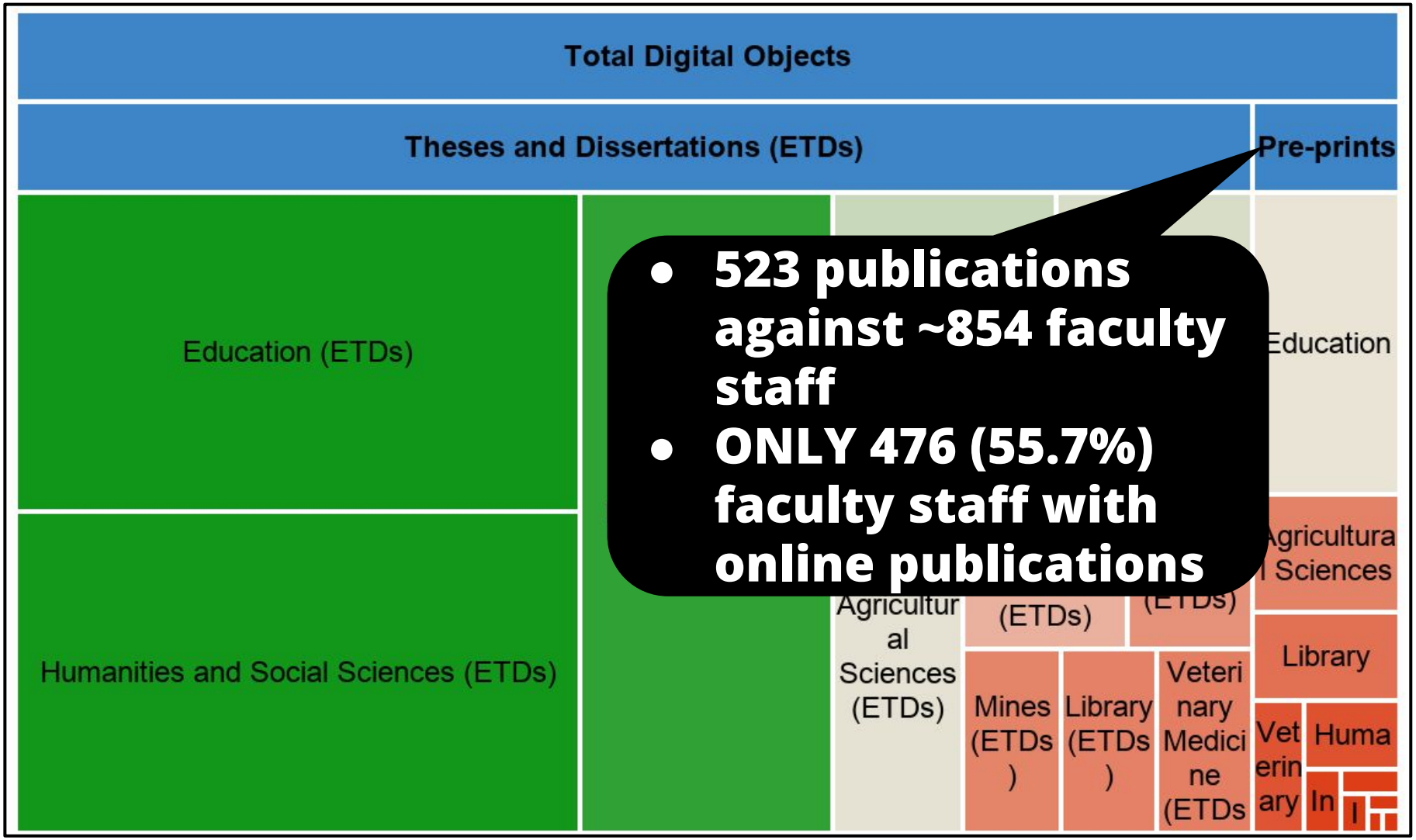
Major Outcomes/Results (2/4)



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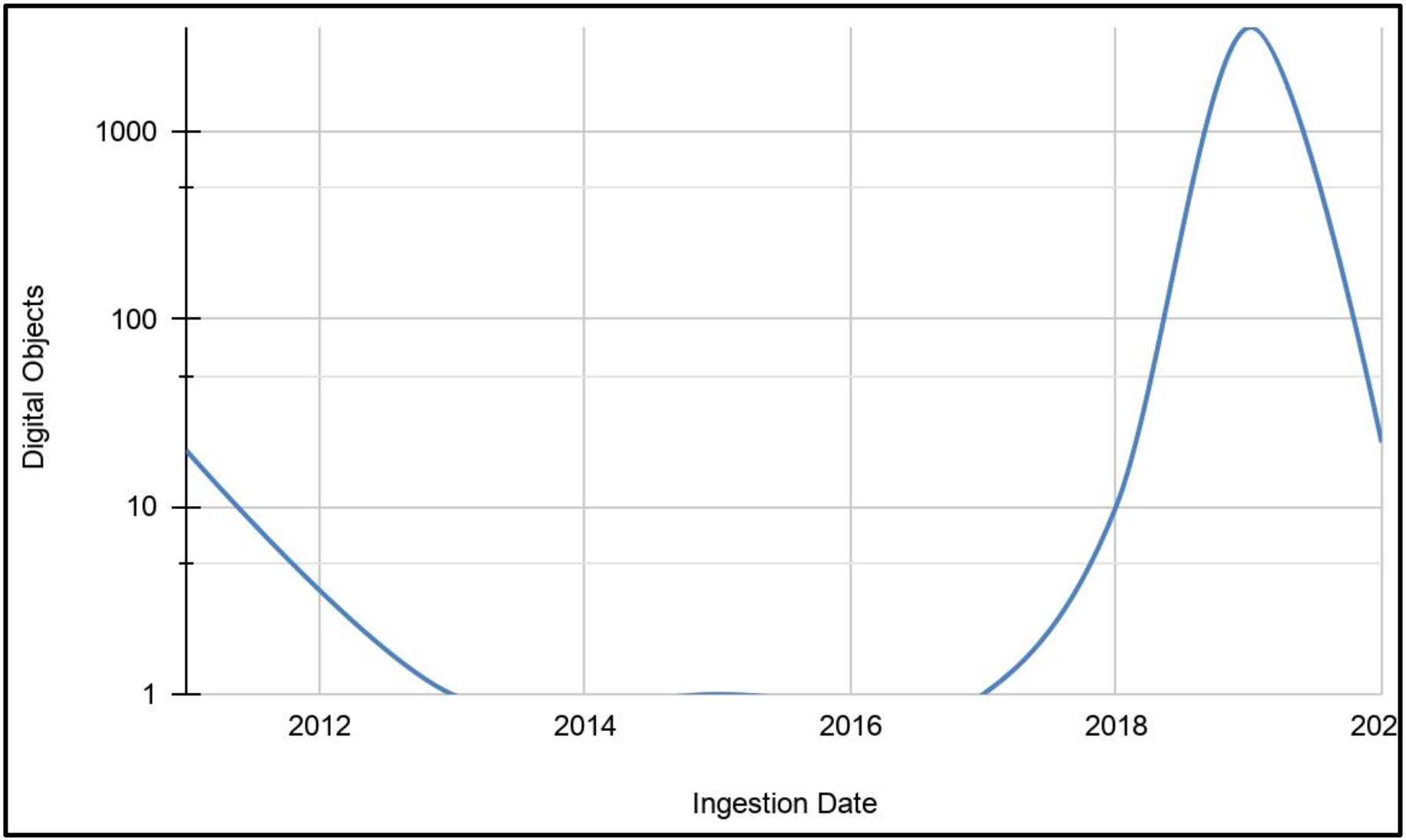

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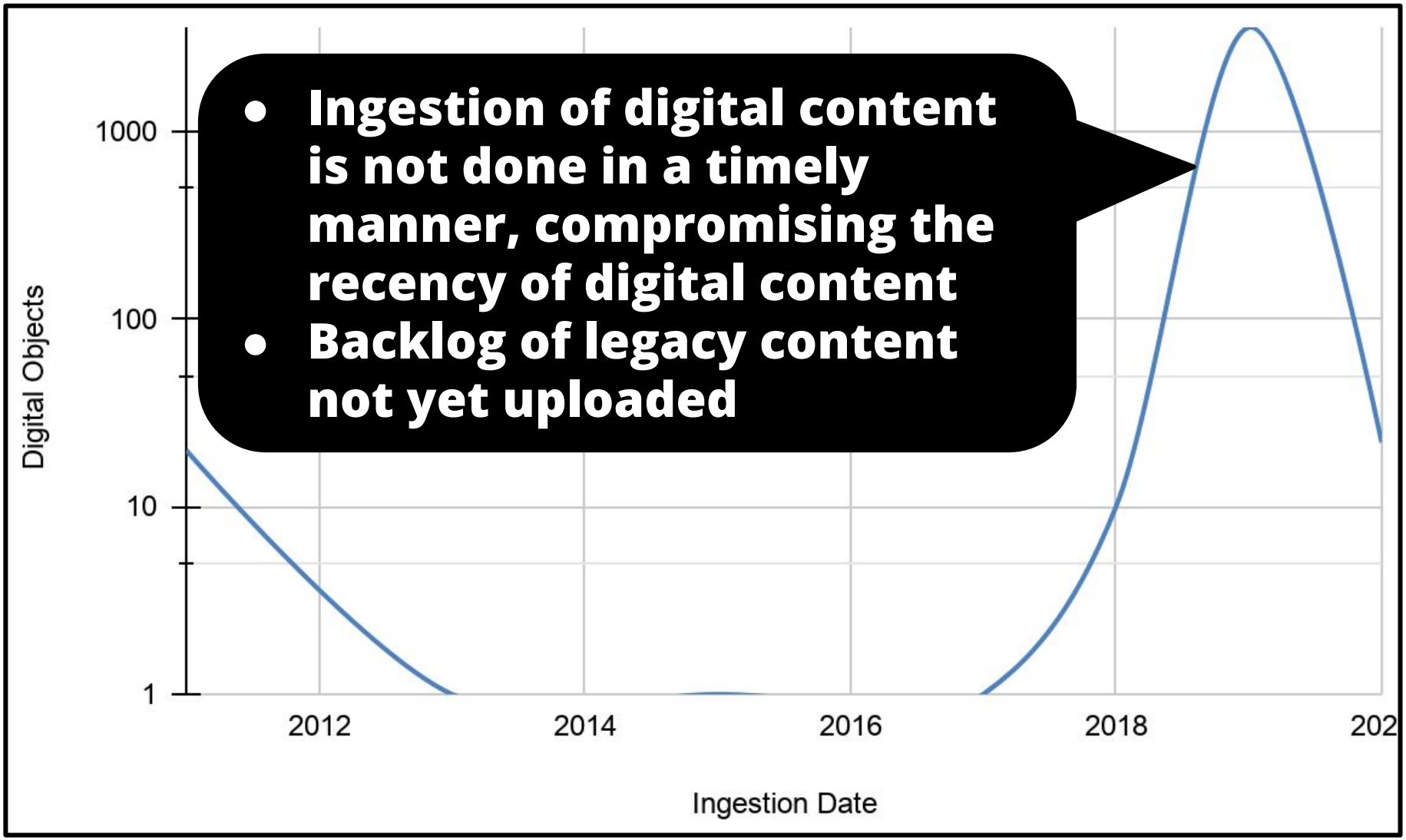

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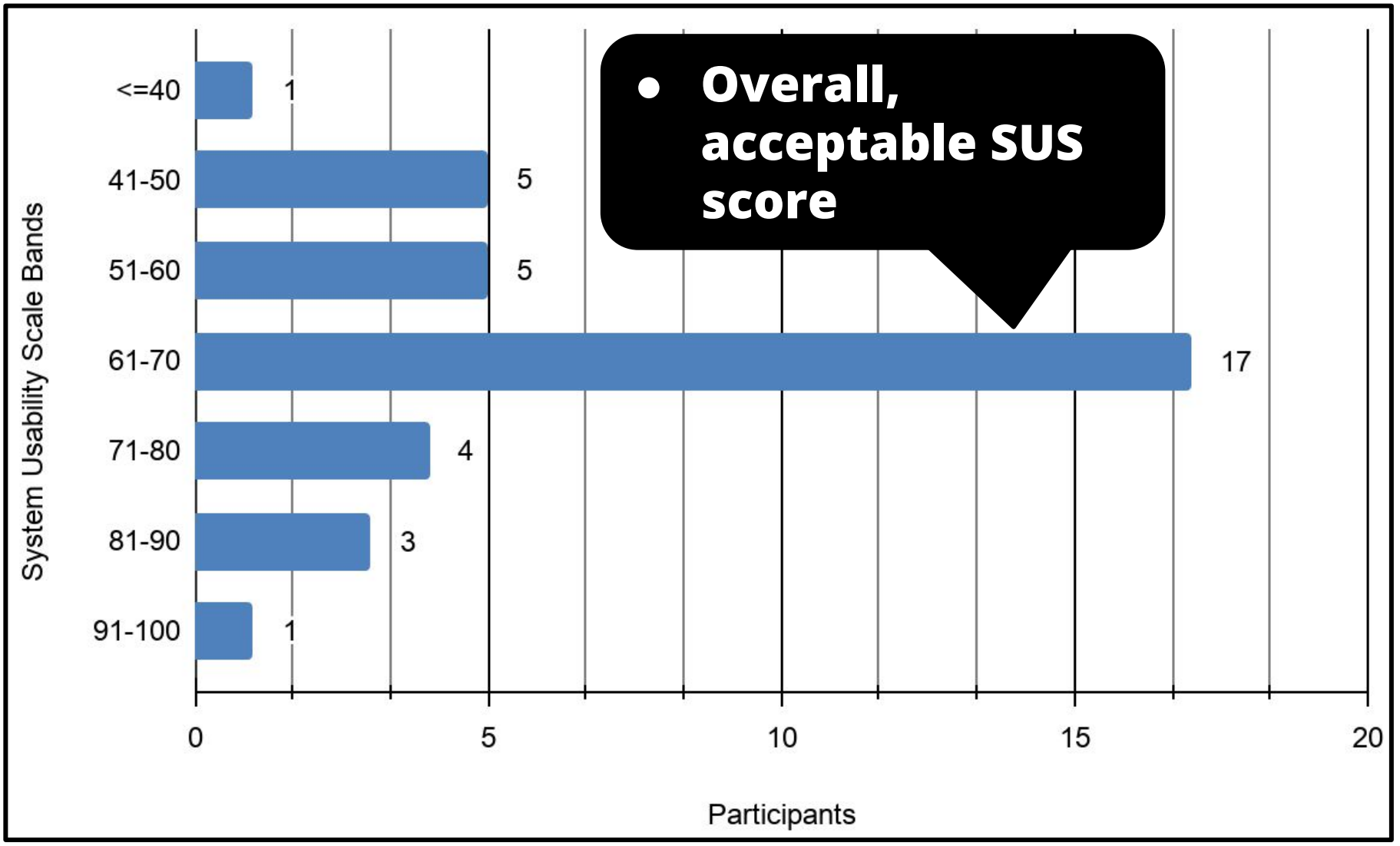

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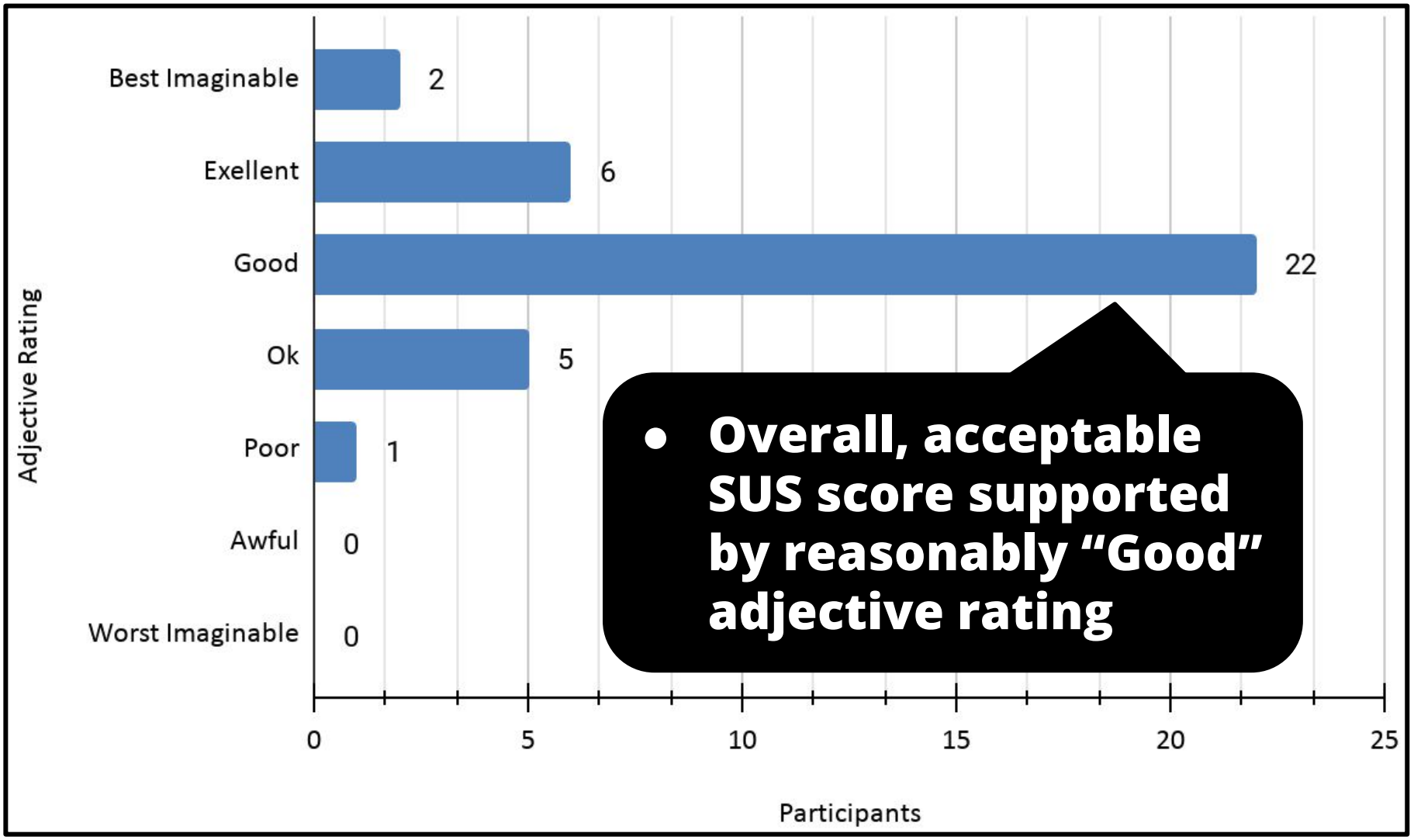

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Conclusion and Outlook

- A case study aimed at assessing the feasibility of using subject IRs for facilitating effective ingestion of digital content
  - Empirical analysis of digital objects ingested into The UNZA IR demonstrates the extent of these challenges.
  - Implementation and usability evaluation of the subject IR demonstrates the feasibility of implementing usable subject IRs
- The obvious benefits of subject IRs is that self-archiving is decentralised, making it relatively easier for research output to be made available online
  - HEIs are better placed to ensure that research output is made available in IRs in a timely manner

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