





# Book Analytics Dashboard (BAD) Demonstration Project:

Draft Technical  
Development Roadmap  
2023-2024

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## Revision History

Version	Date	Author	Comment
0.1	17/05/2023	COKI Team: Kathryn Napier OAPEN: Ronald Snijder, Laura J. Wilkinson	Kathryn Napier wrote and edited this draft version, with feedback from Ronald Snijder and Laura J. Wilkinson.



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# Preface

## Purpose of this Document

This draft technical roadmap is a commentable public document that we are sharing with the publishers and stakeholder communities engaged with the Book Analytics Dashboard (BAD) demonstration project that is now in its second year. The draft technical roadmap is intended to allow us to capture feedback on technical development priorities for the BAD project.

This document is part of a community consultation process that we are continuing to test and develop over the course of the BAD project. Our aim is to develop a robust process for community consultation that will feed into an annual cycle of technical development of the Book Analytics Dashboard service capabilities; as well as reporting, governance and accountability.

For more information and the latest announcements about the project please visit our [project page](#) or sign up to the project's [mailing list](#).

## How to Provide Feedback

The deadline for community feedback on this document is **30 June 2023**.

There are 4 ways that you can provide us with your feedback on this document:

1. Commenting has been enabled and you are welcome to make comments anywhere throughout the document.
2. We have also provided prompts in the form of specific questions that we would like your input on. These questions are flagged with the heading 'Questions for Community Feedback' and appear towards the end of each section of the document. You can respond to these questions by leaving a comment.
3. You can send us an email with your comments and suggestions. Comments via email can be sent to: [info@book-analytics.org](mailto:info@book-analytics.org)
4. Stakeholders with technical experience are invited to examine the [code base](#) and [technical documentation](#) and are encouraged to lodge an issue in [Github](#) for suggestions for improvement or recommendations.

Once feedback has been received the document will be revised and shared with the community. The revised technical roadmap will form the basis of the technical work that we do over the next 12 months.

## Outline and Summary

The work-plan for technical development in the [BAD project](#) is focused on delivering an efficient, stable, and scalable set of systems to support book community members to gain access to useful analytics systems to guide their work and decision making. This work-plan involves three main strands of activity across the three years of the project:

- **Year 1:** standardising and simplifying onboarding of new partners;
- **Year 2:** testing and refining these onboarding systems;
- **Year 3:** scaling up the set of partners.

This technical roadmap focuses on decisions that we need to make about the activities that the project will prioritise during Year 2.

The Updated Technical Technical Development Roadmap for Year 1 of the project is available on [zenodo](#). Technical work completed during this first year of the BAD Project included:

- Development of a technical roadmap consultation process
- Workflow standardisation, including a new technical solution and complete redesign for the [BAD dashboards](#)
- Documentation guides and workflows for onboarding new partners

## 1. Main Development Areas Completed in Year 1 (2022-2023)

The BAD project uses Jira for project management. Work packages from the [Grant Proposal](#) are captured as Epics (labelled BAD-1, etc) that contain discrete tasks as Tickets. The overall project Gantt chart can be seen in Appendix A. The main technical work packages are [summarised here](#), and the technical priorities for year 1 are captured in section 3 of the [first year's technical road map](#). Technical priorities in year 1 spanned 3 distinct work packages, from developing a technical roadmap consultation process, to standardising workflows, and partner onboarding of phase one partners. The current status of the work plans (e.g. 'to do', 'in progress', or 'done') are captured in the live [Book Analytics Dashboard - Technical Priorities](#), with a screenshot of the current status in Appendix B.

### 1.1 Work Package 1

#### 1.1.1 BAD-2: Technical Roadmap Consultation

The BAD project proposal envisages an annual cycle of publishing a draft roadmap and consulting with the community on priorities. Our goal is to have as simple and efficient a system for this consultation as possible, supporting input from both technical and non-technical stakeholders which can easily be incorporated into the project's project

management systems. In the medium term we would expect new developments to be proposed and prioritised by the community.

In June 2022, we provided a [draft technical roadmap](#) in the form of a google doc that was publicly commentable. There was limited engagement with this mechanism for feedback, with only four individuals commenting directly on the draft and [updated](#) roadmaps, but the engaged feedback that was received was very insightful. There was interest in community discussion and groups as a forum for prioritising feedback and ideas, so we carried out a series of six [focus groups](#) with a diverse group of 20 publishers in the first quarter of 2023 to test some ideas and [get their feedback](#) to help inform our technical roadmap for year 2. We plan to continue these focus groups on an annual basis as part of the technical roadmap consultation process.

Key technical work completed in year one included the following:

- BAD37: WP1 - Technical roadmap - [publish draft technical roadmap](#)
- BAD38: WP1 - Technical roadmap - capture community feedback (see [draft](#) and [updated](#) technical roadmap commentable docs and [focus group findings](#))
- BAD39: WP1 - Technical roadmap - [finalise initial priorities and share with community](#)

## 1.2 Work Packages 2 and 3

A key part of the BAD project is to provide standardised and simple systems that enable the user community to scale rapidly. This involves both simplifying and clarifying the requirements for partners to onboard into the analytics service, and ensuring that the underlying systems are robust and consistent to reduce maintenance requirements and costs.

Significant technical work was completed in year 1 to standardise and improve the BAD data ingest pipelines, including the redesign of several workflows. The BAD dashboards were also completely redesigned and redeveloped, and are now delivered using [Looker Studio](#) instead of [Kibana](#) and ElasticSearch, significantly improving the visual impact and user experience of the dashboards. Partner onboarding workflows and documentation ([data onboarding background](#) and [data onboarding questionnaire](#)) were also developed, and continue to be updated as processes are refined.

Key technical work completed in year one included the following:

### 1.2.1 BAD-3: Workflow Standardisation

- BAD41: WP2 - Collate/standardise data collection processes
- BAD163: WP2 - Access control systems - standardise partner management role
- BAD397: WP2 - [BAD Template Redesign - DataStudio/Looker](#)
- BAD137: WP2 - Standardise data ingest pipelines - naming
- BAD210: WP2 - Standardise data ingest pipelines - workflows
- BAD162: WP2 - New data sources - develop telescopes
  - [Thoth telescope](#)

- [Fulcrum IRUS telescope](#)
  - BAD125: WP2 - System maintenance - Telescope updates
  - BAD161: WP2 - System maintenance - Version upgrades
- Not completed:
- BAD43: WP2 - Access control systems - integrate identity provider to ES (elastic search) - not implemented for the BAD project due to the shift to Looker Studio dashboards.

### 1.2.2 BAD-4: Partner Onboarding Phase 1

- BAD48: WP3 - Create partner [onboarding handbook](#) and [documentation](#)
- BAD147: WP3 - Partner onboarding - Identify potential new partners
  - 2 new partners onboarded
- BAD45: WP3 - Partner onboarding - Onboard partner data
- BAD15: WP3 - Partner onboarding - Setup account
- BAD46: WP3 - Partner onboarding - Deploy dashboards and access
- BAD47: WP3 - Develop workflow to coordinate onboarding

## 2. Main Development Areas for Year 2 (2023-2024)

The work packages for the BAD project are [summarised here](#). The core technical packages of work for Year 2 are summarised below. Where these are a current distinct work package in our project management system (which aligns currently with the proposed packages) the Work Package number is noted for reference. One key change from the original work packages plan is the extension of WP2, Workflow Standardisation, to extend into year 2 of the BAD project (see Appendix A).

### 2.1 Technical Documentation and User Guides (WP2)

With the implementation of the new [BAD dashboards design](#), our existing technical documentation and user guides on [Read the Docs](#) need to be updated. This will also involve a redesign of the current [About and FAQ page](#) on the BAD dashboards, incorporating feedback received from the focus groups. Where possible, documentation will be provided in one central location (such as Read the Docs), though this will need to be balanced with any partner specific unique dashboard features (such as a difference in variables used to represent a download or view) and the user experience of the dashboards to obtain information while viewing the dashboard (see 2.2.1).

## **2.2 Implementation of New BAD Dashboard Features and User Experience Enhancement (WP 2)**

### **2.2.1 Data Provenance**

Definition of fields (such as Crossref Event Data), what variables are being used to represent views or downloads, and how we calculate metrics such as 'Access' were highly requested features from the recent focus groups. We will investigate how best to communicate definitions and variables used, such as through the use of hover explanatory text, through a FAQ page on the dashboards, or inclusion of this information in the central BAD Dashboards documentation on Read the Docs.

### **2.2.2 Enhancement of Filtering Options**

The ability to filter the overview and geographical pages by author, country or territory, book title, book ISBN, funder (see 2.2.4), topic/subject, and ORCID were highly requested features from the recent focus groups. This will involve changes to the current workflows to enable the implementation of these enhanced filtering options where possible.

### **2.2.4 Investigation of Providing Funder Information**

The inclusion of funder information was another requested feature from the recent focus groups. We will investigate available sources of funder information (such as from ONIX) and may include this information in the dashboards if feasible.

### **2.2.5 Investigation of the Enhancement of Reporting Options**

Looker Studio currently provides the ability to download or email pdf reports of the BAD Dashboards, as well as csv download of data for each visualisation on the dashboards. The ability to easily download images directly from the dashboards has consistently been a highly requested feature, and we will seek to implement this feature if it is technically possible.

### **2.2.6 Continued Dashboard Design Improvements**

Incorporating the feedback from the focus groups as detailed above requires ongoing dashboard design work. We will continue to release new features and improvements to the dashboard design on an ongoing basis through year 2.



## Questions for Community Feedback

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1. Are there other key feature requests that have been missed?

Please insert comments on this document or email [info@book-analytics.org](mailto:info@book-analytics.org)

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## 2.3. New Data Sources (WP 2)

Our goal is to support a regular cycle of incorporating new sources of data as prioritised by the community. The work to ingest a new data source (aka a “telescope”) involves scoping (both technical and legal), design of software systems, development, testing, and user validation. Depending on the complexity of the data source this can take from a few weeks to a few months of effort.

In the first year, we have incorporated new usage data from Fulcrum (IRUS) and Onix metadata from Thoth into the BAD workflows. We are currently investigating the incorporation of usage data from Project MUSE, and other data sources requested for prioritisation include (in alphabetical order with no particular prioritisation):

- [Amazon](#)
- [EBSCO](#)
- [IRUS](#) (all repositories)
- [ProQuest](#)
- [Public Knowledge Project](#)
- [SciELO books](#)

## Questions for Community Feedback

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2. Are there other important data sources that have been missed?

3. How would you prioritise the incorporation of these data sources?

Please insert comments on this document or email [info@book-analytics.org](mailto:info@book-analytics.org)

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## 2.4 Maintenance and System Upgrades (WP 2)

Maintenance is an ongoing process and a significant part of the costs of operations. This work includes monitoring workflows for issues, updates to the data ingest pipelines (e.g. when data source schemas change or an API is modified), as well as ongoing system updates to ensure infrastructure and system stability (e.g. upgrades to new versions of our core underpinning infrastructures including Terraform and Airflow).

## 2.5 Standardisation of Partner Onboarding (WP6)

A key part of the current project is to provide standardised and simple systems that enable the user community to scale rapidly.

### 2.4.1 Standardising Partner Onboarding (WP6)

As we onboard new partners during year 2, we will continue to iterate and update the documentation guides produced for new partners that detail:

- the Dashboarding Service's requirements for data quality and completeness;
- provides detailed and practical information about the steps that need to be taken to make data available to the Dashboard Service;
- what usage data sources are currently supported and offered;
- the choices partners may make in fields to visualise, and dashboard preferences.

#### Question for Community Feedback

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4. We invite feedback on the partner onboarding documentation ([data onboarding background](#) and [data onboarding questionnaire](#)) that were developed in year 1. These documents will continue to be updated as processes are refined, and deposited as new versions on Zenodo.

Please insert comments on this document or email [info@book-analytics.org](mailto:info@book-analytics.org)

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## 3. Detailed Technical Work Plans April 2023 - March 2024

This section details the work plans documented in the BAD project's project management system, Jira. Epics and tasks are labelled as ('BAD1', 'BAD2' etc). The current status of the work plans (e.g. 'to do', 'in progress', or 'done') are captured in the live [Book Analytics Dashboard - Technical Priorities](#).

### 3.1 Work Package 2

#### 3.1.1 BAD-3: Workflow Standardisation

- BAD-510: WP2 Update documentation
- BAD-516 WP2 - Data provenance
- BAD-517: WP2 Enhancement of filtering options
- BAD-520: WP2 Investigate inclusion of funder information
- BAD-519: WP2 - Enhancement of reporting options
- BAD-397: WP2 - BAD Template Redesign - DataStudio/Looker
- BAD-518: WP2 - Maintenance - dashboards and data
- BAD-162: WP2 - New data sources - develop telescopes
- BAD161: WP2 - System maintenance - Version upgrades

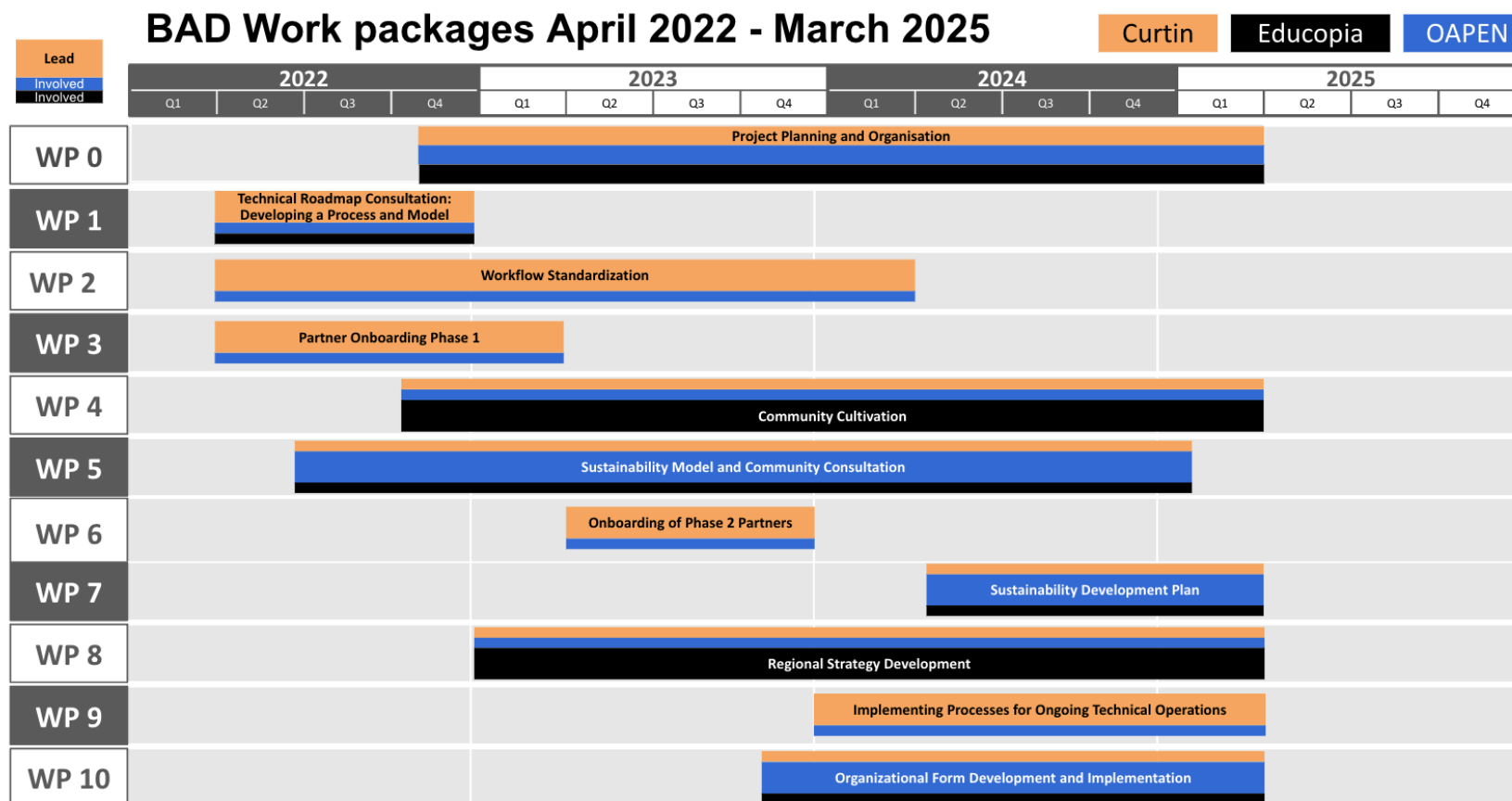
### 3.2 Work Package 6

#### 3.2.1 BAD-8: Onboarding of Phase 2 Partners

- BAD-60: WP6 - Review and revise onboarding process and guidebook
- BAD-58: WP6 - Onboard new partner data - SUMMARY
- BAD-59: WP6 - Deploy new partner dashboards and access - SUMMARY

## Appendix A

BAD Project Gantt Chart April 2022 - March 2025



Updated: 27 April 2023

Official project title: OA Book Usage Analytics for Diverse Communities - A Demonstration Project  
Short project title: Book Analytics Dashboard (BAD) Project  
1 April 2022 - 31 March 2025

## Appendix B

BAD project jira board as of May 2023 with Year 1 and Year 2 technical priorities. Current status [available here](#).

### Book Analytics Dashboards (BAD) Project - Technical Priorities

☆ Refresh ↻ Edit ⚙ ...

Please email us at [info@book-analytics.org](mailto:info@book-analytics.org) to discuss BAD dashboard feature requests. For more information, please visit our project page: <https://openknowledge.community/projects/bad-project/>

⌚ 30 seconds ago

#### Book Analytics Dashboards (BAD) Project - Technical Priorities 2023-2024

BAD Technical Roadmap Year 2

Start Date: 10/06/23 14:36:26 End Date: 26/09/24 12:00:00

TO DO 7

IN PROGRESS 5

DONE 0

Other issues | 12 issues

<b>BAD-516</b> WP2 - Update documentation	<b>BAD-516</b> WP2 - Data provenance	<b>BAD-517</b> WP2 - Enhancement of filtering options	<b>BAD-520</b> WP2 - Investigate inclusion of funder information	<b>BAD-518</b> WP2 - Maintenance - dashboards and data	<b>BAD-60</b> WP6 - Review and revise onboarding process and guidebook	<b>BAD-397</b> WP2 - BAD Template Redesign - DataStudio/Looker	<b>BAD-162</b> WP2 - New data sources - develop telescopes	<b>BAD-161</b> WP2 - System maintenance - Version upgrades	<b>BAD-58</b> WP6 - Onboard new partner data - SUMMARY
<b>BAD-519</b> WP2 - Enhancement of reporting options						<b>BAD-59</b> WP6 - Deploy new partner dashboards and access - SUMMARY			

#### Book Analytics Dashboards (BAD) Project - Technical Priorities 2022-2023

BAD Technical Roadmap Year 1

Start Date: 06/06/22 09:28:45 End Date: 31/03/23 12:00:00

TO DO 0

IN PROGRESS 0

DONE 15

Other issues | 15 issues

<b>BAD-37</b> WP1 - Technical roadmap - Publish draft technical roadmap	<b>BAD-38</b> WP1 - Technical roadmap - Capture community feedback	<b>BAD-39</b> WP1 - Technical roadmap - Finalise initial priorities and share with community	<b>BAD-41</b> WP3 - Collate/Standardise data collection processes	<b>BAD-163</b> WP2 - Access control systems - standardise partner management role	<b>BAD-43</b> WP2 - Access control systems - integrate identity provider to ES	<b>BAD-125</b> WP2 - System maintenance - Telescope updates	<b>BAD-137</b> WP2 - Standardised data ingest pipelines - naming	<b>BAD-210</b> WP2 - Standardised data ingest pipelines - workflows	<b>BAD-48</b> WP3 - Create partner onboarding handbook and documentation
<b>BAD-45</b> WP3 - Partner onboarding - Onboard partner data - SUMMARY	<b>BAD-15</b> WP3 - Partner onboarding - Setup account on password manager	<b>BAD-46</b> WP3 - Partner onboarding - Deploy dashboards and access - SUMMARY	<b>BAD-47</b> WP3 - Develop workflow to coordinate onboarding	<b>BAD-147</b> WP3 - Partner onboarding - Identify potential new partners					