

## Open Impact: Developing Robust Analytics for Open Source Solution Bundle Hyrax

The University of Oregon (UO) Libraries, in partnership with Oregon State University Libraries and Press (OSULP), seek \$198,700 from an IMLS National Leadership Project Grant to support the development of a suite of analytics and reporting tools for Hyrax, an open source, Samvera-powered repository front-end. With a focus on creating new dashboard functionality to enable repository managers to tell the story of their collections and their users, this project will help reduce dependency on third-party, for-profit repository platforms and demonstrate the value of repository services to our stakeholder communities. This work will contribute directly to Hyrax's community development initiatives, with all code contributions, documentation, and project updates made openly available and coordinated with platform stakeholders across the country in alignment with identified Samvera community needs. With Hyrax forming the code base of Hyku, the turnkey repository platform funded by IMLS ([LG-70-15-0006-15](#), [LG-70-17-0217-17](#)), this project will address the need for analytics, identified in the HykuDirect Pilot Gap Assessment as "critical to be competitive in the repository space" and a "Must Have" for future development.<sup>1</sup>

### Statement of National Need

With library backlash<sup>2</sup> against the acquisition of bepress by Elsevier in August 2017 and Bridge2Hyku migrations from CONTENTdm to Hyku, repository managers around the country have sought alternatives for their turnkey, feature-rich platforms.<sup>3</sup> Hyku was identified as a potential alternative, but the Hyku Pilot Gap Assessment identified a significant number of software gaps that would need to be addressed to permit production-level service. Some of these features have been incorporated into the Hyrax roadmap<sup>4</sup>, and the Hyrax Analytics Working Group<sup>5</sup> has assembled user stories, use cases, and requirements. With a long list of development priorities, analytics has not yet been the focus of a major development effort and significant time investment would be required to bring Hyrax (and Hyku) up to feature-parity for libraries across sectors, much less improving on third-party, for-profit competitors.

IMLS and the repository community have invested in building best practice and solutions for repository analytics, including the Digital Library Federation's white papers<sup>6,7</sup> and the Repository Analytics & Metrics Portal web service ([LG-06-14-0090-14](#)). Libraries have also begun looking at open source web analytics application Matomo (formerly Piwik) in an effort to reduce dependency on third-party, for-profit analytics platforms and to respect user privacy.<sup>8,9</sup> This project will incorporate existing and emerging best practices for repository analytics with an eye towards balancing accuracy, data privacy, and functionality.

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<sup>1</sup> HykuDirect Pilot Gap Assessment: <https://docs.google.com/document/d/1mpYLS2pqwKCCxF0Kb-ITC4OjPLgmbj6d11BunxHqAw/edit#heading=h.up2kw3izu6dy>

<sup>2</sup> Inside Higher Ed Announcement: <https://www.insidehighered.com/news/2017/08/03/elsevier-makes-move-institutional-repositories-acquisition-bepress>

<sup>3</sup> BePrexit from University of Pennsylvania: <https://beprexit.wordpress.com/2017/10/13/48-hours/>

<sup>4</sup> <https://wiki.duraspace.org/display/samvera/Hyrax+Roadmap>

<sup>5</sup> Hyrax Analytics Working Group: <https://wiki.duraspace.org/pages/viewpage.action?pageId=87461330>

<sup>6</sup> DLF Best Practices for Google Analytics in Digital Libraries: <https://osf.io/th8av/>

<sup>7</sup> DLF Surveying the Landscape: Use and Usability Assessment of Digital Libraries <https://osf.io/uc8b3/>

<sup>8</sup> Using Piwik Instead of Google Analytics at the Cornell University Library: <https://doi.org/10.1080/0361526X.2016.1245645>

<sup>9</sup> Piwik: Breaking Away from Google Analytics: <http://open-shelf.ca/160215-piwik/>

## **Project Design and Personnel**

The University of Oregon will act as fiscal agent for this project with 2 co-PIs: Franny Gaede (UO) and Margaret Mellinger (OSULP). UO and OSULP are long-term collaborators on the Oregon Digital initiative, which has led Hydra and Samvera development to create a shared repository platform, uniquely positioning us to work with the Samvera community and the contractor hired to complete the analytics modules. The project manager will be Ray Henry (UO); Steve Van Tuyl (OSULP) will coordinate the contractor, Samvera community, and UO/OSULP teams; and UO/OSULP teams will contribute user testing (Mary Galvin, UO), front-end design and development (David McCallum, UO; Kenna Warsinske, OSULP), and technical consulting with the contractor (Jeremy Echols and Linda Sato, UO; Josh Gum and Ryan Wick, OSULP).

Work will fall into four phases: 1) Hiring the contractor and reviewing and augmenting the needs assessment completed by the Hyrax Analytics Working Group; 2) Refining analytics design and coordinating requirements with the Samvera community. Most project work will occur during 3) Developing the analytics modules and implementing front-end visualization and 4) Completing usability testing and community outreach online and at conferences.

## **Diversity Plan**

We have allocated time from user experience experts to perform testing that will focus on accessibility for all users interacting with the system, who may have a variety of abilities, whether repository managers, content creators or depositors, or end users. As part of our open communication and documentation plan for this project, we will contribute to ongoing conversations about how analytics can help identify web accessibility issues.<sup>10</sup>

## **Statement of National Impact**

This project directly supports the IMLS agency-level goal of *Build Capacity* by enabling repository managers to justify initial and continued investment in digital platforms that ultimately increase public access to research, data, and rare and special collections. This project also aligns with the category of *National Digital Infrastructures and Initiatives* focal area of *Expanding Digital Cultural Heritage Capacity* through continued development of shared tools, as well as addressing barriers to the adoption of those tools, as analytics were designated as a requirement. It also contributes to the *Opening Scholarly Communications* focal area by creating interoperable repository functionality that will support green open access, new models for return on impact, and benchmarking initiatives.

## **Budget Summary**

The estimated budget for this one-year project is \$198,700. Direct costs include personnel at UO (\$37,584 includes salary and fringe benefits), personnel at OSULP (\$29,000 includes salary and fringe benefits), \$100,000 for contractor, \$4,000 for travel and project dissemination at conferences such as Digital Library Federation Forum, Samvera Connect, and Open Repositories. Indirect costs at the University of Oregon's negotiated rate of 30.7% of salaries and wages (\$28,116).

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<sup>10</sup> Using Web Analytics for Mobile Interface Development: <https://doi.org/10.1080/19322909.2013.835218>