Scaling Up a Collaborative Consortial Institutional Repository

Summary - The Pennsylvania Academic Library Consortium, Inc. (PALCI), in partnership with the Private Academic Library Network of Indiana (PALNI), representing 94 academic libraries in Indiana, Pennsylvania, New Jersey, West Virginia, and New York, requests an IMLS National Leadership Grant for Libraries for $130,900 to fund a 12-month Infrastructures and Initiatives Project to explore, develop, and pilot an open source, multi-tenant, consortial institutional repository (IR), delivering ultra-low cost hosting, discovery, and access to digital material. This project will be led by subject matter experts and engage an experienced developer to build upon the open source Hyku IR developed previously by the well-established Samvera community. Partnering consortia will build their member libraries' capacity to serve their communities with access to digital collections by reducing IR-hosting and administration costs through shared infrastructure, allowing individual libraries to customize and brand the IR as their own. This project will push traditional consortial boundaries to provide a highly scalable, easily adoptable, and sustainable IR service.

Statement of National Need - Libraries unable to deploy IR services on their own are looking increasingly to consortia to expand their ability to provide storage of and access to digital collections through IRs. However, commercially available systems have proven costly, and open source systems have lacked the configuration options necessary for efficient and effective services at consortial scale. To counter significant, widespread, and prolonged cuts to library budgets and continued consolidation of proprietary or commercial services and software, U.S.-based library consortia are working toward unified strategies for access to freely available content through IRs. In a survey of PALNI supported libraries, over 70% did not have an IR system in place, and more than 65% were interested in participating in a collaborative IR system. Budget constraints, staffing limitations, and insufficient technological support were the greatest impediments identified in the survey. A PALNI environmental scan identified a multitude of IR software; however, current open source solutions are single tenant systems, lacking the large scale configuration options necessary to share costs and infrastructure.

Library consortia are eager to explore meaningful partnerships outside of traditional boundaries in the IR space for greater shared benefit through cross-consortial collaboration. In early 2018, PALCI and PALNI engaged members of the International Coalition of Library Consortia (ICOLC) in meetings at ALA-MW and ICOLC Detroit to discuss consortial IR needs where 30+ consortia of ICOLC expressed high interest in collaborative IR efforts. Consortia with experience running IRs in attendance at these meetings cautioned against the high degree of cost and technological support required to provide this service through existing software, yet none had explored shared infrastructure across consortial boundaries.

Project Design - In Fall 2017, PALCI piloted a scaled-back, hosted version of Hyku, the only available open source, multi-tenant focused IR software. The HykuDirect pilot was part of a grant project run by Stanford, DuraSpace, and Digital Public Library of America (DPLA). Tests showed the software was promising, but additional development work was required to build on the success of this project. In early 2018, PALNI developed a Consortial IR Vision (https://goo.gl/58HCuz), which provides a graphical sketch of the desired multi-tenant environment, maps out specifications for several functional levels, and defines user management needs. This document has been shared and used widely across the consortial and library communities and has been effective in conveying the consortial IR vision to partners and service providers.

PALCI and PALNI have been jointly exploring IR software options, and after having completed an extensive environmental scan and discussions with other consortia, identified Hyku to have the highest long-term potential as an affordable, scalable consortial solution. Notch 8, a web development firm with extensive Hyku expertise, has been identified as the project's development partner in developing a multi-tenant Hyku instance for shared use by our two consortia. PALNI and PALCI have begun actively developing a collaborative consortial prototype Hyku IR, which will require further development, testing, and evaluation to move toward a production-ready service. The project has been initially scoped to focus on adding two new content types to the Hyku IR service: 1) Open Educational Resources (OERs), and 2) Electronic Theses and Dissertations (ETDs),

with expanded options available in future project phases. The work of this grant-funded project is outlined below:

Performance Goals & Outcomes
Goals: Contribute a fully-featured, multi-tenant, open source IR tool to consortial communities, enhancing our ability to provide open access materials while containing costs; develop a model for multi-institution/consortium collaboration and shared infrastructure that is easily adoptable; and further grow the Hyku community, engaging library subject matter experts, with project management at the governance level.

Phase 1 - Form a Cross-Consortial Hyku Pilot Task Force (July 2019 - June 2020)
The formation of this strategic group will represent PALCI and PALNI member libraries with library staff experts who will be charged with specifying key functionality, identifying features and enhancements, outlining shared/unique needs across consortia, and leading the pilot and assessment. The Task Force will meet at least 1-2 times in-person to achieve the Hyku Pilot Task Force's charge.

Phase 2 - Develop and Enhance Hyku's Multi-Tenant Software Development (July 2019 - February 2020)
The development will focus on expanding available content types, discovery, configuration, and metadata schemas in support of shared IR services as well as the ability to efficiently manage individual brand templates. Software development will be provided back to the community under permissive open source licenses.

Phase 3 - Assessment and Hyku Software Pilot, with Communication of Results (October 2019 - June 2020)
Select PALNI and PALCI libraries will test the software for scalability, sustainability and ease of adoption, with reports made to the consortial community, at ICOLC and ALA conferences.

Diversity Plan - The Collaborative Consortial IR project will engage a broad range of stakeholders across multiple consortia to produce a software that will serve the diverse communities of many libraries, representing academic users of all types. This project is scoped to focus on OERs, aiding traditionally underserved populations by making available open course materials. Lastly, care will be taken to collect feedback from traditionally under-represented groups in each consortium with focus on accessibility standards.

National Impact - The success of this project will further cement libraries' place as central to delivery of key repository services to their communities, ensuring sustainable, affordable solutions for preservation and provision of access to digital content. This project will enable our consortia and others to build on the development of Hyku, to share infrastructure nationally and beyond, and reduce reliance on commercial solutions. The Hyku community is engaged and growing, and our selected developer, Notch 8, regularly leads meetings of this community with other libraries and developers, including Ubiquity Press and the British Library. These partnerships are key to success and will result in a long-term sustainable IR solution for libraries.

Budget Summary - Though not required, significant in-kind contributions are anticipated. The budget below is presented with a high degree of confidence based on developer estimates and project specifications.
Web hosting, storage, and infrastructure for 12 months - $14,000; Contract for Hyku software development - $50,000; Project management and staffing salaries - $25,000; Travel - $25,000; Hyku Pilot Task Force meeting expenses - $5,000; Indirect costs at 10% rate - $11,900; Total Requested = $130,900