

# DESIGN BRIEF

## Vision

The management and publication of digital collections for libraries, cultural heritage, and memory institutions are poised for a generational change. These institutions are actively searching for a new solution that is easy to use, easy to integrate, and offers best-of-breed technologies and features matching current web environments and curation workflows. Hydra-in-a-Box is a 30-month collaborative project, funded by the Institute of Museum and Library Services (IMLS), that aims to provide this solution.

Hydra-in-a-Box will be a turnkey, next-generation Hydra-based solution for the management of digital collections that can be easily adopted by institutions large and small. The project partners will also provide a “cloud-ready” version of the application through a hosted service (still unnamed) to meet the needs of institutions without local IT capacity and to help sustain the effort over the long term. Finally, the partners are developing improved metadata aggregation tools to help Digital Public Library of America (DPLA) Hubs and others to harvest, map, enrich and republish metadata to aggregation services.

Through these products, Hydra-in-a-Box will benefit the library, cultural heritage, and memory institution community the several ways: 1) It will give institutions with aging installations of traditional software access to a best-of-breed replacement, one that is not only free and open source but also supported by a diverse, active community, 2) It will provide an easier technological pathway for institutions to join the DPLA, and 3) By providing hosting options, it will offer a simple way for institutions without significant technical staffing or infrastructure to benefit from Hydra.

## Project Partners

Hydra-in-a-Box is a partnership between Digital Public Library of America (DPLA), Stanford University, and DuraSpace. Each organization will contribute unique expertise to the project while pursuing specific stakeholder objectives.

**DPLA:** As it moves toward becoming a national digital library of the future, DPLA brings to the project expertise in metadata aggregation, transformation, and enhancement, as well as a growing network of hubs and partners. The Hydra-in-a-Box project offers DPLA a way to increase its leadership in the area of large-scale, collaborative digital library initiatives; provide infrastructure that will help expand its reach in terms of new and established Hubs; improve metadata quality among DPLA partners; and encourage adoption of emerging standards within the DPLA community.

**Stanford University:** As a founder and leading institution in the Hydra community, Stanford will provide its existing leadership in the Hydra project, will lead development of core product components, and ensure

Hydra-in-a-Box alignment with the greater community. Stanford will benefit from the project through its development of a stronger Hydra community and a more complete Hydra-based application for its use in the Stanford Digital Repository.

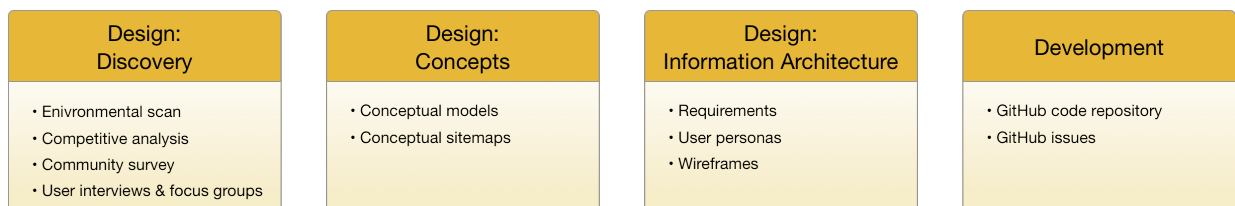
**DuraSpace:** As the stewardship organization for Fedora, DSpace, and VIVO, with deep technical expertise in building repositories and providing hosted services, DuraSpace brings to the project the knowledge necessary to construct the back-end systems for Hydra hosting, enabling the platform to run on cloud infrastructure. The Hydra-in-a-Box project will enable DuraSpace to expand their participation and leadership in implementing and promoting newer repository technologies to the academic and cultural heritage communities; extend their service offerings to those seeking hosted version of Hydra; and further their mission of ensuring that digital heritage materials are preserved and accessible over the long term.

## Scope

Because of the limited time frame and the wide range of potential features, the Hydra-in-a-Box product that is available by the end of the 30-month IMLS grant period won't provide every feature desired by the library, cultural heritage, and memory institution community. Features will be prioritized by the usefulness to the broadest range of institutions and balanced with technical considerations. Hydra-in-a-Box will be based on Sufia, so all of the functionality Sufia provides will be available in the initial version of Hydra-in-a-Box. We will extend Sufia to incorporate support for distinct content types with functionality tailored to those content types based on careful assessment of the needs and desires expressed by the community of prospective adopters in the Discovery process. A top priority is support for image-based content; other content type priorities may be included to the scope as development unfolds. Ultimately one intention of the project is to make it easier for other Hydra contributors to participate in developing new features and functionality that works in the Hydra-in-a-Box application, enabling the community to broaden the product's scope for a collective benefit.

## Process

Work on Hydra-in-a-Box began in Spring, 2015. Much of the effort in the initial phase of the project focused on discovery and design work, with infrastructure and technical exploration occurring in parallel. As these efforts were completed in Winter, 2016, the next phase of work, formal development, began. The diagram below illustrates the main components of work completed in these phases.



The Hydra-in-a-Box development strategy is highly community-oriented. Project source code and work tickets are hosted in the open under a Hydra community organization on GitHub. A number of institutions will be working with the Hydra-in-a-Box team on the development of community components, including Penn State University, the University of Michigan, and Northwestern University. As development proceeds, we will work with a small number of other institutions who will pilot test the application and provide formative feedback to help ensure Hydra-in-a-Box meets the needs of the repository community.