



Sustaining
COLLABORATION among
COMMUNITY-SUPPORTED
DIGITAL PRESERVATION
SERVICES and planning
for **CONTINUED IMPACT**

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00 EXECUTIVE SUMMARY

Community-supported, values-driven digital preservation services operate in a landscape where the increasing economic, labor¹, and climate² challenges are too big for any one organization to tackle alone.

In the context of these challenges, the Educopia Institute—in partnership with [APTrust](#), [Chronopolis](#), [CLOCKSS](#), [lyrasis](#), the [MetaArchive Cooperative](#), and the [Texas Digital Library](#) (six members of the Digital Preservation Services Collaborative³)—sought funding from the Institute of Library and Museum Services (IMLS)⁴ to reaffirm the need for—and to establish a shared vision for—the sustained viability of values-driven, community-supported approaches to distributed digital preservation (DDP).

As the project advanced we were reminded that, as technical service providers, we too are embedded in a broader cultural context that is unconsciously biased towards technocentric solutions, or solutions that foreground technological infrastructures and background social infrastructures. Acknowledging that there are technical and non-technical requirements across the information management continuum, our shared service model vision aims to offer two additional services at discrete moments in the institutional decision-making process: “advocacy-as-a-service,” best deployed at the institutional preservation strategy-forming moment⁵; and “readiness-as-a-service,” assisting stewardship organizations that have recently formed their preservation strategy to identify the content, preservation needs, budget realities, etc., as they begin to research the digital preservation services landscape.

Beyond individual organizations, readiness-as-a-service is also a call for collective strategy among values-driven, community-supported bit-level⁶ service providers to anticipate and be prepared to respond to change (and to shocks) in a nimble, coordinated, collaborative way.

We think this vision offers an exciting and viable path forward for values-driven, community-supported service providers, and we hope this vision will attract additional service providers and grow our coalition of support.

¹Winston Atkins et al., “Staffing for Effective Digital Preservation 2017: An NDSA Report,” September 13, 2017, <https://doi.org/10.17605/OSF.IO/3RCQK>.

²Benjamin Matthew Goldman, “It’s Not Easy Being Green(e): Digital Preservation in the Age of Climate Change,” 2018, <https://scholarsphere.psu.edu/resources/381e68bf-c199-4786-ae61-671aede4e041>.

³See more at <https://educopia.org/dpsc-planning-project/>.

⁴This project was made possible in part by the Institute of Museum and Library Services LG-252340-OLS-22.

⁵Note that while our focus here is on the advocacy in the strategy-forming moment, we acknowledge that sustained advocacy for digital preservation is necessary well beyond the strategy-forming moment.

⁶The Library of Congress defines bit-level preservation as “a digital preservation strategy that maintains authentic and accurate copies of both born digital and digitized content as received...bit-level preservation focuses on safeguarding the original bitstream...”. See <https://www.loc.gov/programs/digital-collections-management/about-this-program/glossary/>.

01 INTRODUCTION

Digital preservation is important, and more effort is needed

Digital preservation is important. Jeff Rothenberg's oft-cited 1995 article, "Ensuring the Longevity of Digital Documents," makes a compelling argument in favor of digital preservation: in the year 2045, how will generations in the (now-imminent) future access the information created digitally by their grandparents and stored on a CD? Will they have disk drives? Will the CD itself be damaged? And even if they can mount the storage media, will they have the software to access the information?⁷

The rapid rate of technological innovation and change makes it highly unlikely that digital information will be available for future access without a concerted effort to preserve it over time. The work of digital preservation is to preserve digital objects so that they undergird the advancement of civilization, humanity, and a better world. Preservation is more than just an end in itself: digital preservation is directly related to the ability of cultural heritage organizations to provide broad access to their collections—in fact, preservation is defined by access.⁸

More effort is needed to advance the cause of digital preservation. The nature of digital preservation consists of underlying policies, infrastructure, workflows, and sustained content stewardship over time. Consequently, the benefits of digital preservation activities are not immediately apparent or tangible to the broader public—which translates to deprioritization and low to no financial resourcing for digital preservation. Funding for libraries has decreased steadily over many years and digital preservation in particular is often an unfunded mandate within cultural heritage organizations.⁹ As a recent ITHAKA S+R Report found, "heritage organizations are severely underinvesting in digital preservation."¹⁰

Ironically, the need for robust digital preservation infrastructure, ongoing skill building, and collaboration is **only increasing**—and the impact of data loss will be felt more immediately and more frequently as the volume, diversity, and complexity of digital information grows without adequate resourcing for digital preservation activities.

⁷Jeff Rothenberg, "Ensuring the Longevity of Digital Documents," *Scientific American* 272, no. 1 (January 1995): 42–47, <https://doi.org/10.1038/scientificamerican0195-42>.

⁸The American Library Association: "Digital preservation combines policies, strategies and actions that ensure access to digital content over time." See <https://www.ala.org/alcts/resources/preserv/defdigpres0408>.

⁹NDSA Staffing Survey Working Group. "2021 Staffing Survey Report." NDSA. August 2022. <https://osf.io/emwy4/>.

¹⁰Oya Y. Rieger, Roger C. Schonfeld, and Liam Sweeney, "The Effectiveness and Durability of Digital Preservation and Curation Systems," July 2022. <https://doi.org/10.18665/sr.316990>.

01 INTRODUCTION

The role of collaborative, community-driven efforts in advancing digital preservation

Community-driven digital preservation initiatives distinguish themselves from other digital preservation services in their preference for open source technologies; commitment to community governance and values-aligned practice; and investment in training and peer learning to ensure that digital preservation skillsets are embedded within stewardship organizations. Together, these characteristics of community-driven preservation initiatives aim to lower barriers to effective digital preservation, offering enormous benefits for cultural heritage workers and the general public.

The Digital Preservation Services Collaborative (DPSC), an alliance of mission-aligned, community-driven digital preservation service providers, has crafted and collaboratively aspires to a set of shared values.¹¹ These shared values establish specific standards that can guide the efforts of member organizations. With that said, DPSC members are well aware that values alone do not define the organizational or financial mechanisms by which those services align and sustain over time.

The digital preservation community has long supported and recommended collaborative approaches, acknowledging that the scale and complexity of digital preservation challenges require coordinated action toward shared preservation goals. The National Digital Stewardship Alliance's (NDSA) 2015 National Agenda for Digital Stewardship report noted the need for a coordinated ecosystem of distributed services: "stewardship organizations and funders need to better identify and implement processes to maintain key software platforms, tools, and services. We need better models to support long-term sustainability for common goods."¹²

The question of **who** will collaborate to do **what** is of paramount importance. In an effort to both contribute new thinking and supporting data, a subset of the DPSC members pursued funding opportunities around exploring the feasibility and viability of a shared service model that would address existing issues and concerns for both the communities we serve and for our own organizations.

¹¹Digital Preservation Services Collaborative, "Digital Preservation Declaration of Shared Values," 2024, https://dpscollaborative.org/shared-values_en_v4.html For references to the impact of the Digital Preservation Declaration of Shared Values, see: NDSA Agenda Working Group, "2020 NDSA Agenda," April 29, 2020, <https://doi.org/10.17605/OSF.IO/BCETD> and Katherine Skinner and Sarah Wipperman, "Living Our Values and Principles: Exploring Assessment Strategies for the Scholarly Communication Field" (Atlanta, Georgia: Educopia Institute, 2020), https://educopia.org/wp-content/uploads/2020/10/20201105_NGLP_PrinciplesValues_Final_Publication.pdf.

¹²NDSA Coordinating Committee and NDSA Working Group co-chairs, "2015 National Agenda for Digital Stewardship: A report on the challenges, opportunities, gaps, emerging trends, and key areas for research and development that support the national capacity for digital stewardship" (September 2014), <https://www.digitalpreservation.gov/documents/2015NationalAgenda.pdf>, p.28

01 INTRODUCTION

A note on the broader context of this project

We set out to define a new/future collaborative service model (and accompanying technical requirements) that would ensure the continued availability of values-driven, community supported distributed digital preservation service providers.

The question of continued availability sits at the intersection of colliding forces: economic realities and uncertainties; changes in the funding landscape; changes in the competitive landscape; too few staff for ever-increasing workloads throughout the field; rapidly-changing climate realities, and the need for active climate change preparation; etc. We sought to craft a vision that was clear-eyed about these forces and expansive enough to allow for degrees of uncertainty.

The 18-month duration of this project was a transformative time for the DPSC Project Team: DPSC Project Team member organizations went through top-level leadership changes; DPSC Project Team members themselves shifted into new and/or reimagined roles; the digital preservation landscape itself continued to rapidly evolve. Meanwhile, this project proceeded in parallel, our research validating and backing with data the stubborn challenges we face in our field. In Section 4, we discuss how our research learnings led us to pursue a broader vision as the output of this project (as opposed to the more technocratic solution we imagined going in).

The work of this project was completed, and advocacy-as-a-service identified, before the February 2024 announcement that the Digital Preservation Coalition (DPC) would be expanding its work to the Americas.¹³ We are excited about their arrival and expect the DPC's expertise in advocacy, coupled with our expertise as bit-level service providers, to be a boon for digital preservation mindsets and approaches in the Americas that will help make the advocacy-as-a-service offerings more impactful for the communities we serve.

What follows is an in-depth description of the project, our learnings, our vision for a shared service model, calls to action to specific stakeholders, and recommended next steps.

¹³"DPC extends global presence to the USA," <https://www.dpconline.org/news/dpc-extends-global-presence-to-the-usa>, February 2024.

02 “SHARED SERVICES” FOR VALUES-DRIVEN, COMMUNITY-SUPPORTED DIGITAL PRESERVATION

The DPSC Project Team received IMLS funding to determine the best way to combine our efforts toward a common goal of providing community-supported, values-driven digital preservation services; and to design a collaborative, forward-looking shared service model vision for distributed digital preservation.



The DPSC Project Team¹⁴ consisted of the following:

- A Project Director (from the Educopia Institute)
- Six DPSC Member Organization Representatives
- A Service Design Consultant



The DPSC Project Team established the following guiding principles for this project:

- **Convene relevant perspectives and voices** to inform the work and build a consensus view of the problems and our proposed solution.
- **Gather data** and create a fact base to articulate the “frame” of the problems we’re trying to collectively solve, and the opportunities that we might take (better) advantage of.
- **Define the guardrails** of the shared service model vision, so that potential service models are both realistic and attainable.

¹⁴ DPSC Project Team members include: Hannah Wang (formerly Educopia Institute/MetaArchive, now National Archives and Records Administration), Ryan Menefee (Group Project), Alicia Wise (CLOCKSS), Bradley Daigle (Academic Preservation Trust), Lydia Tang (Iyris), Courtney Mumma (Texas Digital Library), and Sibyl Schaefer (Chronopolis).

Project approach:

Rooted in the guiding principles outlined above, and in our commitment to community-governed and consensus-building projects, the DPSC Project Team took the following approach to this project:

Recruiting an Advisory Board & Service User Group

Recruit a diverse set of stakeholders (advisors, service users, etc.) to provide input on needs and iterative feedback on the project findings and deliverables. We intend to invite some of these individuals to continue to serve as stakeholders during future phases of this work.

DPSC Advisory Board¹⁵ includes experts on business development and information technology; library administration and digital curation professionals (including representatives from community-based archives); representatives from values-driven, community-supported service providers not involved as project partners; and representatives from innovative digital preservation projects.

DPSC Service User Group¹⁶ includes stakeholders at organizations that already use the services offered by project partners, organizations that are currently in relationships with for-profit vendors, and organizations for whom digital preservation may currently be out of reach. This group will include a mix of practitioners and decision-makers at organizations.

Understand Unmet Needs

Gather data and information from DPSC service providers and current/prospective end users of digital preservation services to:

- Understand end users' unmet needs for digital preservation
- Understand end users' realities regarding budget, staff, competing priorities, etc.
- Understand vendor selection from end users' perspective
- Understand vendor requirements and how end users evaluate risks

Methods employed:

- **Secondary research:** Our work stands on the shoulders of prior data-gathering efforts, many of which are sourced in this executive summary.
- **Primary research:** We created a primary survey distributed to current and prospective users of digital preservation services (including, but not limited to, members of the DPSC Service User Group), followed by 60-minute moderated conversations to go deeper into primary survey topic areas, specifically around the vendor selection process and vendor requirements.

Understand the Shape of the Opportunity

Ground the partners in a realistic, shared understanding of their combined capabilities, opportunities, and vulnerabilities—effectively surfacing the constraints and opportunities for a shared service model design.

Methods employed:

- Questionnaire and one-on-one interviews with DPSC Project Team members, moderated by the service design consultant and Project Director, to gather in-depth information about the DPSC partners’ revenue models, service approach, technical capabilities, interest/desire/feasibility of merging across organizations.

Articulate Challenges

Based on the data gathered above, synthesize learnings into clear statements of challenges that the shared service model vision should address.

Design a Shared Service Model Vision to Address Challenges

Before we embarked on gathering data, we articulated our desire to design a shared service model vision that would:

- Take (better) advantage of our unique capabilities and strengths
- Directly address user needs in the context of today’s market landscape
- Positively impact the DPSC members’ organizations; our service end users and their organizations; and digital preservation overall

Progress Updates, Feedback Gathering (Continuous Iteration)

At key milestones in this project, we shared our learnings with the DPSC Advisory Board and DPSC Service User Group. These stakeholders provided input and feedback on two iterations of the shared service model vision. The vision shared later in this executive summary reflects the consensus output of this collaborative process.

This project kicked off in September 2022 with an initial meeting of the DPSC Project Team and selection of the service design consultant. Advisory Board and Service User Group members were then recruited to advise and inform the project. Primary data gathering occurred between April and May 2023.

A first draft of the service model vision and strategy was presented to a combined meeting of the Advisory Board and Service User Group in August 2023, and subsequent revisions were incorporated and socialized with those groups in October 2023.

03 CHALLENGES & OPPORTUNITIES

Based on the information gathered from the survey and interviews conducted, this project identified specific challenges that could be addressed by the design of a shared service model for values-driven digital preservation service providers. Note that some of these insights may feel familiar or “old news”; however, this is the first time that these challenges have been articulated, synthesized, and supported by both qualitative and quantitative data.

A full summary of research findings is available through Educopia’s website.¹⁷

1. *Persistent needs for institutional advocacy and readiness for digital preservation.*

Effective digital preservation relies on a strong set of cross-functional relationships and interdependent roles and activities. Too often, the responsibility (and burden) of digital preservation advocacy and readiness within information stewardship institutions falls on a single digital preservation practitioner.

When it comes to advocacy, we observed that these lone stewards of digital preservation struggle to gain traction in their organizations, and are often overwhelmed with their many responsibilities and by trying to keep digital preservation afloat in under-resourced environments. They are often dispirited, championing upwards while seeming to make no progress. Some stewards have turned to their digital preservation service providers/ partners to help (re)educate their organization about what digital preservation is, and why it’s important and to help build a sustainable coalition of internal supporters who understand and are aligned with the organization’s digital preservation strategy.

In terms of readiness, we observed a pattern across organizations of varying sizes and digital preservation remits: after having led their organization through a process to evaluate and select a service provider for digital preservation, and now over 12 months into a pilot period with their selected software solution, some organizations had yet to upload a single byte of data into these new systems. This was because the stakeholders in their organization who would be contributing content didn’t fully understand what it meant to be “ready” for preservation. To be “ready” for preservation is to have adequate capacity, capability, and funding available across the entire information management lifecycle preceding content storage and preservation (i.e., content generation, collection/curation, metadata coordination, digitization coordination, etc.).

03 CHALLENGES & OPPORTUNITIES

2. *Limited institutional prioritization for digital preservation*

Stewardship institutions lack top-down alignment on the importance of digital preservation:

- In our primary survey, ~27% of respondents reported working in an organization where digital preservation is both viewed as important *and* there is top-down organizational alignment around its importance
- About ~24% of respondents reported working in an organization with top-down alignment around the importance of digital preservation, but their organization nevertheless lacks the appropriate expertise, staff, and/or resources to do preservation
- Nearly half (~46%) of respondents reported that while digital preservation is important to those doing preservation work, they lack top-down organizational alignment and support for digital preservation

These findings align with a question asked elsewhere in our survey: ~50% of respondents identified insufficient senior-level administrative/executive understanding of digital preservation as an obstacle to prioritizing digital preservation in their organization, and ~30% reported insufficient senior-level administrative/executive support and/or buy-in for digital preservation. While these survey results measured the perceptions of those working in digital preservation, and everyone would like their area of work to be better supported, **the consistent pattern of responses over multiple studies, along with the lack of actual institutional implementation indicates that this is a real and not just a perceived problem.**

3. *Need for collective, cost-effective solutions to overcome budget constraints*

Common themes reported during our project include: limited access to developer time; austerity measures; too few staff in number, and too few staff with experience or expertise in digital preservation; and institutional preference for prioritizing access activities over preservation activities. All of which, the Project Team believes, points to a need for more advocacy and readiness preparation and access to collective, cost-effective preservation services.

03 CHALLENGES & OPPORTUNITIES

3. *Need for collective, cost-effective solutions to overcome budget constraints (contd.)*

Digital preservation mandates bump up against challenging staffing and budgeting realities:

- Staffing challenges: Many organizations have too few staff in number to carry out preservation activities (and in some organizations, a single individual shoulders responsibility for the entirety of digital preservation, inclusive of advocacy, strategy, workflow creation, and all other work that makes preservation possible); organizations that are appropriately staffed may lack expertise for digital preservation; highly expert staff often have a growing portfolio of responsibilities beyond digital preservation.
- Budget challenges: In many organizations, it is easier to secure funding for a one-time expenditure on software or vendor contracts than it is to secure incremental expert staff; in organizations where digital preservation lacks top-down prioritization, preservation activities may compete with the likes of facilities maintenance (for example) for scarce dollars.

In other words, without top-down prioritization, there is no **strategic** perspective on the value of preservation.

In addition to the obstacles identified above, survey and interview respondents also reported the following obstacles that indicate the variety of ways practitioners find themselves challenged:

- Qualified staff, but no budget for hardware/software for digital preservation
- Appropriate number of staff, but the staff lacks expertise in digital preservation
- Organizations select software solutions for digital preservation before securing the staff to use that software
- Lack of dedicated staff (even digital preservation experts only spend a portion of their time on digital preservation in addition to other duties)
- Lack of dedicated IT support for digital preservation
- Decentralized approaches to digital preservation in some organizations can lead to a lack of budget clarity

In some organizations, the sheer magnitude of digital collections to be preserved with limited resources can lead to a prioritization stalemate. In other organizations, these conditions have led to painful tradeoffs.¹⁸ For example, multiple survey respondents reported that given their limited capacity for preservation activities, they have made a choice to dedicate that capacity for preservation to preserving digitized archival materials while simply saying “no” to preserving born-digital content.

03 CHALLENGES & OPPORTUNITIES

4. *Private sector preservation services have designed their go-to-market strategies to align directly with the above challenges, but too often the challenges are not solved.*

Private sector preservation services have tailored their offering as “solutions” to the challenges faced by digital stewardship institutions:

- Some claim to need minimal staff training/onboarding/oversight to start preserving.
- Some foreground access interfaces as a benefit.
- Some invest in sophisticated marketing and sales organizations that target decision-makers at the top of the organization, but often do not cultivate a culture of digital preservation within the organization as part of their service model.

These go-to-market strategies are enticing but they tend to obfuscate, rather than fully address, the challenges of digital preservation. To reiterate, acquiring a piece of standard software or a commercial system is not the same as a strategy; to implement a system without conscious curatorial decisions or sufficient investment in preservation resources and staffing is not truly digital preservation.

¹⁵DPSC Advisory Board members include Tamar Evangelestia-Dougherty, Rachel Frick, Geoff Harder, Mary Lee Kennedy, Carol Mandel, Harish Maringanti, Nancy McGovern, and Thomas Padilla.

¹⁶DPSC Service User Group members include Stephen Abrams, Rachel Appel, David Cirella, Ben Daigle, Stacey Erdman, Chatham Ewing, Christina Velazquez Fidler, Nicholas Homenda, Margo Padilla, Stanislav Pejša, Mark Phillips, Michelle Polchow, Max Prud'homme, Bethany Scott, Krista Sorenson, Danielle Spalenka, Nathan Tallman, Kristen Whitson, Christine Wiseman, and Kate Wittenberg.

¹⁷See more at <https://educopia.org/dpsc-planning-project/>.

¹⁸See, for example, “Preserving Sensitive Data in Distributed Digital Storage Networks” by The Texas Digital Library in Collaboration with the UC San Diego Library, <https://hdl.handle.net/2249.1/156715>.

Opportunity: Expanding collective offerings to meet end user needs

Our research effort uncovered three major vectors of opportunity for values-driven, community-supported service providers.

Expanding Collective Offerings To Meet End User Needs

Today, DPSC members primarily offer bit-level preservation, storage and communities of practice. We learned from end users, however, that distributed preservation is not viewed as a “complete” offering—end users often have requirements beyond storage and communities. There is an opportunity for more DPSC members to offer any or all of these commonly-required services:

- “Upstream” services that shape preservation strategies and vendor choices. These upstream services could help end users to:
 - Understand the landscape of values-driven, community-supported service providers
 - Build sustaining coalitions for digital preservation within their organizations
 - Calculate the total cost of ownership of their preservation solution
 - Articulate functional requirements to be “ready” for digital preservation
- Robust workflows to move content from active preservation to access, and vice versa.

The opportunity to offer upstream services arose from an insight gleaned from our research about how institutions make their preservation service selection decisions: there is first a discrete institutional attempt to articulate the need for a digital preservation strategy and to align necessary stakeholders around that need; and then there is a separate effort to bring that strategy to life, which is when institutions begin researching the digital preservation landscape.

These two discrete moments are critical institutional decision-making points for preservation. As values-driven, community-supported service providers, we are uniquely positioned to bring our capabilities, experience, and expertise to bear to help these organizations make more informed decisions for preservation. These moments are also prime opportunities to educate these organizations about community-supported and values-driven shared services.

Opportunity: Expanding collective offerings to meet end user needs

Creating More Seamless Connections Between Services

Once additional services are defined, there is an opportunity to develop a more coherent and well-defined connection between these services and the providers who offer them (one example, directly addressing end user preferences, would be a single point of purchase across many values-driven, community-supported service providers).

Evolve The Service Model Over Time

Based on the questionnaire and interviews with representatives of the DPSC member organizations, the DPSC Project Team was able to articulate the need for an evolving service model that could be developed iteratively over time. This acknowledges that some DPSC member organizations have challenging revenue models or models in flux and that a shared service model vision should both elevate the partners while they seek sustainable operations and free capacity for more collaboration with the project partners. With time, the member organizations can further pursue more complex collaborative efforts.

04 SERVICE MODEL VISION

With these challenges and opportunities articulated, our next step was to draft a shared service model vision that would:

- Build on the unique strengths and capabilities of the DPSC members while acknowledging the need for a service model that could evolve with time
- Be feasible, viable, and sustainable for the organizations providing the services
- Better meet the unmet needs of our designated communities
- Contribute to the field of digital preservation in general, beyond our own organizations

In response to the explicit challenges uncovered in this project, and based on our conversations and feedback with the DPSC Advisory Board and DPSC Service User Group, the DPSC Project Team first outlined a set of criteria that any effective shared service design for digital preservation must meet:

Effective Shared Service Requirements

Any effective shared service must recognize that successful digital preservation arises from a **comprehensive program** of the **services, systems, and tools** used for digital preservation, and also the **people, competencies, measurement and analysis, organizational cultures, workflows, and decision-making** that comprise a holistic, programmatic view of digital preservation.¹⁹

Any effective shared service must **clearly delineate where partners could combine and coordinate service efforts and/or remain independent**. Factors to consider include, for example, organizational needs, the community of stakeholders with interests in the content, good practice in terms of redundancy and resilience, cost, efficiency, and sustainability.

Any effective shared service must deeply and meaningfully **engage organizations with unmet needs, with consideration of increased diversity, equity, and inclusion**. This includes being iterative and incremental, incorporating feedback from existing users of our services; it also includes considering the needs of organizations that are currently excluded or left out of participation in community-supported digital preservation services because they are cost-prohibitive.

Any effective shared service must be **“easy to do business with,”** i.e., the service and its benefits must be legible and the mechanics of contracting, invoicing, etc. must align to end user processes.

Any effective shared service must attempt to **engage the multitude of discrete functions within an information stewardship organization** that play critical roles in long-term access to digital information (e.g., information technology, executive administration, metadata coordination, digitization coordination, reference, etc.)

04 SERVICE MODEL VISION

These general requirements provided a starting point for our shared service model vision design process and, with advice, input, and feedback from the Advisory Board and our Service User Group, our specific shared service model vision began to take shape.

A Shared Service Model Vision: Beyond Preservation Services

Today, our shared service model could be succinctly described as preservation services, grounded in shared values, provided to our members/communities/customers. Figure 1 below illustrates this service model.

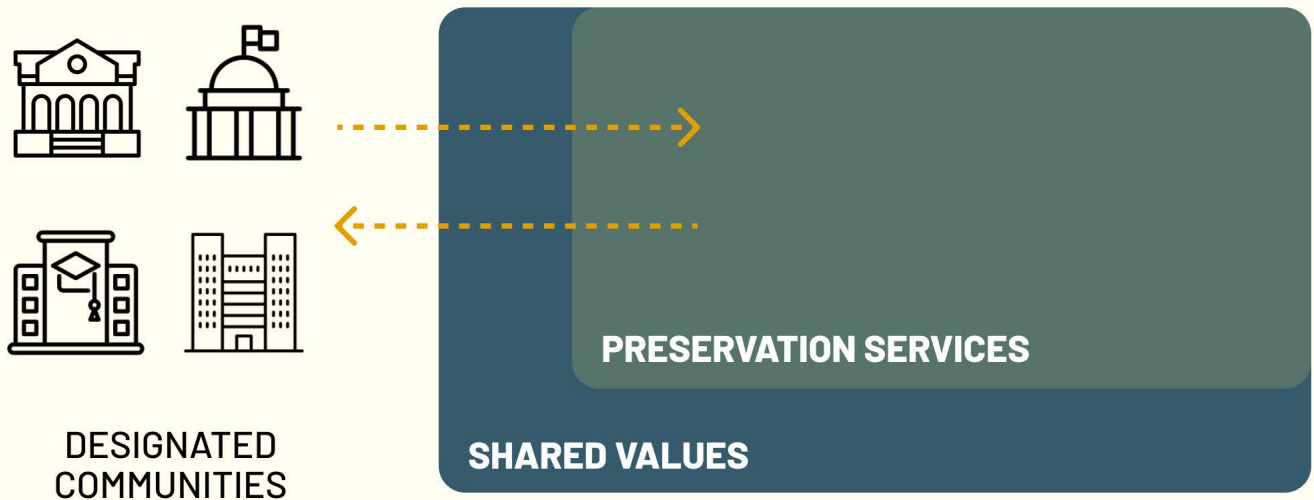


Figure 1: Today's Service Model

04 SERVICE MODEL VISION

Our vision for a future shared service model starts from an insight into how preservation service selection decisions are made: there is first a discrete institutional attempt to articulate the need for a digital preservation strategy and align necessary stakeholders around that need; and then there is a separate effort to bring that strategy to life, which is when institutions begin researching the digital preservation landscape.

The future shared service model vision, depicted below in Figure 2, adds two new digital preservation services, “advocacy-as-a-service” and “readiness-as-a-service,” each aligned to one of these institutional decision-making moments. This vision is firmly rooted in the shared values of the Digital Preservation Services Collaborative.

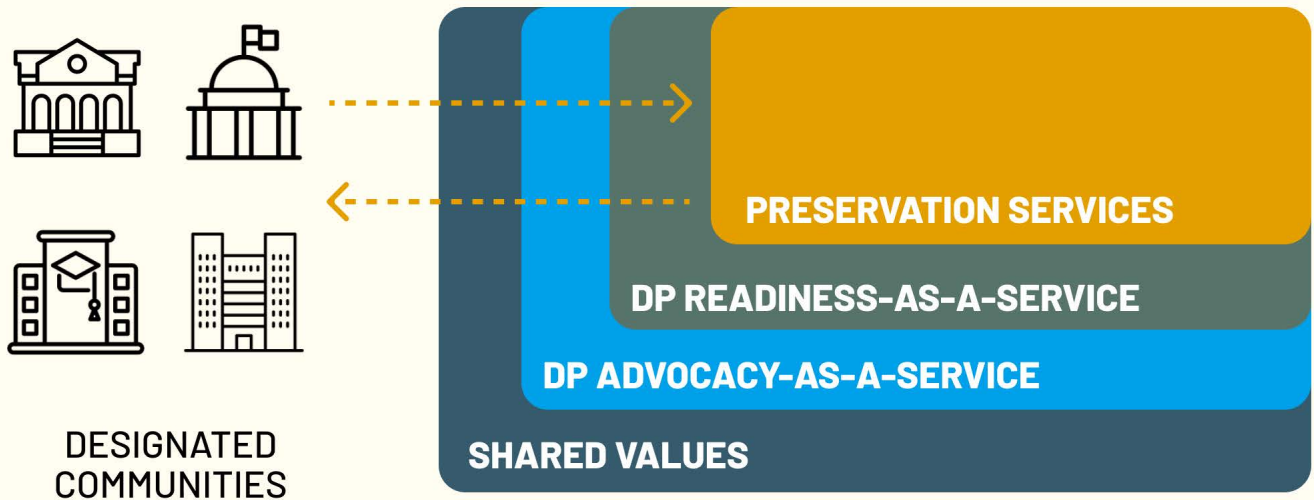


Figure 2: Future Shared Service Model Vision

04 SERVICE MODEL VISION

“Advocacy-as-a-Service”

Today, advocacy for digital preservation within stewardship organizations often takes the form of a single individual, having actively participated in a membership community composed of their peers in similar institutions, advocating upward in their organizations for digital preservation generally, and for preservation services specifically, over a sustained period.

Providing advocacy-as-a-service to support them is part of our shared vision. This could take many forms. For example, during the strategy-forming moment, service providers could engage and activate senior leaders and other stakeholders who have been missing from digital preservation conversations to date. CTO/CIOs, university provosts, deans, directors, and other roles are critical to information stewardship but may not have traditionally seen a direct connection between their day-to-day work and the advancement of preservation goals (e.g., legislators and foundations). Through coordinated advocacy to a broader set of stakeholders, digital preservation can become integrated into a broader strategic framework.

The responsibility for advocacy for digital preservation, distributed across a much broader set of stakeholders, is more likely to influence resource allocation decisions in ways that positively impact digital preservation. We know from our research and past precedent that this activity should happen in concert with the often-solo individuals who have long been advocating upward in their organizations.

“Readiness-as-a-Service”

The DPSC Project Team defines “readiness” as having adequate capacity, capability, and funding available. This needs to happen across the entire information management lifecycle preceding content storage and preservation (i.e., content generation, collection/curation, metadata coordination, digitization coordination, etc.). Similar to advocacy, readiness for digital preservation within stewardship organizations is too often seen as the responsibility of a single individual. From our data gathering in this project, we know that individuals responsible for evaluating digital preservation services often reach the end of a digital preservation service pilot before they have actually reached the preservation stage of the information lifecycle.

We see two scenarios where readiness-as-a-service can show up productively for service providers and their end users.

Readiness-as-a-Service: For Organizations

Readiness-as-a-service at the organization level would be support provided to stewardship organizations *after* the adoption of a digital preservation strategy but before an organization begins researching the digital preservation services landscape. Assisting stewardship organizations earlier in their preservation journey to identify the content, preservation needs, budget realities, etc. will not only help those organizations to make more informed decisions for preservation, but is also a moment to elevate and educate organizations about existing services and options available to decrease duplication of effort. In this scenario, *readiness-as-a-service is something that community-driven digital preservation services are uniquely positioned to provide.*

Readiness-as-a-Service: A Call for Collective Strategy

A second scenario envisions readiness-as-a-service as a call for collective strategy, specifically among the values-driven, community-supported bit-level service providers. Economic, labor, and climate challenges affect all of our organizations and, by extension, the communities we serve. Do we, and the communities we serve, have adequate capacity, capability, and funding to be ready to meet these challenges? A collective strategy could prepare bit-level service providers to anticipate and respond to change (and to shocks) in a nimble, coordinated, collaborative way.

Findings

The findings from the DPSC project were initially surprising to both the project partners and end users, as they directed service efforts towards advocacy-as-a-service and readiness-as-a-service, and away from our initial assumptions regarding a “technical requirements-first” approach to collective service design. This finding was surprising for two reasons:

1. There are several digital preservation advocacy and readiness-focused organizations that publish advocacy and readiness resources that are freely available online.
2. Even though participants in this project, including DPSC partner representatives, are values-aligned (emphasizing the criticality of cross-functional workflows; institutional commitments to and investments in digital preservation; and the intergenerational nature of digital preservation activities), the results of information-gathering remind us that *we too are embedded in a broader cultural context that is unconsciously biased towards technocentric solutions, or solutions that foreground technological infrastructures and background social infrastructures.*

DISCUSSION

A Broader Vision

However, we think that a broader vision is at the appropriate altitude for this moment in time. A broader vision acknowledges that there are technical and non-technical requirements and needs across the information management continuum, from collection to selection/curation to preservation. At the institutional level, solid advocacy and readiness approaches can help sustain digital preservation initiatives even as key personnel depart, preservation technologies evolve, etc.

We think this vision is effective for values-driven providers, as it:

- reflects learnings and input from all project stakeholders;
- accelerates and empowers our next phase of collaboration and helps us bring more individuals and organizations into the work; and
- allows for action sooner versus later: an articulated vision allows for conversations and forward momentum to begin even as the details are being worked out

Subsequent, future phases of this work will translate this vision into a detailed, reality-based plan for the implementation of these collaborative services.

05 NEXT STEPS

We frame the necessary next steps in two parts:

- Near-term: Calls to action for critical digital preservation stakeholders
- Medium-term: A series of field-level facilitated workshops aimed at advancing deeper cross-organizational collaboration among digital preservation service providers and other critical digital preservation stakeholders.

Calls to Action for Critical Stakeholder Groups

Senior Leadership in Information Stewardship Organizations



Digital preservation isn't a problem solved; the preservation and long-term access of your organization's digital materials requires attention and action. Every function in an information stewardship organization maps to the digital information stewardship lifecycle, and must appreciate the role that other functions play. Digital collection stewardship requires ongoing investment of resources. Against the backdrop of shrinking library budgets, *cooperative and networked approaches that combine the resources of many institutions toward digital preservation goals should be seen as critical investments in delivering a mission while mitigating risk.*

Middle Management in Stewardship Organizations



Your and your direct reports are likely experiencing some, if not all, of the challenges named in this report. You are not alone—peers in other information stewardship organizations are similarly positioned. We ask that you remember that effective digital preservation efforts are cross-functional. You have peers and colleagues within your organization who may not see their distinctive role in ensuring long-term access to digital materials. While the responsibility of calling everyone in is not yours alone, there may be ways in which you are uniquely positioned to strengthen the connection between discrete functions in and across the library around digital preservation—to see the goals as shared.

Advocacy Organizations, Educators, and Trainers²⁰



The resources that you all have published for the field are critical. Some advocacy organizations have focused on advocacy messaging for supervisors and resource allocators. Others have focused on resources for creators. (There are fewer effective advocacy strategies aimed at enabling non-preservation functions within a collecting organization to see the direct impact of their role on the preservation of digital materials.) However, our survey responses point to advocacy and readiness assessment as a major need or gap.

One conclusion to draw from this finding is that “if we build it they will come” is not a reasonable assumption. Our respondents are looking for support in the localized translation and use of those resources.

With the Digital Preservation Coalition’s (DPC) successful track record in digital preservation advocacy in other parts of the globe and their imminent expansion to North America, we are excited to explore how the DPSC advocacy-as-a-service model maps to advocacy work described in DPC’s current strategic plan (2022 - 2027).²¹

For trainers and educators, it is key to ensure that students and practitioners understand the interdependence of their digital stewardship role with every other function in the organization (e.g., metadata, reference, information technology, etc.). It is also key to provide tools for understanding and accessing the landscape of collective action efforts. In lieu of a national strategy in the United States, digital stewardship practitioners need tools to navigate the plurality of resources and groups, and how to right-size tools and resources for their specific needs.

²⁰Non-exhaustive list of digital preservation Advocacy Organizations, Educators, and Trainers: Digital Preservation Coalition, National Digital Stewardship Alliance, Digital POWRR, Digital Preservation Management Workshops, BitCurator Consortium, Digital Preservation Outreach and Education Network, Internet Archive; For research completed about the sustainability of digital preservation training and education efforts in the United States see “Sustaining Digital Curation and Preservation Training in the U.S.: Compiled Project Reports by Sam Meister and Katherine Skinner, 2019, https://educopia.org/wp-content/uploads/2019/09/Report_20191001.pdf

²¹“Advocacy” is one of five strategic objectives in the Digital Preservation Coalition’s 2022 - 2027 Strategic Plan and is defined as “: <https://www.dpconline.org/docs/about-1/strategic-plan/2607-dpc-strategic-plan-2022-2027/file>

Field-level workshop series aimed at a Common Agenda for Collective Impact

The National Digital Information Infrastructure and Preservation Program (NDIIPP) and its initiatives, ran from 2010–2016.²² Almost 10 years later, it is clear that the effort to align on and advance a common agenda for digital preservation in the United States has proven unsuccessful. Representatives from a sample of collecting organizations combined with representatives of collective action groups in the U.S. digital preservation landscape **need to be resourced to engage in a series of facilitated workshops** aimed at the design and launch of a longer-term effort to build a digital stewardship Collective Impact initiative, with an initial focus on advocacy and readiness coordination. This work would build on the lessons and insights gathered since the sunset of the NDIP program.

The success of Collective Impact²³ initiatives relies on a “backbone organization” that is not engaged in digital preservation or related work – it exclusively serves as a coordinating hub, responsible for maintaining constant communication and holding all parties accountable to the common agenda via a system of shared measurement.

Additionally, any future, large-scale funding to advance digital preservation needs to require a clear understanding of the broader economic realities - realities that must directly inform the business models underlying a sustainable digital preservation ecosystem.

Central to any large-scale efforts at alignment and measurement is a shared understanding of and commitment to equity in digital preservation – resisting the assumption that all collecting organizations should be striving to reach the same digital preservation program maturity goals. Instead, we must acknowledge that there is more than one way for organizations to contribute strategically and operationally to the common agenda—and intergenerational project—of digital preservation.

For both the series of proposed workshops and any longer-term Collective Impact initiative, representation from critical digital preservation stakeholders would need to include: Senior Leadership in Information Stewardship Organizations (including Senior Collections and Information Technology Leadership); Middle Management in Information Stewardship Organizations; Funders (especially those who focus on Digital Infrastructure, Open Infrastructure, Expanding Access to Cultural Materials, Models of Knowledge Production, Research Reproducibility, and Broadening Representation in the Cultural Record); Digital Preservation Practitioners; Creators, Donors, and Researchers; Advocacy Organizations, Educators, and Trainers; and Digital Preservation Service Providers.

²²The NDIIPP was a program, led by the Library of Congress, to establish a national agenda for digital preservation in the US. More on the background and importance of this program can be found here: <https://www.digitalpreservation.gov/about/background.html>

²³John Kania & Mark Kramer, “Collective Impact,” 2011, https://ssir.org/articles/entry/collective_impact.

Workshop Series 1: Advocacy

Objective: Map the digital preservation advocacy landscape onto the information stewardship lifecycle.

Goals & Outcomes:

- Acknowledge and build from existing work to eliminate or reduce redundancy of effort.
- Connect the dots across the information stewardship life cycle between different functions/ roles and reporting lines within an institution.
- Determine how the professional goals and priorities of each role within an institution advance digital preservation.

Workshop Series 2: Service Offerings

Objective: Map existing community-driven, values-aligned digital preservation services, identify gaps, and collectively develop approaches to secure long-term investment in digital preservation.

Goals & Outcomes:

- Nurture a shared understanding of the current landscape and gaps, clearly communicated so that stewardship organizations are well-informed and can make better decisions about where and how community-governed digital preservation service providers fit into their institutional strategies.
- Gather data to inform business models (e.g. amount/ variety of content to be preserved, trends in volume and costs, risk analysis, value of organization continuity and disaster management plans).
- Determine specific metrics that will enable us to measure our impact on practice and across stakeholder communities.
- Articulate what aspects of an “advocacy- or readiness-as-a-service” model might be collectively addressed across service providers, and which aspects create space for providers to differentiate from one another (e.g., the specific types of information stewardship organizations they serve, etc.).

Objective: Empower community-driven, values-aligned digital preservation service providers to transform their offerings to better meet community needs (via in-depth, holistic “advocacy- and readiness-as-a-service”).

Goals & Outcomes:

- Articulate clear and explicit recommendations for digital preservation service providers that want to build capacity to provide “advocacy- and readiness-as-a-service” offerings.
- Determine how existing digital preservation service providers may need to expand or shift their existing staffing model to offer these additional services and if they are willing.
- Identify levers/mechanisms for resourcing an “advocacy- and readiness-first” approach to digital preservation that includes current collective funding models such as memberships, as well as newer collective funding models such as donor-advised funds.

We think these calls to action and the field-level workshop series will advance the vision articulated in this project. We are excited about the potential for this workshop series to grow the coalition of supporters who seek to collaborate to offer new and reimaged services to the communities we serve.

More work lies ahead of us to bring this vision to reality, but we are motivated by this opportunity to foster greater commitment and ability to look after our digital cultural and intellectual heritage for future generations.