To: BTAA Deans Executive Committee
From: Shared Print Collections Technical Infrastructure Investigation Team
Date: May 11, 2026
Subject: Final Report

The Deans Executive Committee reviewed this final report in May 2026; recommendations adopted at the Library Deans & University Librarians at their June 2026 Annual Business Meeting.

Executive Summary and Recommendations

The Shared Print Collections Technical Infrastructure Investigation Team was charged in Summer 2025 to synthesize community work to date, survey non-BTAA shared print programs, identify infrastructure gaps, and recommend a practical path to operationalizing the BTAA Shared Print Collection (SPC). The team's work concludes at a critical moment: the consortium has built strong policy foundations and shared services, and there is significant community interest in moving from planning to action. At the same time, institutional budget constraints and limited technical capacity require a pragmatic, incremental approach.

The BTAA SPC is ready to move from framework and foundations to sustained operation. A Shared Print Program is in place, shared agreements and procedures are established, resource sharing is aligned, and BIG CAT provides powerful analytics across member collections. It is time to initiate local designation activity—conducted within member library integrated library systems (ILSs)—to open a path for durable, authoritative, network-level knowledge. Our survey showed that every non-BTAA program uses some sort of core IT infrastructure to keep track of which items owned by members are designated for their collection, but there is no architecture currently in use by other shared print programs that can be adopted directly by the BTAA. While the community needs to begin building the collection now, a reliable technical infrastructure is ultimately needed to prevent it from remaining siloed in member systems. Inadequate technical infrastructure will limit the collective value of local efforts, risk duplication of work, and constrain evidence-based collection decisions.

The team recommends a phased approach. This allows willing institutions to begin the process of contributing monographs. Taking this initial step will help define the work needed to designate material for the SPC and allow us to understand the barriers to this work and how to help alleviate them.

The team believes that a lightweight, modular technical architecture that preserves local autonomy while enabling shared visibility is an important strategy and long-term goal for the consortium. That vision and architecture could take many forms; enabling libraries to make commitments now will help us understand what we might want to create in the future.

Our recommended approach builds directly on existing BTAA investments, particularly BIG CAT, and supports incremental implementation that delivers clear returns on early participation and builds towards a system that allows for transparent coordinated effort.

Recommended Phased Approach

NOW: Activate the Shared Print (MONOGRAPH) Collection

- Invite member libraries to **begin selecting and designating items locally** using existing shared procedures and centrally generated BIG CAT reports.
- **Launch initial metadata flows** from local ILSs to support early visibility, test assumptions, and surface implementation requirements.
- **Focus on participation and momentum** rather than perfection, ensuring that early work contributes directly to shared infrastructure.
- Use the initial metadata flows to **assess a BIG CAT-only shared print infrastructure** and later revisit the feasibility of desired infrastructure design.

SOON: Establish Shared Direction and Engagement

- Engage collections, metadata, and systems experts, leveraging relevant community network groups to **align implementation with operational realities**.
- **Use early metadata creation and flows** to inform refinement of requirements, workflows, and governance expectations.
- **Draw on the work done and lessons learned**, to review the proposed technical architecture as the consortium's high-level vision for SPC infrastructure. Then determine the next steps.

LATER: Translate Vision into Implementation

- **Establish a technical implementation group** to develop an actionable plan, including requirements definition, sequencing, and assessment of build-versus-partner options for a metadata staging/ingest system and shared registry to expose the SPC to all members.
- **Advance integration** between the registry and BIG CAT to enable deeper analytics, reporting, and long-term planning.
- **Fully deploy the SPC** to support ongoing collaborative collection management activities, such as coordinated digitization and shared purchasing models.

Conclusion

This phased approach allows the BTAA to act now while managing risk and capacity. By enabling immediate participation, endorsing a shared architectural direction, and investing incrementally in implementation, the consortium can ensure that members' efforts compound into a durable shared asset. With executive endorsement, the Shared Print Collection is positioned to accelerate our momentum toward an enduring and operational cornerstone of the BTAA's collective collections strategy.

Accompanying documents:

- *A. Launching Selection and Designation: Initiating Metadata Flows*
- *B. Envisioning a Technical Architecture for the SPC*
- *C. Fall 2025 Survey of IT Architectures of non-BTAA Shared Print Programs*

A: Launching Selection and Designation: Initiating Metadata Flows

Purpose and Context for the Investigation Team's Work

As laid out in its May 2026 recommendations to the Dean's Executive Committee, the Investigation team believes the BTAA SPC is ready to move from framework and foundations to sustained operation. A Shared Print Program is in place, shared agreements and procedures are established, resource sharing is aligned, and BIG CAT provides powerful analytics across member collections. **It is time to initiate local designation activity**—conducted within member library integrated library systems (ILSs)—to open a path for durable, authoritative, network-level knowledge.

Initiating Metadata Flows via Initial Selection for the Shared Collection

Here, the Investigation Team provides additional clarity on its high-level recommendation to activate the Shared Print (MONOGRAPH) Collection. These details are aimed at beginning the community's work now by:

- Enable willing member libraries to begin selecting and designating items locally using existing shared procedures and centrally generated BIG CAT reports.
- Launch initial metadata flows from local ILSs to support early visibility, test assumptions, and surface implementation requirements.
- Focus on participation and momentum rather than perfection, ensuring that early work contributes directly to shared infrastructure.

Overview of the Member Library's Activities

Selection

Selection is a local decision informed by shared criteria, collective analytics, and institutional priorities. The shared agreements and procedures, developed by an earlier Working Group, establishes the scope of materials eligible for participation in the SPC, defining content that is appropriate for joint management and long-term collective retention. These shared criteria ensure that, while selection decisions are distributed across member libraries, they remain aligned with collective goals.

Supported by BTAA staff, member libraries can use BIG CAT and their local analytics tools to identify appropriate candidates at scale for shared print designation by their library. BIG CAT enables libraries to assess factors across the consortium such as overlap, lending status, and holdings distribution. Libraries then apply additional local parameters, including storage locations, condition, and institutional collecting priorities. This creates an environment where selection is both analytically informed and locally contextualized.

While selection decisions will be an ongoing activity rather than a one-time exercise, starting at a significant scale offers immediate benefits to libraries, as well as an opportunity for the members to focus on development of shared best practices.

Designation in Local Systems

Designation is the formal act by which a selected item becomes part of the SPC. It is initiated within the member library's local ILS using 583 Action Notes specified in the Shared Print Procedures. Designation is typically completed through local batch processes, allowing libraries to designate at scale.

Importantly, the member's local ILS remains the authoritative source of record for designated items and members are responsible for providing updated metadata to any BTAA shared systems following community guidelines. By embedding and maintaining shared print designations directly in local metadata, libraries ensure that designations are integrated into routine collection management workflows, including location transfers, circulation, repair, and lending.

Once designated, items are managed in accordance with shared agreements. Libraries retain responsibility for maintaining the physical integrity of designated materials and for fulfilling agreed-upon access commitments to other BTAA users.

Exposing Designations in BIG CAT to Support Analytics

Once designations are included in a member's library records as 583 action notes, the member can include them in their regular metadata exports to BIG CAT. Properly formulated 583 action notes can be accessed for analyses in BIG CAT.

Review and Lifecycle Considerations

Designation is intended to be durable, but not immutable. Shared agreements recognize that exceptional circumstances—such as damage or loss—may require review or adjustment of commitments. Clear procedures ensure that changes are communicated and reflected accurately in shared infrastructure.

Over time, as the Shared Print Collection matures, selection and designation practices will be refined in response to collective analysis and strategic priorities. The initial Agreements Framework is designed to support this evolution while maintaining transparency and trust across the consortium.

Support for Initial Selection and Designation

To advance member selection, BTAA staff can provide **initial reports (spreadsheets) for member libraries** which reflect the items in their collection that meet the Agreements & Procedures Working Group specifications for items designated for the Shared Print Collection. (This is like the procedure many members used in developing their contributions to the HathiTrust Shared Print Monograph Program.)

Expert consultations with member library staff are available to assist in understanding the analytic application of the selection criteria and any limitations of consortia-scale analysis. This

expertise can advance each member library's team in its work of identifying the portions of their collections that they want to designate.

Staff consultation also can support application of the existing procedures for designating items for the SPC in local ILSs using 583 action notes. **BTAA staff are expert in the details of action note specifications** and offer consultation services for this member activity. Based on the community's recommended procedures, staff have already established an official program name that can be used by members that wish to share retention commitments with OCLC based on their selection decisions.

In addition, the BTAA's Metadata Exchange Community of Practice (MDEX) has been engaging in developing and aligning local practice with procedures for exporting 583 designations for non-BTAA retention programs. Staff are currently supporting the community in aligning with its best practices. The MDEX work on members' 583 action metadata imported to BIG CAT is also informing ongoing development conversations with Colorado Alliance to optimize future analytics based on SPC designations.

BTAA Staff will support **appropriate community convenings** as members begin their selection work. Individual member **consultation opportunities and services will be promoted** to the membership as selection and designation begin.

B: Envisioning a Technical Architecture for the Shared Print Collection

Contents

Purpose and Context for the Investigation Team's Work

As laid out in its May 2026 recommendations to the Dean's Executive Committee, the Investigation team believes the BTAA SPC is ready to move from framework and foundations to sustained operation. A Shared Print Program is in place, shared agreements and procedures are established, resource sharing is aligned, and BIG CAT provides powerful analytics across member collections.

It is time to initiate local designation activity—conducted within member library integrated library systems (ILSs)—to open a path for durable, authoritative, network-level knowledge. Beginning our metadata flows is an important foundational step for building future technical capabilities. Our survey showed that every non-BTAA shared print program uses some sort of core IT infrastructure as a registry to keep track of which items members have designated for the shared collection, but

there is no system currently in use by other shared print programs that can be adopted directly by the BTAA. While our community can begin building its collection now, a reliable technical infrastructure is ultimately needed to prevent it from remaining siloed in member systems. The phased approach we propose reflects and helps address the resource constraints that currently restrict our ability to build new technical infrastructure.

Principles Guiding the Design and Development of our Proposed Architecture

The Investigation Team's proposal is guided by several core principles.

- The local ILS must remain the source of truth for member collection management. Designation and ongoing management of physical items should continue to be carried out within members' systems.
- Shared infrastructure should reduce local effort. Libraries already manage metadata flows to multiple external systems and often maintain local staging workflows. Our approach builds on these realities to enable "ingest once, syndicate many times," increasing the return on existing work.
- Development should be incremental. Rather than attempting to deliver a fully formed platform upfront, our architecture should support phased implementation, allowing functionality to mature as priorities and capacity evolve.
- Shared infrastructure will emerge and evolve responsively to member needs. New infrastructure should align with existing BTAA investments. BIG CAT, shared agreements, and resource sharing are foundational assets.

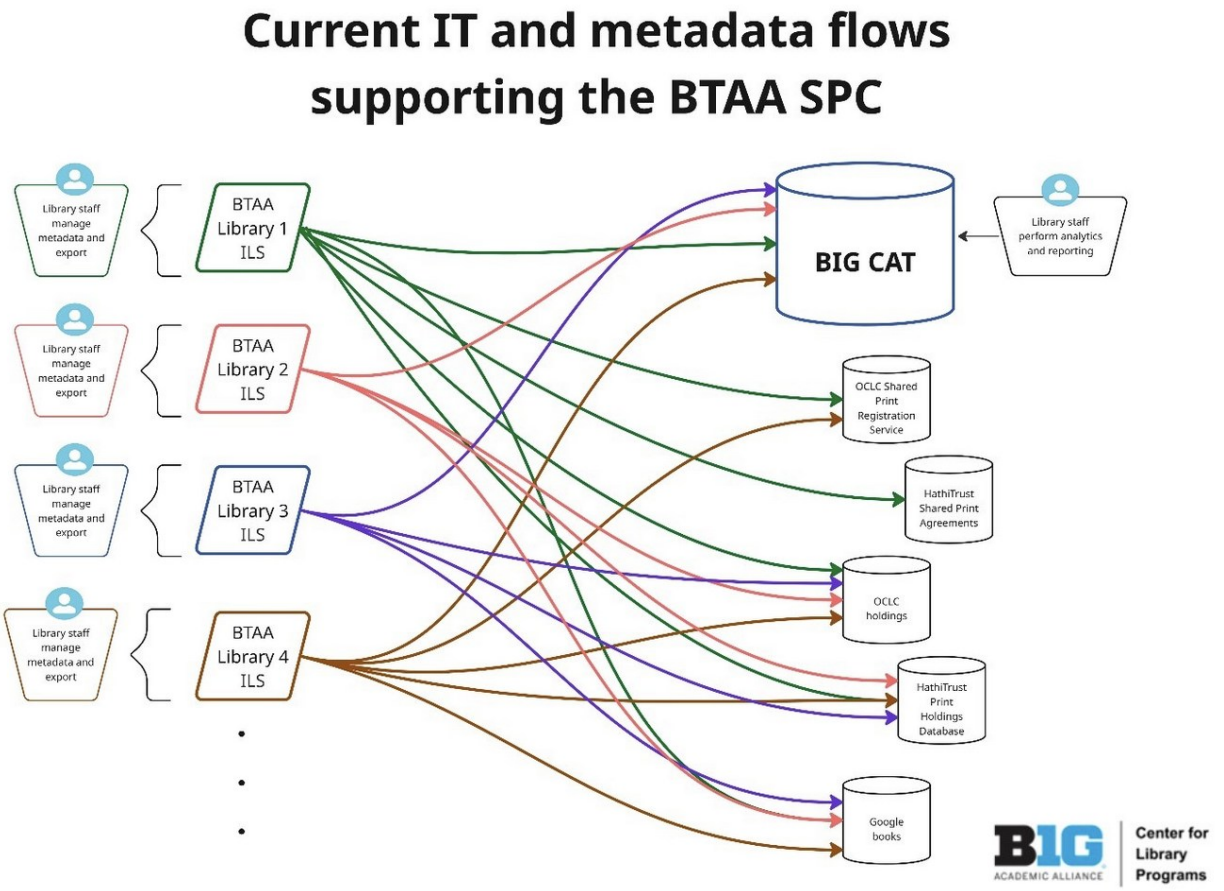
Our High-Level IT Architecture for the Shared Print Collection

This section fulfills the SPC Infrastructure Team's charge to design a high-level architecture. It includes both a description of the current architecture, BIG CAT, and where we foresee future infrastructure needs. Our architecture includes current systems and highlights elements that do not presently exist. The group also explored the potential and limitations of the BIG CAT tool (which uses the Colorado Alliance of Research Libraries (CARL) Gold Rush application) for supporting registry functions that ensure members' decision-making can rely on accurate and durable information about the shared print collection.

The Current IT Architecture and Metadata Flows

The following diagrams represent member library's current metadata flows into key community architectures central to ongoing service delivery for our print collections and how those could be improved and enhanced to deliver the value of a BTAA shared print collection.

Figure 1: Diagram of current metadata flows and key IT systems used by the membership



The "Current State" diagram depicts the fragmented reality where libraries must independently manage data exports to HathiTrust, OCLC, and BIG CAT (among other systems). Our analysis highlighted that these "right side" systems operate in silos, with member libraries duplicating effort as they provide separate metadata sets for each service, library by library.

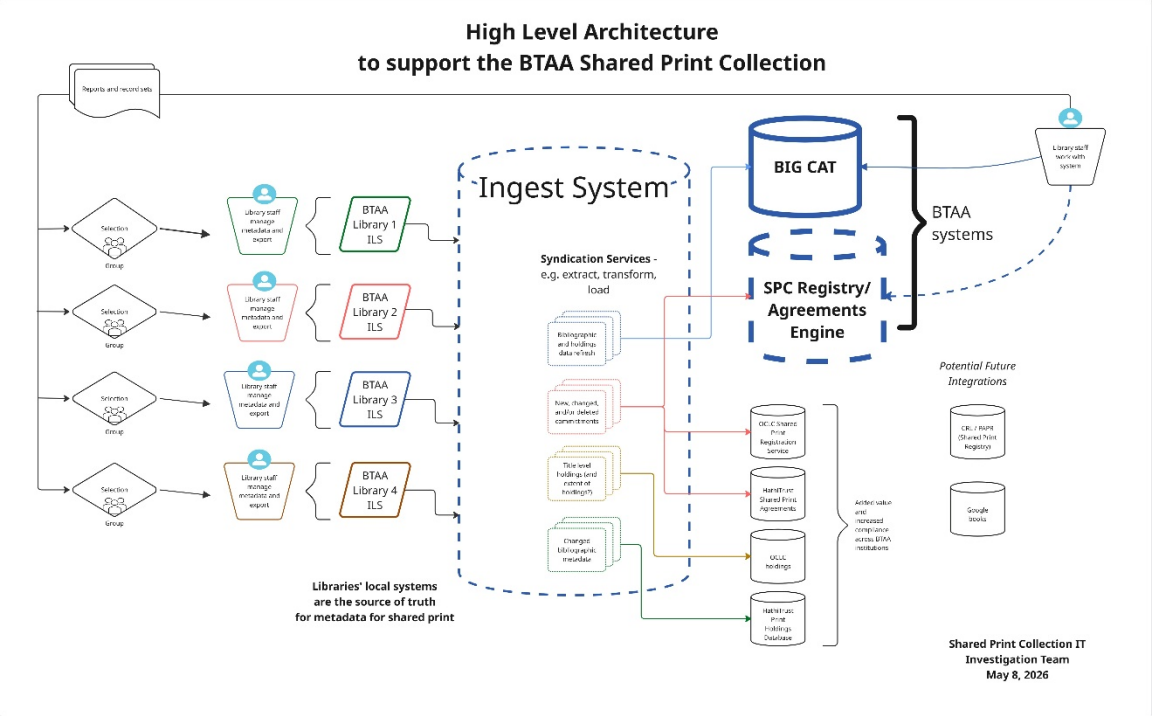
In addition, BIG CAT is now a powerful analytics system that holds the full member metadata of their collections. While it supports selection for the shared print collection and exposes member-submitted retention action notes (583's), BIG CAT's architecture lacks key registry functions. It cannot provide a durable, machine actionable, community-wide view of the SPC. For instance, metadata changes are not traceable across monthly indexing runs, i.e. as member metadata gets overwritten regularly, designated item metadata will disappear or change from index to index as members make intentional or inadvertent changes locally – any changes cannot be detected at the network level.

Our Recommended Technical Architecture

The proposed infrastructure establishes a single ingest system (staging member metadata) with many downstream targets. In addition, it posits a registry system that provides persistent,

community-accessible visibility into the items committed to the community and supports durable management of the SPC.

Figure 2: Advanced Technical Architecture and Metadata Flows



Overview of key systems

We propose a modular architecture that connects local designation practices to a shared registry through a standardized ingest layer. This approach emphasizes metadata flow and interoperability rather than centralized control.

The architecture comprises four primary IT components:

- **Member ILS:** continuing current practice, the starting point for metadata defining the items that make up the Shared Print Collection. Libraries use BIG CAT reports to select items, then batch-designate them in their local ILS.
- **BTAA Ingest System:** A "basic system" initially designed to take raw metadata and deliver it to downstream services, evolving over time to include flexible, sophisticated normalization. Over time, the system can incrementally support metadata delivery for a growing list of partner-managed systems (e.g. HathiTrust, OCLC, Google).
- **SPC Registry:** Initially a stand-alone system that can evolve to an architecture that interoperates with BIG CAT as a companion system. The registry provides the "Community View" of all designations, tracks changes in the collection, and supports machine-actionable processes that can optimize workflows and decision-making.

- **BIG CAT (Analytics Companion)**: BIG CAT continues to function as the primary analytics environment for BTAA collections.

Benefits of creating a registry system

By adding a dedicated registry to complement BIG CAT, we achieve the following operational efficiencies:

Reliable Tracking and Version Control

Currently, BIG CAT's monthly data refreshes overwrite previous records, making it impossible to see what changed between updates. A secondary registry provides metadata persistence, allowing staff to track the history of a specific item's status and ensuring that a "retention" designation stays permanently linked to the record regardless of monthly system reloads.

Streamlined Access to SPC Data

Under the current model, identifying Shared Print Collection (SPC) items requires staff to manually "carve out" a subset from the massive BTAA dataset every time they need an answer. A dedicated registry treats the SPC as a standalone, searchable entity. This eliminates the need for complex, ad hoc reporting and allows for instant visibility into our specific commitments.

Proactive Collection Coordination

A dual-registry system enables automated notifications that our current tools cannot support. For example:

- Withdrawal Alerts: If Member A withdraws a volume, the system can automatically notify Member B to ensure the "last copy" threshold is maintained.
- Gap Filling: Staff can instantly identify missing volumes in the collective set without cross-referencing multiple spreadsheets.

Reduced Manual Overhead

By automating threshold management (for instance, number of copies) and providing a durable record, we significantly reduce the labor hours currently spent on data cleanup and manual verification. This shift allows our team to focus on high-value collection development rather than administrative data troubleshooting.

Reduced Risk of Collection Loss

With persistent tracking of metadata and automated notifications, the risk of inadvertent loss of content falls substantially. Accurate, persistent data on the SPC also reduces risk of inadvertent collection loss for items not in the SPC. In addition, remediation of losses and targeted digitization of print collections supported by the registry increase the resilience of the SPC and non-designated member collections both.

The Power of "Data Syndication"

The staging system introduces a "deposit once, publish everywhere" model. By centralizing metadata deposit, normalization, and transformation before it reaches external partners, we achieve several operational wins:

- Efficient Reuse: Once a member library uploads their data, the staging system automatically transforms and normalizes it, distributing appropriate subsets it to multiple platforms—including BTAA platforms like BIG CAT and optionally, external platforms such as HathiTrust, WorldCat, and Google Books. This eliminates the need for staff to manage separate, redundant exports for every system.
- Decoupled Workflows: Currently, libraries must tailor their data extractions to meet the specific technical requirements of each target system. Staging creates a "buffer" that handles these mechanical conversions (ETL processes) centrally, reducing need for local staff to spend time on technical troubleshooting.
- Incentivized Participation: By reducing the "local effort" required to extract and contribute metadata, we lower the barrier to entry for members to pick up collective activities.

Overall: Improving Operational Efficiency

This architecture shifts our focus from manual, repetitive technical tasks to a streamlined, automated pipeline. It ensures our collective holdings are visible globally with minimal administrative friction, making participation in the Big Collection program a seamless part of local operations.

A Phased Transition in IT Architecture

In alignment with our design principles, the transition from the current environment to a fully realized shared print infrastructure should be incremental and strategic. Each phase builds on existing investments while developing new capabilities that improve metadata flows, increase the visibility and reliability of shared commitments, and reduce duplicative local effort. Taken together, these phases move from analysis and aggregation toward automation, persistence, coordination, and long-term stewardship.

Phase 1: Establishing Shared Metadata Flows through BIG CAT

In the initial phase, the consortium leverages BIG CAT as the shared foundation for aggregating and analyzing member metadata. Libraries designate shared print commitments within their local ILS environments, while contributing the necessary metadata through existing workflows. The emphasis is on making shared print commitments consistently visible across the consortium without introducing new systems or significant process changes.

Key elements of this phase include:

- Leveraging existing infrastructure: BIG CAT serves as the core shared system with a functional, unified data ingest model. It acts as the central environment for aggregation and analysis of the growing SPC.

- Aligning metadata practices: Member libraries ensure retention commitments are clearly represented and consistently expressed in the metadata they export to BIG CAT
- Creating a shared analytical view: The emerging Shared Print Collection is visible as a subset of holdings in BIG CAT
- Minimizing disruption: Current ingest and metadata contribution workflows remain in place

Outcome: A coherent, shared view of designated materials and the establishment of consistent metadata flows. These lay the groundwork for future infrastructure that can add durability and functionality for tracking changes in the SPC.

Phase 2: Build Toward Registry Functionality and Standardized Ingest

The second phase introduces the infrastructure and coordinated practices needed to move from shared visibility to shared management. Building on the metadata flows established in Phase 1, this phase combines the development of a registry with intentional alignment of metadata standards and workflows across member institutions. This is as much an organizational effort as a technical one, requiring sustained collaboration among IT, metadata, and collection management communities.

A central component of this phase is the formalization of shared metadata practices, led in part by groups such as MDEX, whose work ensures that data contributed by members can function coherently at the network level.

Key elements of this phase include:

- Establishing a shared ingest data model
    - Define a common structure for contributed metadata
    - Standardize how metadata is contributed, transformed, and distributed
    - Ensure all members can participate using the shared model
- Agree on cooperative metadata content practices. (MDEX)
    - Establish BTAA-controlled vocabularies and data conventions for shared print
    - Align member practices so that metadata has both common structure and consistent content
- Coordinating member workflows:
    - Encourage convergence around similar ETL processes
    - Support consistent contribution patterns across institutions

At the same time, this phase prepares the path for new infrastructure—including a registry and shared ingest layer—that will provide the technical foundation for persistence, coordination, and reuse. Building on the success of the initial SPC metadata flows, the community can conduct gap analyses to identify missing functionality and evaluate options for extending or supplementing the Gold Rush application that underpins BIG CAT.

Priority areas for development may include:

- Data persistence and version tracking
- Title- and volume-level threshold management
- Notification services to support coordinated decision-making

Outcome:
A standardized and community-aligned metadata environment, positioned to support the implementation of registry functionality, with reduced variation in local practices and a clear path toward persistent, network-level management of shared print commitments.

Phase 3: Enabling Ongoing Stewardship and Integrated Services

In this phase, new infrastructure—including a registry and shared ingest layer—provides the technical foundation for persistence, coordination, and reuse. The architecture matures into an integrated ecosystem supporting both analytics and operational workflows.

Key elements of this phase include:

Implementing a registry:

- BIG CAT continues as the primary analytics and selection environment
- The registry serves as the operational system for tracking and managing commitments

Deploying a shared ingest framework and data syndication:

- Standardize how metadata is contributed, transformed, and distributed, implementing the standard data model developed in phase 2.
- Deploy a “deposit once, reuse broadly” model for BTAA systems
- Expand data syndications to non-BTAA downstream systems

Integrating core systems:

- Registry, ingest, and BIG CAT function as complementary, interconnected components
- Persistent records and change tracking enable monitoring and validation of commitments
- Notifications and shared workflows support collective responses to withdrawals, gaps, and thresholds
- Enhanced analytics inform sufficiency modeling, overlap assessment, and deselection decisions

Outcome: A resilient, continuously managed Shared Print Collection in which local actions are fully aligned with collective stewardship goals.

In Conclusion

This document fulfills a key element of the Investigation Team's charge - to articulate a high-level IT architecture for the Shared Print Collection, with particular attention to the systems and metadata flows required to support it.

Without a coherent shared print technical infrastructure, the SPC risks remaining an aspirational framework rather than a fully operational collective collection. In the absence of dedicated infrastructure, members' decisions remain siloed within local systems, and the consortium lacks a stable, authoritative view of what has been committed. This limits the ability to assess the strength and sufficiency of the shared collection and constrains members' ability to make evidence-based local deselection decisions.

The architecture we describe does not prescribe a single platform or implementation, but instead defines a flexible, modular framework that connects local systems, shared infrastructure, and external partners through coordinated metadata practices and staged integration. By centering on how data moves—how it is created, standardized, aggregated, and reused—our proposal establishes a clear path for transforming distributed local activity into a coherent, efficient network-level resource.

At the same time, our phased approach recognizes that architecture must evolve alongside practice. The progression from shared data aggregation, to standardized ingest and emerging registry functions, to fully integrated stewardship reflects both technical development and organizational alignment across the consortium. Together, these investments provide a success path for advancing the Shared Print Collection as a managed, visible, and resilient collective asset—supported by infrastructure that enables reliable data flows, reduces local burden, and strengthens the consortium's capacity for coordinated action over time.

C: Fall 2025 Survey of IT Architectures of non-BTAA Shared Print Programs

Purpose and Context for the Investigation Team's Work

This section fulfills the SPC Infrastructure Team's charge to investigate the IT architectures currently being used by other shared print programs.

The Investigation Team initiated a review of IT technology infrastructures currently being used by non-BTAA shared print programs. A key aspect of the environmental scan was teasing out how both the goals and the operational realities of the BTAA compare to those of other shared print programs. The BTAA program is not focused on moving to a shared ILS infrastructure or building more centralized locations for material, but rather on leveraging the ILS's already in place and leaving responsibility for the shared corpus at the institutions as they make commitments.

The BTAA Shared Print Collection (SPC) has reached a point where its continued progress depends on opening a path to enable the needed technical infrastructure. Over several years, member libraries have invested in the foundational work required for shared print at scale: shared agreements and procedures are in place, interlibrary loan policies are harmonized and deployed in a shared lending architecture, while BIG CAT provides comprehensive analytics across member collections.

As we move forward, what remains unresolved is how local designation activity is translated into durable, network level knowledge. Selection and designation begin within local integrated library systems (ILS), where they are authoritative but largely invisible beyond the home institution. BIG CAT can help identify candidates for shared stewardship but cannot function as a stable registry of designated items. Without technical infrastructure to connect these elements, the Shared Print Collection risks remaining fragmented and underleveraged.

Technical Infrastructure Survey of non-BTAA Shared Print Programs: Themes and Background

Overview of Data Gathering

The data presented and synthesized here was collected via targeted qualitative interviews with nine major non-BTAA programs. The participating shared print programs were the Alliance Shared Print Trust (Colorado Alliance), Center for Research Libraries (CRL), Eastern Academic Scholars' Trust (EAST), HathiTrust Shared Print, Keep@Downsview, Michigan Shared Print Initiative (MI-SPI), Minnesota Shared Print Program, Research Collections and Preservation Consortium (ReCAP), and University of California Shared Print. Programs were identified from the community of the Print

Archiving Network based on similarity of scale and scope to the BTAA Shared Print Program. MI-SPI and Minnesota Shared Print Program were included because of the participation of BTAA member libraries.

Zoom interviews were held with program staff for each organization between September 10 and October 10, 2025. Visiting Program Director, Karla Strieb and Shared Print Consultant, Jeff Kosokoff (the Owl Works) took notes. To ensure transparency and a focused discussion, interview prompts, along with background information detailing the BTAA's purpose for collecting this infrastructure data, were pre-shared with all programs in advance. Crucially, the resulting interview data was shared back with each program as a validation step to confirm the accuracy and integrity of the reported technical details.

Scope of programs

While an effort was made to capture all shared print programs that included ongoing development of a shared collection, two of the programs surveyed limit their scope to promoting and managing existing retention commitments. One way to characterize the difference is between programs where retention is the focus and final goal and those that focus on ongoing development of the shared collection. While the latter expect long-term persistence of items in the collection, retention *per se* is not the end goal.

Mi-SPI and Minnesota focus narrowly on retention commitments as a preservation strategy that facilitates member deduplication. Both currently steward static collections of retention commitments. EAST and Colorado Alliance are similar, although their programs are adding retentions and in East's case, members.

Among programs that focus more broadly on ongoing development of a shared collection, there is usually an element of central storage operating as a kernel for the shared collection. This is presently true of Keep@Downsview, ReCAP, University of California, and CRL (and the BTAA's SPRs). Except for CRL, all of these programs are in various stages of expanding to include distributed collections. HathiTrust is an exception, although from its perspective the centralized digital collection is the core collection that enables the development of the fully distributed shared print collection.

The present survey and this report are focused on programs that address monographs. Several also have components that include serials – among them CRL, Keep@Downsview, ReCAP, and University of California.

Information Technologies managing the items participating in the program

Every program uses some sort of core IT infrastructure to keep track of which items owned by members are designated for the shared print program. The infrastructure is either managed by the program or by a broader organization in which all members participate.

The programs surveyed each use some mix of four approaches to their core technologies: an ILS, a database, Colorado Alliance's Gold Rush, and home-grown technologies.

Integrated Library Systems (ILS) as Core Tech:

Usually this takes the form of a common ILS tenanted across member libraries where the shared print functionality is integrated alongside other ILS functions. The ILS approach supports full bib records, item records, holdings information, and some markers of participation in the shared print program.

- ALMA is used by Keep@Downsview and University of California Shared Print
- TIND is the basis for CRL's ILS and their serials registry, PAPR

Stand-alone databases of minimal metadata:

Particularly programs managing static collections of "retained" items rely on stand-alone databases. Green Glass holds full bibliographic records, holdings and location information.

- Minnesota – AppSmith on top of a home-grown database holding limited bibliographic data
- Mi-SPI – Green Glass and migrating to Gold Rush

Gold Rush curated for shared print:

Gold Rush was developed by the Colorado Alliance of Research Libraries to support the Alliance Shared Print Trust. The tool is offered as a service to other consortia as well and is being utilized as the infrastructure for BTAA's BIG CAT in the context of collective analysis. EAST is using Gold Rush to manage a registry, and a Minnesota Shared Print is in the process of migrating to it. EAST mediates access to Gold Rush, repurposing it to function as a database of retention commitments. Gold Rush holds full bibliographic records, holdings and location information.

Other home-grown infrastructures

- SCSB is a specialized metadata and storage management system used by ReCAP. BTAA has conducted extensive assessment and testing of SCSB in the context of our Shared Print Collection needs.
- HathiTrust – uses their Print Holdings Database for the digital collection to hold data on corresponding retained print

Member library staff access to programs' systems

Program IT systems are not always accessible to library member staff. Where programs are using ILS-based approaches, member library staff generally have full access to information in the systems, and the systems support functionality like APIs. Where programs use other IT approaches, functionality for system-to-system integration like API's is not generally available. Programs using homegrown systems vary in whether they are directly accessible to staff at member libraries. Gold Rush and SCSB are accessible to member library staff. Gold Rush does not offer APIs or similar access. The HathiTrust Print Holdings Database is not accessible beyond HT staff. Unmediated member staff access is not provided to database approaches used by MI-SPI and Minnesota.

Canonical source of information on items' participation in a program

Programs vary somewhat in how they conceptualize the 'source of record' for items contributed to a shared print program. In several instances, the local ILS is considered the canonical source. This is not surprising when a program is using a shared ILS for its program. The question becomes more important when the program maintains its own IT infrastructure for tracking items in the program. All of the programs using other approaches expect members to maintain awareness of items in the program within their local ILS. In some cases, the program views this local information as canonical. If a discrepancy exists between data in a local ILS and the program's IT infrastructure, the program expects the member to support update of the information in the program's IT infrastructure (rather than expecting the member to bring its local information into conformity with the program's data). While such discrepancies are not a large-scale issue, they have implications for the program's management and development of its own IT infrastructure.

Diverse Analytics Tools

Analytics capabilities are needed by programs, at a minimum, to identify and/or qualify potential candidates for the shared print collection. Additional functions are sometimes offered by programs. For example, some draw on their program's IT infrastructures to do analytics across the existing shared print collection (EAST is doing this currently to review numbers of copies for titles). Some programs provide support to members in doing analytics to facilitate local collection management such as transfers or deduplication against the shared print collection. Some programs simply provide members with access to systems or exposed commitments in OCLC to do allow members to do their own analytics.

The IT systems programs used to enable members to select commitments are highly varied and often built for purpose.

- OCLC's GreenGlass/API was used by EAST, Michigan SPI, and Minnesota Shared Print Program for their initial analytics, but citing unsustainable costs none of them have current licenses.
- Gold Rush (built on SOLR/Blacklight) is used by the Colorado Alliance and EAST (for current analytics).
- CRL uses its PAPR ILS instance to perform analytics
- Purpose-built/Homegrown tools are used. often in combination with the programs collection management IT: HathiTrust (Ruby/MariaDB with their Print Holdings Database), ReCAP (Python with SCSB), and Keep@Downsview (Knime drawing on data from ALMA).

End-User Discovery:

None of the programs have a dedicated, program-level IT infrastructure for end-users to discover committed items. End-users at some member libraries can infer items' participation in the shared print program indirectly through exposure of notes in member institutions' local catalogs. The one

exception to this is that CRL's TIND-based tools are accessible openly on the internet and thus are passively discoverable by end-users. This is not a supported use case for CRL, merely a by-product of its IT architecture and the expediency of offering open access to its systems.

Transparency of commitments to non-members (and members)

Where program commitments are exposed beyond program member libraries, only one program exposes commitments publicly in its own system – CRL via PAPR.

For all other programs, exposure of committed items is currently done only via use of the OCLC shared print registration system, and therefore through GreenGlass and the OCLC API. Several programs include registry of committed items with OCLC as a base-line expectation, but only MI-SPI and Minnesota Shared Print have fully registered all program commitments with OCLC. The other programs have only partial registration of commitments to date. There are multiple reasons for this consistent pattern of partial registration of commitments. In a few instances member libraries do not participate in OCLC or do not wish registrations to appear in OCLC's system. However, the primary barrier to full registration of commitments with OCLC seems to largely be a lack of prioritization of the activity by members or difficulties with the complexity of the registration process. Several programs offer the service of registering commitments with OCLC on behalf of members, but generally these offers have not been widely accepted.

Notable Areas of Future Development

Several programs are actively developing in a few critical areas, largely focused on expanding functionality and better tool integration:

A significant planned development is extending serials management systems to handle monographs. Two programs are currently engaging in pilots to explore this strategy.

- HathiTrust/CDL/WEST are engaged in a pilot ending in 2027 to explore the feasibility of adding monograph functionality to the AGUA tool currently used by WEST and UC to manage shared print serials.
- CRL is committed to near-term testing of adding monograph commitments to PAPR. This latter approach is envisioned as a potential community service to offer an open registry of shared print monograph commitments across the full ecosystem of programs. This would be the first open alternative to the closed registry offered by OCLC's shared print registry service.

ILS integrations development to support analytics across a program and member catalogs:

- Keep@Downsview is in a development partnership with Ex Libris to use Rialto to integrate retention/de-selection workflows directly within the ALMA environment. Currently, metadata needs to be extracted and analyzed outside the ALMA environment. UC also faces this limitation in its ALMA environment.

Improving Core System Functionality in home-grown systems:

- As a prelude to a development project, ReCAP is conducting a functional analysis to better align SCSB with current use cases and to improve its resource sharing functionality.
- EAST is currently working with Colorado Alliance to explore possibilities for the creation of limited API access to metadata in Gold Rush. Conversations are currently very early and exploratory.