Request for Proposal

Five Colleges, Incorporated

Collections Management Software

Solicitation Title: 2024 FCI Collections Management Software
Solicitation Release Date: Thursday, April 18, 2024
Solicitation Questions Due: Tuesday, April 30, 2024
Solicitation Answers Release Date: Friday, May 10, 2024
Solicitation Closing Date: Friday, May 24, 2024
Solicitation Demonstrations: May 29th, 2024 - June 21, 2024
Solicitation Award Date: July 1, 2024

1.0 Statement of Purpose

FCI seeks a software vendor to respond to this Request for Proposal to propose a collections management and discovery software solution that includes licensing, data assessment, data transition, customization, software implementation, training, and ongoing support for six museums and academic institutions located in the Connecticut River Valley of Western Massachusetts sharing a collaborative database environment. The successful vendor will be selected based on an assessment of skills, experience, and price specifically tailored to the unique needs and requirements of this complex environment.

2.0 Definitions

In this document:

- "FCI" means Five Colleges, Incorporated
- "AC" means the Mead Art Museum at Amherst College
- "HC" means the Hampshire College Art Gallery
- "HD" means Historic Deerfield
- "MH" means Mount Holyoke College Museum of Art and Joseph Allen Skinner Museum
- "SC" means the Smith College Museum of Art
- "UM" means the University Museum of Contemporary Art at UMass Amherst
- "Contract" means the agreement to be entered into between the selected vendor and for the proposed work
- "Vendor," "Candidate," "Partner," "Proponent," "Proposer," and "Supplier" have the same meaning
- "Local time" means the local time at FCI (Eastern Time)
- "Proposal(s)" and "Submission(s)" are to be considered as having the same meaning
- "Solicitation Closing Date" means the time set out in Section 3 of this Request for Proposal after which time no further Proposals can be submitted pursuant to this Request for Proposal
- "Work" means the services and/or products primarily described in Section 5 of this Solicitation Document

3.0 Preparation of Response

3.1 How to Respond

Please provide a comprehensive and sufficiently detailed Proposal, following the recommended format outlined in Section 6. Please include pricing details with a breakdown of design, work, materials, installation, and any other associated costs that will permit a complete evaluation in accordance with the criteria set herein. Proposals must take into account

information provided in the Appendices in determining pricing details, breakdown of work, and any other relevant considerations that are integral to the bid. Proposals must be sent as a single PDF file via electronic means. Proposals should be delivered to:

Tom Brennan, Director of Information Technology
and Carrie Evans, Museum Database Coordinator
Five Colleges, Incorporated
museums-cms@fivecolleges.edu

Proposals must be successfully received by the Solicitation Closing Date, no later than 5:00 pm ET, Friday, May 24, 2024. Responses received on or before the stipulated closing date and time will become the property of FCI and will not be returned. Submissions may be amended at any time up to the specified closing time and date.

3.2 Proposals

Submissions in response to this Request for Proposal shall be in US dollars.

3.3 Contact

All correspondence, questions, or requests for clarification concerning this Request for Proposal should be submitted by email no later than Tuesday, April 30, 2024 with the title of "FCI Collections Management RFP" in the subject line and sent to:

Tom Brennan, Director of Information Technology
and Carrie Evans, Museum Database Coordinator
Five Colleges, Incorporated
museums-cms@fivecolleges.edu

Answers to proposal questions will be distributed by Friday, May 10, 2024.

4.0 Background

4.1 About FCI

The Five College Consortium shares a spirit of collaboration, community service, and intellectual excellence with 2,200 faculty members and includes 7,000 courses, a combined library collection of some 10 million volumes, and 10 museums – 6 of which participate in the database collaboration that is the focus of this project. The consortium is composed of Amherst College, Hampshire College, Mount Holyoke College, Smith College, and the University of Massachusetts Amherst, which collectively serve approximately 36,000 students. Historic Deerfield is an associate member of the Consortium, and participates as a full member of Museums10 and the shared museum collections management system. Examples of other multi-campus initiatives include cross-registration, coordinated public transportation, the Five College Foreign Language Resource Center, and 17 Five College certificate programs. The Five Colleges also steward a number of shared resource discovery and technology collaborations, including FOLIO, the Five College library service platform, a shared instance of ArchiveSpace, and Five College Compass, a digital collections platform.

Today the shared museum CMS (Mimsy XG) and its public discovery portal (http://museums.fivecolleges.edu) hold information for approximately 120,000 items. representing an extraordinary record of human creativity spanning media, time, geography, and world cultures. The shared system has revealed connections and synergies across the museums and has facilitated collection development strategies that consider the breadth of the collections, allowing the consortium to make complementary acquisitions, build distinctive areas of strength, and avoid redundancy. Faculty, students, and scholars can

find and access related materials across museum sites, which has catalyzed the growth of collection use and expand the range of academic partners. Five College faculty and their museum colleagues have contributed significantly to the development of integrative, object-based pedagogy; making the scope and depth of the collections discoverable has facilitated innovation.

4.2 About the Partner Organizations

The six museums seeking the new shared system are described below:

Amherst College | The Mead Art Museum

- Enrollment: 1,970
- Faculty: 209
- Educational philosophy: Mead's mission is to stimulate, inspire creativity, provide insight, interrogate perceptions, and invite contemplation through interaction with the original works of art that the museum collects, researches, interprets, exhibits, publishes, and preserves.
- Collection size: 20,000 objects

Hampshire College | Hampshire College Art Gallery

- Enrollment: 717
- Faculty: 38 full-time, 19 part-time
- Educational philosophy: Hampshire College Art Gallery has been a focal point for artistic expression and interdisciplinary exploration since the college's inception in 1970. Spanning 2,000 square feet, the Gallery provides a platform for diverse creative practices and hosts exhibitions of artists engaging in experimental forms.
- Collection size: 1,070 objects

Historic Deerfield, Inc.

- Educational philosophy: Historic Deerfield welcomes all to experience one of the best-preserved villages and rural landscapes in North America through dynamic encounters with the stories, cultures, and material worlds of those who have made New England home. 12 historic houses, the Memorial Libraries, and the Flynt Center of Early New England Life display collections with a primary focus on objects made or used in Deerfield and the Connecticut River Valley.
- Collection size: 32,000 objects

Mount Holyoke College | Mount Holyoke College Art Museum & Joseph Allen Skinner Museum

- Enrollment: 2,200
- Faculty: 200
- Educational philosophy: The college's mission builds on its historic legacy of leadership in women's education and prepares students for lives of thoughtful, effective, and purposeful engagement in the world. MHCAM aims to spark intellectual curiosity and ignite a lasting passion for learning and creativity through direct engagement with its rich art and material culture collections. It is a nexus for experiential learning across academic disciplines and a resource for the broader community.
- Collection size: 24,000 objects

Smith College | Smith College Museum of Art

- Enrollment: 2,500
- Faculty: 296
- Educational philosophy: Smith College educates women of promise for lives of distinction and purpose. The museum's mission is to cultivate inquiry and reflection by connecting people to art, ideas, and each other. It collects, researches, presents, and preserves an art collection in service to learning, teaching, and critical dialogue.
- Collection size: 28,500 objects

University of Massachusetts Amherst | University Museum of Contemporary Art

- Enrollment: 31,800
- Faculty: 1,935
- Educational philosophy: UMass Amherst provides a high quality, affordable, and accessible education and conducts programs of research and public service. UMass strives to create a positive, inclusive, and challenging learning environment that encourages self-motivation and fosters leadership development and life skills. UMCA endeavors to balance a commitment to experimentation with a mandate to serve as a dynamic, multidisciplinary learning resource, affirming the University's dedication to education, research, and community service.
- Collection size: 3,700 objects

4.3 Key Participants

Core Team (Individuals)

The core team of the project consists of the following:

- John Davis – President & CEO, Historic Deerfield
- Tricia Paik – Florence Finch Abbott Director, Mount Holyoke College Art Museum
- Thomas Brennan – Director, Information Technology, Five Colleges, Incorporated
- Carrie Evans – Museum Database Coordinator, Five Colleges, Incorporated
- Robyn Haynie – Collections Manager/Registrar, Smith College Museum of Art
- Kate Kearns – Collections Manager, Historic Deerfield
- Laura Shea – Museum Photographer & Digital Asset Manager, Mount Holyoke College Art Museum

Beyond the core team, a set of critical stakeholders composed of key supporters, project participants, end-users, campus information technology, and other select faculty and staff will periodically provide input and response. While their involvement may be periodic, their engagement and participation are no less critical or valuable to the project.

Constituents of the shared CMS: For detailed museum staffing levels, see Appendix A: Museum Staffing

- **Daily practitioners:** Registrars and collections managers (site managers); curators; education departments; preparators, conservators, and exhibitions staff; imaging staff and museum photographers.
- **Occasional practitioners:** Museum visitor services; students, interns; visiting researchers and faculty; museum communications and public relations departments; administrative and accounting staff; donor relations.
- **End users:** Students; faculty; artists; researchers; K-12 educators and students; general public.

4.4 Current State

The CMS is the tool used by museum staff to track and describe collection objects, conduct museum operations and business practices, and disseminate information. The public portal has over 1.5 million interactions a year by more than 30,000 users across six continents to discover artworks and objects of material culture that span from antiquity to the

present day. Through the collections, the museums provide essential curricular services to their campus communities as well as exhibitions and events for other audiences, including local K-12 educators, artists, and the public.

Each museum's use of the CMS is characterized by a range of experiences and practices among member organizations. This is a complex environment, and there's no simple determinant for a set of shared collections management practices for use across the consortium. Rather, the systems in place must be flexible enough to accommodate six collections management processes while being structurally robust enough to enable streamlined, shared discovery and data exchange. Each museum operates within unique circumstances, and standards and processes are largely influenced by the operational environment of each museum, including factors such as staffing, time, and training. There is an effort underway to standardize terminology and data governance practices, particularly around topical subjects and creator names, to enhance access on the public portal. Support for data enrichment and governance initiatives is partially provided by a grant from the National Endowment for the Humanities, which will likely overlap with the CMS migration timeline. After 25 years on the same platform, the museums began to plan for a thorough upgrade in 2020. **The current system can continue to operate until October 2026 at the very latest. The selection of a vendor and implementation of a new museum collections management system and portal must be performed well in advance of this date**.

With a new CMS and public portal system, the consortium expects that:

- Students and faculty members will be able to easily discover the resources necessary for their research.
- Museums will be able to easily locate, loan/share, and exhibit resources, whether they are on a wall in a gallery or in a drawer in a storage room.
- Campuses will be able to fully account for invaluable cultural heritage collections across campuses.
- Creating and maintaining a shared system will remove barriers to collaborative data management by including project or workflow management solutions.
- Cultural heritage resources will be cataloged with thoughtful, respectful, standardized terminology.
- Much improved access to collections will allow the institutions to increase engagement with global research communities, transforming the consortium into a destination for in-person research.
- The innovative, multi-institutional approach will serve as a model for others in the field.

4.5 Technical Environment

Current Systems

- MimsyXG relational database (Oracle) hosted on Windows 2012 R2 Server at UMass Amherst.
- Highly customized instance for Five Colleges and Historic Deerfield Museum Collections.
- Utilizes parent-child and linked table relationships; historically minimal use of controlled vocabularies.
- Database is partitioned on record view (repository) so that museums cannot share or view data within the CMS about each other's objects (or associated records), people, or facilities.
    - Current partitioning impedes collaborative data management within the CMS
- Museums agree on a set of core fields for object records.
- Museums share controlled lists in some fields; most fields have been treated as free-text.
- See Appendix B: Technical Specifications for overview of details that may inform proposals.

5.0 Scope of Work

5.1 Scope of Services

FCI requires a new CMS and public portal, including physical and user experience design, software development, experience refinement, audio-visual integration services, installation, and warranty for FCI as detailed herein.

The Vendor must demonstrate their capability in performing the following tasks:

1. Prepare and specify all labor and equipment required to perform the work indicated and specified in the Proposal documents, including additional technical specifications, AV infrastructure planning, and implementation, fabrication, installation, and other associated documentation.
2. Collaboration with the assorted project partners in understanding, developing, and supporting the proposed software including design, configuration, and installation.
3. Providing additional insight, guidance, and experience in support of the project's intended goals for design, technical implementation, and overall experience.
4. Specify components and infrastructure needed to support heavy and extended use by the general public, which includes year-round operation. Most days will see up to 12 hours of active public portal use. Quality, reliability, scalability, and ease of maintenance are all critical factors in choosing appropriate solutions.
5. Preparation of detailed schematics of technology stacks and metadata schema, indicating installation details as needed. Detailed design information is required for each typical component type and includes: Specifically, prepared technical data for this project, drawings, diagrams, prototypes, schedules, templates, patterns, measurements, and similar information not in standard print form.
6. Working with FCI staff and other project partners as appropriate to prototype, beta-test, and/or verify software development efforts as needed.
7. Preparation of handover documentation including, but not limited to, equipment, systems manuals, maintenance and operation manuals, and as-built package indicating any changes to the original design, systems, specifications, and installations as previously indicated. Training shall also be provided to pertinent FCI and museums staff in regard to the basic operation of and maintenance of all systems and equipment.
8. Providing a suggested ongoing annual maintenance schedule and regimen, including ongoing support.
9. Suggestion of data preparation, conversion, and maintenance workflows as needed.
10. Providing warranties for installed components.

5.2 Specific Project Goals

Specific project requirements beyond core features and capabilities are expected in the scope of work to be completed by the selected vendor. The list below is suggested as a reference and may not be exhaustive. Any software proposed should meet the baseline functionality for collections management procedures as outlined in Museum Registration Methods and the Spectrum Standard procedures (5.0). See Appendix C: Essential Workflows, Tasks, Features, for specific information regarding user practices the museums expect the CMS to support.

Essential System Expectations:

- Must accommodate minimum 15 concurrent editors with potential for 30+ concurrent viewers (unlimited read-only users preferred) across at least 10 different physical locations.
- Must be cloud-hosted and accessible via a web browser.
- Hosting must be provided by or arranged/administered through vendor.
- Must include public discovery portal that is easily configurable/customizable by client.
- Must accommodate multiple levels of cataloging granularity: Collections, sub-collections, file, and item-level.
- Must be compliant with professional standards in the field of museum registration, e.g., Spectrum.
- Workflow or procedures must be configurable to accommodate modules needed (or not) by each individual institution (different practices at each organization).
- Scalable: Functionality must meet needs of growing collections from 1,000 - 40,000 objects (may be accommodated by tiered systems, modular configurations per site, or varying service levels).
- Each museum must have individual instance, profile, or authentication homepage.
- Site managers or database administrator must be able to configure controlled lists, user views, roles, permissions.
- User-friendly interface to encourage staff to utilize functions effectively.

- Visually accessible field definitions and user help text that is configurable.
- Easy customization by users or site managers (to accommodate different styles of information processing).
- Enable management of rights and reproduction licenses for objects, digital images, and published object data.
- Training documentation and walk-through videos.
- Robust users/permissions: Use user/permission types to enable user-specific views and access.
- Customizable view builder (ideally, drag and drop widgets, or field ordering) and simplified object information.
- Accessibility support throughout (must be at minimum screen-reader friendly on all interface elements).
    - The user interface for both CMS and public portal should meet student and faculty accessibility expectations for resource discovery.
- Compatibility with a variety of metadata schema and standards used in library, archives, and museum cataloging.
- Automatic backups of catalog and entire database records; easily retrievable in event of emergency.
- Easily retrievable audit trail, change log, or record versioning on individual object or field levels.
- Provision of collaborative or community-oriented training and communications.
- Integration with a variety of digital asset and content management systems and procedures.
- Provision of user experience design, analysis, reporting, and assessment.

5.3 Schedule

Request for Proposal Issued: Thursday, April 18, 2024
Questions Due: Tuesday, April 30, 2024
Request for Proposal Closing Date: Friday, May 24, 2024
Requested Demonstrations: May 29th, 2024 - June 21, 2024
Contract Award: Monday, July 1, 2024
Project Start Date: Monday, September 2, 2024
Expected Project Completion: Friday, April 26, 2025

5.4 Responsibilities, Expectations, and Requirements

The main responsibilities of FCI and the museum project leads are as follows:

- Act as an engaged and active partner and provide oversight of the project.
- Co-develop, review, and approve the proposed implementation, data refinements, and custom solutions for the collections management implementation, assigning roles and responsibilities to project partners and staff.
- Guide, review, and approve the overall system design, integration, and implementation for the technical requirements of the collections management system.
- Provide documents and specifications as needed to inform the implementation of the CMS.
- Facilitate interactions with other participants and stakeholders as necessary.
- Establish budgets and other criteria.
- Monitor results according to the specifications and scope defined in this Request for Proposal.
- Provide iterative feedback and reviews throughout the duration of the project.
- Attend progress meetings to review progress and confirm work.

Vendor shall:

- Develop and propose the appropriate software solution to meet the needs of the overall project.
- Develop data reviews, refinements, and migrations in consultation with other project partners and in accordance with the scope and budget as finalized through this Request for Proposal.
- Develop and propose additional custom features to meet the individual partner requirements and overall implementation of the project.
- Work with the FCI team to provide input, opinion, and guidance where relevant and necessary to finalize the development of the collections management environment.

- Work with FCI resources to aid with any infrastructure and other technology requirements in order to implement the intended system.
- Provide regular reports regarding progress (progress may be documented in any number of ways including, but not limited to, written updates, proposed systems, diagrams, sketches, specifications, and working prototypes).
- Notify FCI in advance of any issues that may impact the timeline, budget, and/or any deliverables.
- Incorporate a five (5) business day response time from FCI staff into schedules. Staff typically work Monday through Friday as part of a standard work week. This window affords staff the ability to accommodate a responsible level of engagement and response alongside other workloads.

Any additional requirements and clarifications can be provided as part of the Request for Proposal response. The general intent is indicated in the outlined responsibilities and should not be considered exhaustive. These include but are not limited to:

- The Vendor must identify one (1) person to serve as the primary contact, project manager, and liaison to FCI.
- The Vendor shall provide internal project management and administration services throughout the duration of the project as needed. The Vendor solely shall coordinate the services provided by its staff and subcontractors. The Vendor will provide FCI with a list of its subcontractors, if any, prior to contracting. Subcontractors remain the sole responsibility of the Vendor, and FCI reserves the right to reject any or all subcontractors proposed by the Vendor.
- The Vendor shall maintain regular meetings as appropriate with FCI (in person and/or by telephone and/or by web conference). These meetings will be used to inform the needs of the project, maintain a cohesive schedule, and coordinate, oversee, and manage work produced, providing timely notification of deviations from the project schedule. These meetings will report on and track the migration and implementation process and establish and implement mechanisms for ongoing communication.
- The Vendor shall maintain regular and routine communications with FCI, responding within 24-48 hours to emails, phone messages, and other communications as necessary during regular business days and hours. FCI will provide the same in return.

6.0 Proposal Content and Format

For the Proposal, bidders must provide a description of the solution(s) that will meet the requirements outlined in Section 5 of this document, highlighting key benefits to FCI. Proposed work may be approached in phases. Proposals should address a vendor-provided CMS and provide options for public discovery.

Proposers should organize their Proposals to provide the following information sequentially:

6.1 Corporate Summary

A company synopsis, including:

A) Organization and Identity

- Legal name and address
- Telephone number
- Online contact information
- Primary contacts on a national and regional basis
- Separate pricing from Proposal narrative

B) Overview and History

Proposers are to provide a company overview, including:

- Current work methodology (i.e. project management philosophy)
- Key vendor partnerships (if any)

- Number of years in business

C) Additional Information
Provide any additional information you feel is relevant to the Proposal including, but not limited to, customer testimonials that contribute to demonstrating the Proponent's qualifications, experience, capabilities, and resources to meet FCI's requirements as stated in this Request for Proposal.

6.2 Related Experience

- Please describe qualifications and experience of key personnel who will be involved in this project, including data migration, hardware implementation, and software customization even if operating as a subcontractor.
- Please provide case studies for up to three (3) previous projects that your company has implemented that are comparable in physical size, budget, and scope to the proposed services.
    - Please include examples that demonstrate the capability of collaborating with and accommodating the diverse needs of multiple project partners and databases as relevant to the proposed implementation.
- Provide references, including a specific contact name, title, company name, address, phone, and email.

6.3 Schedule

Given the overall key project dates (*see section 5.2*), please provide a proposed schedule that indicates key deliverables, milestones, and internal/external dependencies. This schedule should include, but is not limited to:

- Client reviews
- Data migration and verification
- System design, customizations, installation, and launch
- Documentation and training
- Specialized requirements per organization as required

The project plan should also identify:

- Relevant personnel assigned to this project
- Specific phases as necessary (included associated tasks and deliverables) and review points

With reference to the proposed schedule, please provide a description of a preferred process for the design, customization, development, approval, installation, and verification of the proposed solution.

6.4 Pricing

- Please provide pricing for each proposed phase in the above project plan. Please provide line-item costs for site licensing, per-seat licensing, specific customizations, data migration, and other resources necessary to transition each of the member organizations into the new system. Please provide per hour / per day costs for additional training or support as necessary.

- If, in your pricing exercise, you determine that additional optional services should be specified and priced, please do so, calling attention to those additional line items. Where specific pricing cannot be approximated, please provide ranges. We believe that thoughtful pricing helps demonstrate the vendor's thinking about how to approach this complex project and helps illuminate considerations of which we may not be aware.

6.5 Systems and Integration

- Please describe your qualifications and experience in designing, specifying, procuring, and integrating the necessary system designs and hardware to support the varying needs of the member organizations.
- Please discuss your staging and testing environment for system integration, if any. Include any process for quality assurance, delivery, and documentation of the necessary systems integration.

- Please discuss any considerations or requirements, especially given that, while this overall project is happening under the unified auspices of Five Colleges, Inc., there will be at least seven different IT departments involved in the implementation and rollout of the new collections management environment.
- Please describe your Data Loss Prevention and Business Continuity plans.
- Please describe your Cybersecurity framework and incident response plan in the event of cyber security attack.
- Please describe any API endpoints and potential points for future system modifications and customization that may be possible. Where possible, please demonstrate a range of capabilities through case studies of implementations at other organizations, detailing any considerations of which we may not be aware
- Please describe any associated software systems that already integrate with the core collections management system. These systems do not necessarily need to be supplied by the same vendor and should be clearly indicated as so. Such systems may include DAMS, search systems, data visualization tools, workflow management tools, and other forward-thinking resources that demonstrate possible integrations into a richer environment and greater usability beyond the core user group of the collections management system.

6.6 Website Integration

- Please describe the possible delivery of content to the web portal, either as a module of the software system or as an API available for additional integration. Please include examples on client websites.
- Please describe how basic integration can be extended with custom search capabilities and how those would work given the multi-organization environment described in this scope.
- Please describe in-house technical and customization support options for web integration, if any.

6.7 Prototyping and User Testing

- Please describe how you would approach and accommodate prototyping and possible user testing for this project.

6.8 Projected Software Roadmap

- Please indicate any longer-term software planning and implementation design for the collections management system and associated infrastructure going into the future. Please indicate features that are in active development vs those that are simply under consideration.

6.9 Risk Assessment

- What do you see as the main risks associated with your Proposal? What do you plan to do to mitigate these risks?
- What are the primary risks and uncertainties of this project and how do you anticipate being proactive and resolving these issues within the constraints of the project's schedule and budget?

6.10 Accessibility Questionnaire

- Please complete Appendix D: Accessibility questionnaire, and return this with your responses.

7.0 Response Review Evaluation

Proposals will be evaluated through a two-step process. Proposals will undergo an initial review for qualifications and viability, and selected vendors will be invited to give a detailed demonstration of their proposed solution. This should not be viewed as a competition for the lowest price proposal but as one that best interprets the diverse co-existent needs of different collections. We encourage bids that are proactive and anticipate needs that we are not considering.

The second review round will make use of a rubric based on system goals and functional requirements, including: Features of the suggested software; experience and success with similar projects in terms of complexity, integration, size, and scope; process and partnership; planning and budgeting; suggested customizations for specific use cases; management and

mitigation of potential risks; pricing and effectiveness of the proposed software; demonstration of software system showing detailed user interface elements, typical collections processes, and functions identified as requirements in this RFP.

8.0 Terms and Conditions

FCI will negotiate contract terms upon selection of a software vendor. This winning proposal will be primarily contracted with FCI with additional relevant details negotiated per museum and academic institution as necessary. All parties involved will not incur any costs until all agreements or contracts are signed.

9.0 Appendices

Appendix A: Museum Database Users: Staffing (User Roles)

Museum	Staffing Roles in relation to museum systems
FCI	1.5 FTE: Database Administration & Community Management
AC	1.5 FTE Collections 1 FTE Exh. Prep 2 FTE Curatorial 3 FTE Education 1 FTE Communications 1 FTE Administrative Assistant
HC	1 FTE 1-3 PTE interns/student workers
HD	3 FTE Collections 4 FTE Curatorial 5 FTE Education
MH	1 FTE Collections 1 FTE Imaging/Digital Asset Manager 3 FTE Curatorial 2.5 FTE Education 1.5 FTE Exh Prep .25 FTE Website Manager
SC	1.5 FTE Collections 3 FTE Exhibits 3 FTE Education 6 FTE Curatorial 1 FTE Communications 2-5 PTE student workers
UM	1 FTE Collections

	1 FTE Curatorial 1 FTE Education 1 FTE Exh Manager 1 FTE Office Manager 1-3 PTE interns/student workers

Appendix B: Technical Specifications

Total # of Object Records

All Objects	Published to Discovery Platform
118,665	94,705

Organizations

Museum(s)	Object Records*
Amherst College: Mead Art Museum + Emily Dickinson Museum	25,456
Hampshire College Art Gallery	1,069
Historic Deerfield	25,096
Mount Holyoke College: Mount Holyoke College Museum of Art + Joseph Allen Skinner Museum	28,747
Smith College Museum of Art	34,673
University Museum of Contemporary Art	3,624

* Number of database records for migration; there are some differences between these numbers and the collection numbers on pages 4 &5 due to individual museum protocols.

Total # of other Authority Records

Module	# of records
Media (Image, Audiovisual, Document)	18,9076
Thesaurus (AAT)	55,407
People (Agents)	avg. 5,671/org (34,025 total with duplication across organizations)
Publications	3,932
Facilities	3,836

Places	1,867
Events	629

Total # of Tables

# of tables in FC View
344

High level list of functionality

Procedures (descending order by records per module)
1. location and movement control*
2. adding media to catalog records
3. cataloguing*
4. acquisition and accessioning
5. condition checking and technical assessment
6. object entry*
7. use of collections (exhibitions)*
8. rights management
9. creating groups + reporting
10. inventory (audit)

* Loans in and loans out are tracked differently by each museum and are represented in the location records, object records, entry, and exhibition records.

Approximate # of custom reports

- 20-30 (Crystal Reports)

# of Users

User accounts (includes workarounds)	~120
Active in the past year	58
Concurrent users all-time peak	23
Concurrent users typical (still gathering data)	~13

Current CMS and public portal: Database Size + Statistics

CMS oradata folder (database size)	15.5 GB
Public Portal mysqldata folder (database size)	405 MB
Media files (CMS, also used by public portal)	90 GB
CMS backups	2.5 GB
Server primary partition (OS)	120 GB
Server data partition	500 GB
CMS data tables in use	101
CMS data rows	13.1 million
CMS data rows exclusive of image descriptors	7.6 million
Public portal data tables in use	23
Public portal data rows	643 thousand

Hardware and Network Overview

Virtual server OS	Windows Server 2012 R2
Virtual server specs	VMWare x64, dual processor, 16GB RAM
Oracle version	Oracle 12.1.0.2.0 (licensed under UMass umbrella)
Public portal software (same server)	Custom PHP/MySQL adapted from Mobius 1.6
Public portal stack	Apache 2.4, PHP 8, MySQL 5.7
Client requirements (minimum)	Windows or Mac, Oracle JRE or OpenJDK JRE, 2MB RAM, 300MB storage

CMS connections are on the Oracle port (1521) and ports 8080/8181 for media and reporting. An SMB connection to a shared folder is needed in some contexts. All of these are protected by firewalls and need specific IP ranges or a VPN to access. The public portal is served publicly via ports 80 and 443.

Appendix C: Essential Workflows, Tasks, Features

Processes	Essential Workflows, Tasks, Features	Wish List
Accessioning *AC* ~~*HC*~~ *HD* *MH* *SC* *UM*	• Create object records from an initial entry, acquisition, or loan • Maintain all associated unique identifying numbers • Approvals workflow for acquisitions • Management of non-accessioned, related items alongside accessioned objects • Easily navigable multi-part acquisitions • Ability to import/add file attachments • Fields to document and manage legal ownership and conditions of collections	• Documentation of objects considered but not accessioned
Agent management *AC* *HC* *HD* *MH* *SC* *UM*	• Separate management of donors, vendors • Shared file between museums of artists, creators, and subjects of works	• Automatic updates of authority files from linked open data sources • Artist biography visible from within object record and easily reportable, printable • Faceted search by artist
Cataloguing *AC* *HC* *HD* *MH* *SC* *UM*	• Accommodates minimum required elements for object records according to museums' shared core standards • Approvals workflow for entered data • Unique accession numbers/record identifiers • Easy cross-references to digital and paper information, related records stored elsewhere • Data is automatically transferred into the object record when elsewhere in the system (ex. condition, location, inventory, valuations) • Object status flags for various purposes (on view, available, NAGPRA-sensitive, etc.) • User-defined fields for museum-specific data capture and workflows • Automatic conversion of measurements from English to Metric; measurement of component parts • Tracks record creation and updates	• Auto-population of fields (lookup) • Configurable data entry fields based on discipline/accommodate different standards such as natural history or decorative arts • Approvals or commenting workflow on content, such as label copy, materials, or physical description, supplied by others

Processes	Essential Workflows, Tasks, Features	Wish List
	• Allow multiple users to contribute to shared resources, such as artist records • Easy management of multi-part or whole/part objects; ability to catalog the dimensions, locations, condition issues, etc., of each part/component from within parent	
Collections care *AC* *HC* *HD* *MH* *SC* *UM*	• Fields to document conservation treatment priority, detailed notes, conservation checks, standardized condition terms, conservator information • Full condition reports • Accommodates notes/instructions specific to the handling, display, storage, environmental needs, and shipping/packing of objects	• Bulk ingest of condition surveys or assessments done using other tools (e.g., Google forms) • Statistical analysis or reporting on conservation treatment priorities and recommendations
Damage and loss *AC* *HC* *HD* *MH* *SC* *UM*	• Fields to document damage or loss events related to objects, loans, or accessories • Include notes, reporter information, dates, and standard terms for method of loss	• Cross-references with condition/conservation, vendors, insurance, valuations, and shipping or logistics workflows • Workflows or collection-specific instructions related to key people to inform in event of emergency
Deaccessions *AC* *HC* *HD* *MH* *SC* *UM*	• Cross-reference with paper or other documentation (Excel, other formats) • Cross-reference with any other data about entry, acquisition, provenance, sources, loans, locations, and the catalog record • Fields to document reasons for deaccessioning, approval, and disposal or other disposition of objects (method, recipient, provisos, legal dates) • Automatic update of catalog and associated records if approved for deaccession	• Creation of reports for deaccessioning candidates based on certain criteria
Digital asset/media management *AC*	• Able to integrate with multiple digital asset management systems and museum servers • Easy to control image publication • Media linkable to multiple modules or	• Display 3D renderings of works, galleries or integrate pathways to hosted renderings • Accommodate high(er) resolution images • Allow downloads of highest resolution images for authorized users

Processes	Essential Workflows, Tasks, Features	Wish List
HC *HD* *MH* *SC* *UM*	workflows (e.g., object catalog, condition, damage, exhibitions) • Automatic resizing for web optimization • Preview a/v files in system (files hosted elsewhere, e.g., Vimeo, YouTube, server, DAMS) • Populate select embedded metadata (e.g., copyright, dimensions) into media records • Support various file sizes and formats (TIFFs, JPEGS, GIFS, MP4, PDFs). • Flexibly support multiple schema • Support easy retrieval of images/derivatives of different sizes/resolutions/versions for a variety of users and purposes (e.g., communications, researchers, publications) • Fields to document preferred citations, image credits for certain uses	• Auto-generation of preferred citations for media publication • IIIF compliant • Voice annotation of some fields authorized users; provide support for transcription • OCR search of attached media files
Digital preservation ~~*AC*~~ ~~*HC*~~ ~~*HD*~~ *MH* *SC* ~~*UM*~~		• Ability to perform checksums as a minimum requirement during migration, if media files are hosted by vendor • Integration or data exchange with existing digital preservation systems at some colleges, e.g., Preservica
Information maintenance *AC* *HC* *HD* *MH* *SC* *UM*	• Detailed change log to track updates in the system, number of records updated, users performing updates, affected objects, and specific fields. • Changes searchable or sortable by user, date, record, and field.	• Statistical reporting on "completeness and currency" of a record • Pre-publication signoff workflow (ex., interns may enter data or write label copy in an entry-only view, and a manager may approve changes prior to publication on discovery portal)
End-User features / collaboration / web	• Browsability: Content on landing page organized around specific search needs • Users able to use the portal without instruction (intuitive) • Easy data export features	• Integrate data exchange with JStor for ArtStor on web platform • Integration with individual museum content management systems/websites

Processes	Essential Workflows, Tasks, Features	Wish List
Integration *AC* *HC* *HD* *MH* *SC* *UM*	• Export objects, groups, images, and lists to PPT (or equivalent), Google Docs, Excel, PDF, or folders of images • Object records should be linkable via permalink or API to external resources, at minimum Five College library, digital collections, and archive records • Links to related resources • Discovery based on a theme or topic • A "faceted" search, allowing people to narrow down items within categories or • initial search results • Search results ordered by relevance (or flexible ordering and sorting options) • Field on each entry indicating display status ("on view")	• "Google-like" search functionality: forgive or correct misspellings, comma-separated values, quotation marks, flexible keyword retrieval • Access museum education materials or lesson plans from teachers or educators who have used the collections
Exhibitions *AC* *HC* *HD* *MH* *SC* *UM*	• Cross-reference loans, agents (e.g., exhibition venues or other museums), locations, condition and conservation, insurance, publications, media • Support for content associated with exhibits, groups, and media including labels, interpretive text, audio files, alt text • Educator and curator views • Records of furniture, object mounting accessories and instructions • Allow for cross-collection exhibition planning: making groups or checklists, annotation from within the CMS • Include fields to document legal and loan agreements related to exhibitions, related publications, and people	• Compatibility with metadata exchange protocols for exhibitions and loans • Publishable exhibitions records • Exportable exhibitions records for use on individual museum websites – content management system integration • Integration with sketchup or other exhibition planning/3D rendering software • Accommodate description and access of archival materials related to exhibitions • Browse-by-exhibition or exhibition archives on public portal
Groups/lists *AC* *HC* *HD* *MH* *SC* *UM*	• Ability to create and manage groups of objects, people, venues, publications, images, or topical subjects • Adding to groups using "shopping cart/my list" or similar functionality • Assign shared resources (a search result, a named set, etc.) to groups of users • Ability to save and share intermediate states of information (ex. searches) • Easy addition and deletion from groups • Easy management of collections	• Calculate total square/cubic footage of selected objects in a group • Ability to add object to multiple collections at the same time (e.g., adding a ceramic pot to a group of ceramics and a group of pots during cataloging) • Exportable image "reserves" or groups that can be shared to course management systems

Processes	Essential Workflows, Tasks, Features	Wish List
	management tasks using groups	
Inventory *AC* *HC* *HD* *MH* *SC* *UM*	• Ability to bulk update status for groups • Generate lists by location, accession number, object type • Generate random lists for spot checks • Automatic tracking of inventory recorder and recording date • Update object records or locations from inventory • Cross-reference against acquisitions, entry, loans, exhibitions, losses and damage, archival materials or other documentation	• Mobile device inventory capability
Loan management *AC* *HC* *HD* *MH* *SC* *UM*	• Track incoming and outgoing loans • Connect both individual and groups of objects to loan records • Updating locations, statuses in the object record from loan records • Places to record and request approvals, dates, loan terms, insurance, packing and shipping requirements, courier information, installation requirements • Cross-references to facility or venue, insurance, and condition data • Accommodate a diverse range of loan procedures, including international	• Link to condition reports in condition module • Integration with calendars for workflows related to duration of loan and transportation • Easily exchange information with other lending institutions • Accommodates a variety of signature/agreement formats (e.g., signed PDFs, DocuSign)
Location management *AC* *HC* *HD* *MH* *SC* *UM*	• Museums must retain site-level privacy (e.g., users at AC cannot view room or shelf-level storage locations within buildings/art storage facilities at HD) • Nested, hierarchical facilities management (including storage, exhibition galleries, and other locations) • Generate records of movement between locations (who, when, where) • Send groups of objects to home location, bulk location changes • Record and update locations of multi-part objects (ex. Single record tea set where spoon is in silver cabinet, cups are in gallery storage) • Locations of linked whole/part or parent/child records should operate	• Filter objects and groups based on space limitations and requirements • Supports barcoding • Integration of environmental monitoring software into facility or location description

Processes	Essential Workflows, Tasks, Features	Wish List
	separately; accommodate multiple locations for whole records with many components in different locations • Container management • Public portal displays "on view" when objects are located in galleries • Area to document instructions • Reportable location histories	
Non-accessioned objects *AC* *HC* *HD* *MH* *SC* *UM*	• Easy creation of non-accessioned object records which may be associated with items or collections • Records of non-accessioned objects should be easily searchable (ex. filter or sort by frames / mounts) • Ability to inventory and loan accessories or non-accessioned objects (ex. MH loans a pedestal to HC) • Manage components or accessories (crates, mats, frames, mounts) • Manage education or study collections (may have object record) • Integration with exhibitions and loan	• Exchange information across campuses or exhibition venues for loans of accessories, like mounts or furniture
Object entry *AC* *HC* *HD* *MH* *SC* *UM*	• Enter objects prior to accession or loan • Values, dimensions, tombstone information carries over/transfers into records on acquisition, loan, or object record creation (no duplication of effort) • Cross-reference with donor or provenance data • Approvals workflow for entry of object information before accession or loan	• Reciprocal updating of entry to object records (ex. If variant title is added to Object Record, this should be searchable/visible in the Entry Record while retaining the historical information)
Platform / systems integration / technical adaptability / API *AC* *HC* *HD* *MH* *SC*	• Open, well-documented API functionality for integration with other tools and systems • Flexibly support various data import and export formats (excel, csv, htm, pdf, doc) and schema (MODS, XML, EADS, MARC) • Bi-directional browsability for easy and fast navigation between different pages within the CMS	• Mobile interface for some or all functionality, including data input, search, save, share • Provide structured documentation, help text, and data entry instruction support within the CMS platform • Each site manager (at minimum) should be able to engage in private support conversations/open tickets with vendor support • Integration with individual museum websites

Processes	Essential Workflows, Tasks, Features	Wish List
UM	• Metadata exchange compatibility with library, archives, and digital collections on campuses into the CMS	
Publication tracking and documentation *AC* *HC* *HD* *MH* *SC* *UM*	• Publication + media requests approvals workflow • Connect to rights, reproductions, exhibitions, media, loans, inventories, and object functionalities	• Auto-generation of preferred citations based on catalog data • Supports integration with library cataloging systems (ex., ingest of library call numbers for publications held by Five College Libraries) • "Shared" metadata or publication records: base bibliographic record can connect to object records in multiple collections • Robust bibliographic records
Reports *AC* *HC* *HD* *MH* *SC* *UM*	• Visually accessible, functional, and flexible management and organization of lists, creating reports • Any report should be able to include one or more images per record and should allow formatting, or be exportable to an external application for formatting • Lists/reports that should be easily and quickly generated Basic (tombstone) data Full record data Inventory checklists by location Wall labels Audit trails for one or more objects Audit trail by user and/or date range Conservation, location, exhibition history for one or more objects Acquisitions by fiscal year, by object (may be different at each museum) Objects loaned Objects used in a classroom visits or education programs	• Customizable report builder with drag & drop widget functionality, field ordering, filtering and grouping • Summing reports that group object data on fields like value, storage space, light exposure • Dashboarding/analytics, dynamic reporting

Processes	Essential Workflows, Tasks, Features	Wish List
Research & use *AC* *HC* *HD* *MH* *SC* *UM*	• Records of objects used in educational settings, what objects have been used for what class, by whom, by discipline • Approvals workflow for use of collections for classroom visits, education programs, reproductions, or other uses that includes terms of use, dates, and information about the use • Cross-reference or links to groups, locations, media, people (artists, faculty and staff, requesters), condition • Accommodates a variety of access and use policies at each museum within the CMS and on the public portal	• Analytics or reporting on: Frequent search terms • Fields populated with highest frequency • Tracking or statistical reporting on downloads or media usage • Workflow with approvals for updating object information resulting from the use of collections (e.g., by students or researchers) • Allow per user / per user-group annotations of objects and groups with information that can be shared or kept private • Automate maintenance of linked resources (e.g., no dead links or easy web archiving/integrated web archiving for artists websites, news clippings, etc.)

Processes	Essential Workflows, Tasks, Features	Wish List
Retrieval, search, & find *AC* *HC* *HD* *MH* *SC* *UM*	• Provide traversable bread-crumb trail with search results • Allow users to display or rearrange specific fields in search result • Provide intuitive search functionality, incorporating faceted or filterable results, or natural language processing, for enhanced user experience • Integrate results from linked databases alongside results from the collections database using external APIs (such as Library Catalogs, Five College Compass) • Faceted search, including collection-level and multi-part object • Ability to browse via thematic hierarchies of objects (ex. Mythology -> Greek) either standard sources or local • Switch between list, dashboard, grid, and lightbox-style views with ease	• Filter search results by museums using shared data sources or authority tables (e.g., publications, places, artists) (ex. MH and SC both have records linked to Honore Daumier – in search for "Daumier," should be able to filter artist record by contributor) • Object search via image recognition ("related images") • Object search by color or pattern • Capability to visualize data set or search result as knowledge graph
Rights management (objects, digital images) *AC* *HC* *HD* *MH* *SC* *UM*	• Display copyright and access agreements from within work and image records (possibly only for some users, evocable) • Workflow for managing licenses, rights, and reproduction requests for digital images and publications • Fields to document contact information for rights holders, estates • Documentation of work and image right linked to reproduction workflows • Easy access to information about rights holders for object or image records • Management of agreements including updateable fields and linking relevant documents to records of rights / permits	• Connect or link to Artists Rights Society, gallery websites, or artist foundations for rights inquiries from within the CMS
Risk management / insurance / valuation *AC*	• Fields to record information about valuations including people involved, dates and circumstances, and currencies • Enter valuations from multiple points (entry, acquisitions, object records) • Moderate access to view or enter	• Inclusion of updateable international currency exchange rates • Quantify loan risk based on historical data (loss, damage, and valuation)

Processes	Essential Workflows, Tasks, Features	Wish List
HC *HD* *MH* *SC* *UM*	valuation information for user types • Maintain secure and searchable historical records of valuations • Accommodate attached documentation (digital or paper) of appraisals • Exportable or exchangeable valuation records for insurance management • Ability to summarize/calculate values within object group (i.e., total value, value of incoming loans, value by location) • Tracking with international currencies (pop-up list of currencies)	
Roles / permissions *AC* *HC* *HD* *MH* *SC* *UM*	• Implement configurable, detailed permissions for different users and/or roles at field, module, and system level • Consistent approach to data partitioning	
Shipping and logistics *AC* *HC* *HD* *MH* *SC* *UM*	• User-friendly logistics, shipping, receiving (used by registrars, archivist, preparators, facilities/install manager) • Packing, special requirements, storage and handling recommendations easily accessible from the object record	• Incorporated into acquisitions, exhibitions, and loans workflows • Ingest or bulk upload of shipping and logistics information stored in other formats (e.g., excel spreadsheets)
Thesauri; authority control + controlled vocabularies *AC* *HC* *HD* *MH* *SC* *UM*	• Simplify the process of linking content to shared lists of standard terms • System should enable validation against internal and external data sources • Accommodate local terms for various themes/thematic/subject tagging • Multiple sharing settings for user-defined keywords: Public, private, shared with specific other users	• Automate the tracking of deprecated, variant, or non-preferred terms in linked vocabularies • Ability to configure view permissions across museums for different components of authority files or thesauri (e.g., can share subject files or pick lists and maintain local lists from within the database) • A field, banner, or other indication about whether pick lists or controlled vocabularies constitute shared (a standard source list or list of terms which is applicable to all museums and collections, e.g. Getty ULAN for artists) or

Processes	Essential Workflows, Tasks, Features	Wish List
		separate (e.g., a local list of donors or alumni) data • Non-authoritative keywords (social tagging) + approvals; workflow for validation of contributed content • Creation of audience and use keywords ("5th-grade geology class") • Display of secondary, non-authoritative information for objects and groups in a way that identifies it as such (user contributed, non-verified, etc.)
Workflows *AC* *HC* *HD* *MH* *SC* *UM*	• Session management: Admin or site managers should be able to end sessions or set expiring times for inactive users without losing data • Fields for personal annotation that are kept in a restricted view (notes/comments) • Configurable notifications (turn on/off for certain fields or functions)	• Align workflows and processes closely to ensure data consistency and compatibility with other workflow management software in Five Colleges and Historic Deerfield (e.g., Trello, Slack, Google Forms, AirTable). • Mechanism to flag potential errors or discrepancies in data with additional workflow to route flagged content to appropriate team members and track open queries • Integrated calendar/integrated tasks management/send appts and reminds about workflow tasks to emails • Record known future calendar events for works (exhibitions, loans, conservation, etc.) • Integration or storage of emails alongside object and group records • Ability for site managers to designate critical/required workflows, alerts, and reminders • Visible indicators of workflow in progress (like a kanban board) • Ticket system (assignment, reminders, status, assignments, etc.) for requests to move, loan, exhibit, or use the collections

Appendix D: Electronic and Information Technology Accessibility Questionnaire

Describe your efforts to be compliant with WCAG 2.0 Level AA for web-based technology, Section 508 of the Rehabilitation Act, and the Americans with Disabilities Act.

1. Does your company have a Voluntary Product Accessibility Template (VPAT) for a current version of your product that documents product conformance with Section 508 Standards?

2. If your company has a VPAT, please provide it as an attachment in response to this email. If your company does not have a VPAT, please describe your perspective on accessibility and any exceptions you believe are applicable.

3. Please describe your accessibility conformance testing process.

4. Does your company have an Accessibility Roadmap to remediate any accessibility gaps in a reasonable period of time? An Accessibility Roadmap can be a list and description of accessibility gaps, including current resolution status of each gap and a specific timeline for remediation. An Accessibility Roadmap also lists any known workarounds to provide end-users access until the vendor has resolved each of the accessibility gaps. If an Accessibility Roadmap is available, please provide it.

5. Can you share with us your company Accessibility Mission Statement or equivalent?

6. To whom in your company should we direct our accessibility questions should we have any (name and contact information)?