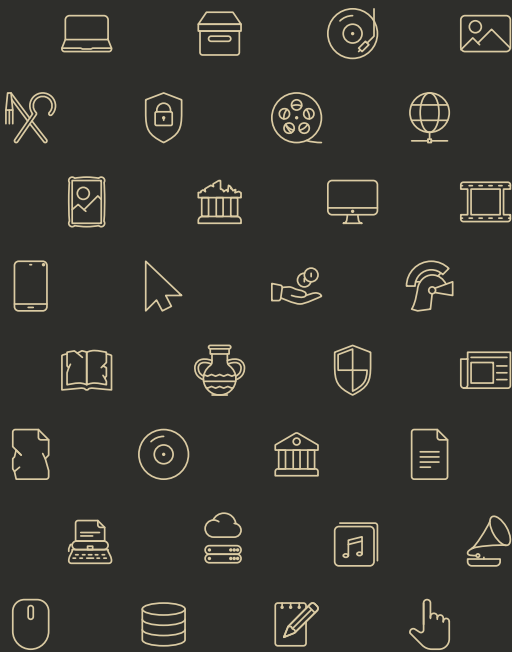


RACHAEL CRISTINE WOODY



HOW TO SELECT, BUY, AND USE A MUSEUM CMS

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“From its inception the museum catalog was created to inspire. Through the centuries the catalog has taken many forms, ranging from a checklist, to an inventory, to an exhibit guide, to a textbook, to its expression through a collections management system—all the while delivering education on the mysteries and histories of the far-reaching world to the masses. May this book inspire you, dear reader, as you take on the centuries old role of cataloger.”

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In providing a forum for ideas and advice, Lucidea encourages museum practitioners to face challenges, strategize, and evolve.

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CHAPTER

1

Why You Need a (Better) CMS

The collections management system (CMS) is a museum engine used to capture and display collection information. The data in the CMS helps museum professionals make informed decisions related to collections care and it assists staff in efficient collections management. Given that any museum can have hundreds, thousands, or millions of items to care for, a CMS is a critical component of effective collections care and management.

The Evolution and Role of the CMS

Many of the companies known for producing collections management systems were predominantly founded in the late-1970s through the 1980s. Museums using a CMS became commonplace in the 1990s with wide-spread implementation occurring by the 2000s. The CMS was initially created to mimic the physical card catalog where limited object information could only be retrieved in-person. A CMS isn't constrained by the need to fit object information on a 3x5 index card—and information such as provenance, description, conservation reports, and exhibition histories are additionally documented in a CMS. Today, a CMS is more than just the museum object information it maintains, it's an engine that can automate collections-based workflows and improve the accuracy of staff work. Additionally, most CMS options now offer external online access, allowing the public to search and view collection information from wherever they have an internet connection. With so many features that deliver effective collections care and management, the CMS has become significant and central to how a museum meets its mission to care for and present collection objects.

No CMS—or a Bad CMS—is a Burden to Staff

Many museums operate with limited staff and resources, which means staff must have tools available that intuitively integrate with their workflow and cut down on project time—rather than adding to it. If the museum relies on an outdated CMS, if a CMS hasn't been implemented properly, or if there is no CMS at all, staff are likely suffering from being overworked. If there is no CMS engine to facilitate gathering collection information, project workflows, and collection use, then much of that analog labor falls on staff to complete.

Additionally, in order for a museum to meet its mission there are certain actions that must be taken to ensure the health of the collections. If staff don't have accurate collection information at their fingertips they can't make the right decisions for the museum collection, and by extension, the museum itself.

Why You Need a (Better) CMS

No matter the type of museum, all museums have the responsibility to care for and manage collection objects. This universal responsibility can be done without a CMS, but it would take a tremendous amount of staff time and energy (on a repeated basis) to do so. If no CMS is in place, any object information will exist in a non-centralized, non-standardized format that can't be validated, automatically pulled for multiple purposes, nor shared broadly with the external community. Only small or simple tasks will be possible and staff will be limited as to collection activities they can execute. Furthermore, tasks will take longer to achieve, collection data runs the risk of being lost or inaccurate, and no automation can be offered to support museum staff.

Museums need a centralized venue where staff can instantly access current collection information. A CMS fulfills this need as it can centralize a great breadth of object information captured in a standardized format. In addition to basic collection information, a CMS can accumulate information resulting from every staff action—and can generate multiple report types based on this information to further simplify collections care and management. Depending on the CMS and how well it's been implemented, staff can leverage the automated information a CMS provides to improve the care and management of the museum collection. Information derived from the CMS can assist staff in making critical operational decisions and can influence how resources are allocated.

Here are a few examples of how a good CMS can assist in more than “just” capturing basic collection information. A good CMS can:

- Highlight items in need of treatment before the next exhibit by checking conservation reports.
- Demonstrate how often collection objects are on display, or not, by chronicling exhibition history; this can inform exhibit creation.
- Prove collection use by tracking statistics of in-person use and digital viewership. This information can be used to determine visitor traffic or demand, which can translate into how externally valued the objects are and where more resources should be allocated.
- Address legal or ethical questions that arise when evaluating poor past practices with clearly documented object provenance.

- Decrease lost or misplaced objects by tracking items that are leaving or returning to the museum through exhibition loans or traveling exhibits.
- Support enjoyment, research, or education initiatives with tools that allow the public to create a self-curated object list, share objects on social media, or download images of their favorite objects.

What This Booklet Will Do

If this is the first CMS for the museum or if it's the first time staff are involved in choosing a new CMS, it's crucial to understand how the CMS selection and procurement process works. A CMS is a long-term investment in staff time, collections care, and money; the museum needs to be confident in the chosen CMS. This means in order to deliver the best return on investment staff need to know:

- How to begin the search for the right CMS;
- How to navigate the procurement process;
- How to prepare for what migration will entail;
- What workflows, standards, and tools they should be aware of; and
- How to use the CMS to its maximum potential.

In an effort to support museum staff through the CMS procurement process this booklet will explain how to search for, select, buy, implement, and maximize the value of the museum collections management system. Each section will review the important elements of the process, will highlight areas museum staff should be particularly aware of, and will offer tips to help museum staff navigate the process successfully.

CHAPTER

2

How to Begin the Search for the Right CMS

***“Begin at the beginning,” the King said, very gravely,
“and go on till you come to the end: then stop.”***

– Lewis Carroll, *Alice in Wonderland*

If a museum is new to using a collections management system (CMS), staff are likely unaware of what the CMS options are, nor what to look out for when making initial selections for further review. This section will cover how to identify which CMS options to review, the typical CMS features to consider, and CMS deal breakers—and will reveal the two most important CMS criteria to include when making initial CMS selections. Since implementing free software is often a consideration for museums this section will also review the cautionary points to know before committing to a free CMS.

*For more on the CMS selection process and procurement, please see the next section:
How to Navigate the Procurement Process.*

How to Identify CMS Options for Consideration

It’s hard to know where to begin when first considering a new museum CMS. While the prospect can seem daunting there are some easy steps that can quickly introduce staff to relevant CMS options. Here are four easy to follow recommendations that will help museum staff identify which CMS options to look at:

- Ask a friend or respected colleague at a different museum what CMS they use and if they would recommend it.
- Visit peer museum websites to view what CMS they use. The CMS name can be branded on the page or listed as part of the website address. If it’s not immediately apparent then reach out to the collections manager and ask.

- Review professional association pages to see if they provide a recommended vendor list or if they post CMS company advertisements.
- When attending conferences make a note of which CMS companies are in the exhibit hall, sponsored a meal, or published an advertisement in the conference program.

TIP: When attending conferences, take advantage of the exhibit hall time to visit CMS companies. This is a great way to informally meet company staff, have a tour of the CMS platform, and ask questions.

Initial CMS Selection Criteria to Consider

When selecting CMS options for initial review there are desirable CMS features and deal breakers to guide staff consideration. While the procurement committee will define a more thorough specification sheet for ultimate CMS decision-making, initial selection can be guided by the following features and deal breakers:

Features Required for CMS Consideration

- Control over private and public content
- Customizable front and back-end
- Cloud-based access

Deal Breakers to Remove a CMS from Consideration

- No public online access
- No technical support
- No ability to customize catalog template, workflow, reports, or searches

Staff may find that not all of these features or deal breakers are relevant, but they do form a foundation from which staff can begin to define their own initial CMS parameters.

What are the Most Important CMS Criteria?

In addition to features, there are two important criteria to keep in mind when shopping for a new CMS: affordability and exit strategy.

Affordability

When selecting CMS options for initial consideration it's important to know if the CMS can fit within the museum budget. For the majority of museums, the CMS takes up a large percentage of the operating budget, which adds pressure to the CMS decision-making process. To avoid costly missteps, the museum should have a predetermined budget in mind when shopping for a CMS. The budget for the CMS will need to be workable within the larger operating budget, but it must also be realistic in terms of what a CMS can cost. If the museum can't afford a CMS well suited to the stated museum needs, then the budget isn't realistic. The museum will need to re-evaluate the budget, the identified CMS needs, or both. Once the museum has settled on a realistic budget, staff can begin to search for CMS options within that budget. If the cost of a specific CMS is nowhere close to the museum budget then the CMS will need to be removed from consideration. Additionally, though the museum may be able to afford CMS "X" now, it's important to determine (to the best extent possible) if the museum can maintain the annual and sometimes increasing cost of the CMS in the future.

TIP: A museum may start out with one budget number only to find it needs to be altered. The key is to be flexible with a budget range and re-evaluate the budget with real CMS costs to ensure it's realistic.

Exit Strategy

This may seem like an odd place to start when shopping for a new CMS, but that's exactly the point. CMS migration and evolution are inevitable and it's critically important to have a CMS that will allow a museum to extract its data and maintain the data's structural integrity. No museum should have to start from scratch, nor spend countless hours massaging data to fit into a new CMS because the export of data from the previous CMS is unusable. To do so would be extremely costly to the museum in terms of staff time and labor.

A Note on Free Collections Management Systems

Collections managers or museum leadership may insist that the museum consider free CMS platforms. A free CMS can be a suitable choice in the right circumstances. If a free CMS is to be considered, the museum must have staff who possess the expertise needed to implement, run, and support it. When considering a free CMS, museum staff need to be aware of—and prepared to solve—the following challenges:

Weaknesses Inherent in Free Software

- It often takes experts to implement the free software correctly
- It requires experts to modify or improve the software
- Only the user community or hired experts can offer trouble-shooting support, updates, and tool development
- The software expiration is unknown and the death of a free CMS can happen suddenly and without exit support

Where the Cost is in “Free”

There are costs hidden in “free”. Free software implementation, improvement, trouble-shooting, and support takes time and skill that doesn’t always exist within the museum. Installing and setting up a new CMS also requires technical knowledge, sometimes as advanced and as specific as writing query commands in Linux. Additionally, the museum staff will have to figure out how to migrate legacy data from the previous CMS into the free CMS. Any strategic decisions or critical workflow questions will have to be anticipated—and this can lead to bad decisions and implementation pitfalls. If customization is needed, the museum must either rely on staff or hire an expert to help modify the free CMS. If the museum doesn’t have the capacity to rely on staff or hire an expert then no modification or improvements to the software can be made. This has its own cost implications as the museum won’t be able to effectively use the CMS to execute its mission.

A Free CMS is not a Healthy CMS

Healthy software undergoes software upgrades in order to perform optimally in a constantly changing technological and user-driven environment. Software supported by a company will publish regular updates and will have staff on-hand to trouble-shoot any issues. Free software will only offer updates if someone from the user community builds and shares one. Updates will be inconsistent and those that do happen may experience a higher percentage of technical trouble because every instance is set up differently. If CMS users atrophy, or if the software is

no longer compatible with current technology, the software can die—seemingly unexpectedly. Free software doesn't come with an exit plan and it can be fairly difficult to reclaim museum collection information from the system after the fact.

Conclusion

When done right, the initial CMS search and selection process sets the foundation for a successful CMS procurement process. Knowing how to begin the search for the right CMS will help establish museum staff confidence as they begin to select collections management system options for review. Intentional selection, realistic budgeting, and prioritizing CMS options with an exit strategy form a pragmatic approach to selecting the right museum CMS.

CHAPTER

3

How to Navigate the Procurement Process & Select the Right CMS

“The most difficult thing is the decision to act, the rest is merely tenacity.”

– Amelia Earhart

If the museum is new to procuring a collections management system (CMS), or if it's been a while since staff last considered CMS options, it's important for staff to become familiar with what the procurement process entails. Procurement is the action of obtaining something. In this case, procurement includes the activities participated in by museum staff in order to research, test, and select the right CMS for the museum. This section will review what components make procurement successful, such as: whom to include on the procurement committee, what questions to consider when constructing CMS specifications, what testing and vetting actions should be taken, and what the purchase process consists of.

Forming the Procurement Committee: Who Are the Museum CMS Stakeholders?

When forming a procurement committee (also referred to as a procurement team), it's important to know who the museum CMS stakeholders are. Stakeholders can be both internal and external to the museum, so be sure to think about both when identifying museum CMS stakeholders. Once a review of stakeholders has been conducted, choose a team that represents the majority of stakeholders and their needs. A procurement committee should be reflective of the stakeholders present, but also needs to be small enough to allow effective coordination, discussion, and decision-making.

TIP: Determining the size of the procurement committee can be based, in part, on museum staff size. For example, with a staff of 100, the museum can select 10% of its staff for a ten-member committee. For any committee to be effective it must have at least three and no more than twelve members.

External Museum CMS Stakeholders

External museum CMS stakeholders include patrons, researchers, and communities who are connected to the collection or coexist locally to the museum site. If an external stakeholder can't be included on the procurement team, a staff person who can speak knowledgeably regarding external stakeholder needs must be included.

Internal Museum CMS Stakeholders

There are five types of museum staff who tend to use the CMS the most: collections managers (or registrars), curators, conservators, educators, and exhibit designers. Each require different experiences of the CMS and each play a role in the input and extraction of information from the system. If the museum is considering software that will rely on technical expertise, or has IT-regulations it must follow, an IT representative should be included as an internal stakeholder on the procurement committee.

Create Specifications and Research CMS Options

Meet with stakeholders and note their questions, concerns, comments, and needs. The more needs and use cases accounted for, the easier it will be to select a CMS that will help all museum staff do their jobs effectively. Once all the information has been compiled the procurement team can organize the specifications into technical areas and prioritize each (see the *Example of Museum CMS Specifications* table on page 17). CMS search and evaluation parameters can then be calibrated based on the specifications the procurement committee creates.

How to Identify CMS Specifications

CMS specifications will depend upon museum, collection, staff, and future vision. The procurement committee needs to review every current and anticipated CMS use in order to tease out what tools are required for museum staff to do their jobs effectively. Asking questions is a great way to explore what CMS specifications the museum should include. For the following example questions the word “tool” represents any CMS feature or function that

the staff person would use as a tool to do their job.

Questions each staff person should consider are:

- What tools do I currently use that are required to do my job?
- What tools do I not have currently that would make my job easier?
- What tools do I consider as mandatory versus recommended?
- What tools are so important that it's a deal breaker if the CMS doesn't offer that tool?

Next are questions that may be applicable to how the museum operates and how it intends to use the CMS.

Example questions:

- Does the digital file backup meet preservation standards?
- Are there digital file size storage requirements?
- What administrative control levels are available?
- What customization is needed (on both the front and back-end) and can the CMS accommodate those needs?
- What reports or other automation tools are desirable to support museum staff?

In addition to staff tool requirements which are all internal, it's equally important to review what tools may be required for external use.

Questions staff should consider together as they think about the external museum stakeholders:

- Is streaming video a requirement?
- Is the CMS ADA-compliant?
- Can the CMS navigation and object information be translated to another language on the fly?
- Can the CMS gather user contributions to object records?

- Can the CMS external search include objects from a different CMS at a peer museum?
- Is there a zoom feature or watermark feature for images?
- Can users create and save their object searches?
- Are users able to download object images and data or share them via social media?

How to Put it All Together to Create CMS Specifications

Once the procurement committee has had a chance to identify all possible CMS requirements it's time to put them all together and determine what tools are required and which are recommended but OK to do without. This part of the process can be the most difficult as staff often have conflicting opinions on what is a required tool. To assist, staff should indicate to what degree they believe the tool is required. One easy way to do this is to assign an importance scale. For example, here is a sample staff list of required tools:

- Cloud-based (can access online from anywhere); *Score: important*
- Customization of catalog template; *Score: very important*
- Exhibit reports configuration; *Score: somewhat important*
- Curated lists (or pre-selected searches); *Score: not very important*

TIP: Create a form for staff to identify their CMS tool requirements, what they perceive the broader museum requirements to be, and what they believe the external museum stakeholder's requirements are. Next to each tool have the staff assign a ranking as to how important it is with the following scale: not very important, somewhat important, important, very important, extremely important.

Once staff have identified and ranked their required tools the procurement committee can see which tools received the highest ratings. This exercise will help members of the committee understand how important a tool is to their colleagues and can see which ones have the most obvious cross-department appeal. Once the tools have been identified and ranked, the procurement team can construct a specifications sheet to present to CMS companies and to evaluate how each CMS ranks.

Example of Museum CMS Specifications

CMS:	Required: Cloud-based	Required: Customizable Catalog	Required: Report Creation	Recommended: Streaming Media	Recommended: Curation of Content (Digital Exhibit)	Within Budget
#1	Y	Y	Y	N	Y	Y
#2	Y	Y	Y	Y	Y	N
#3	N	Y	Y	N	N	Y

Testing

Once the procurement team has outlined the CMS requirements and made an initial selection, it's time to test and vet the CMS options that appear to meet those requirements. It's important to test CMS capabilities and workflow options to ensure the tools work the way museum staff expect them to. Request a temporary sandbox to test workflows, customization, and other facets of the CMS that are important to the museum. If a sandbox can't be provided request a detailed tutorial that demonstrates procurement committee requirements; this is another way to help determine whether the CMS meets staff expectations.

Vetting

If CMS testing goes successfully it's time to ask the provider any remaining questions the procurement committee may have. This is a good time to clarify anything missing from the provider's proposal and outline what the next steps will be. It's important to remember that the CMS company is a potential partner and this is an interview. Finally, just as the museum would do if they were hiring a new staff member, the museum should verify references for the CMS company. Peer referrals will increase the procurement committee's awareness of potential CMS advantages or pitfalls that were not evident during the research and testing phases.

TIP: When seeking referrals, ask the referring museum more than just “Does the CMS meet your requirements?”. Instead, ask for a quick demonstration of which tools they love using and/or which areas lack robust tools. A great question you should always include is “What were your lessons learned from adopting and using this CMS?”.

Budgeting and Purchasing

Once a CMS has been selected, the procurement committee—along with any legal and operations staff—should review the CMS contract to ensure it meets specifications and is determined to be suitable for the museum to enter into. Payment terms for the CMS should be outlined in the contract and should be processed and scheduled as appropriate in order to guarantee prompt payment and an accurate budget.

TIP: If the CMS company is one that increases annual fees (at regular or irregular intervals) make sure the increase is spelled out in the contract so there are no financially damaging surprises. For example: “CMS Company” has an annual increase of 2%. Or: “CMS Company” reserves the right to increase its fee not-to exceed 5% upon renewal of the agreement.

Conclusion

It is imperative for museum staff to get the CMS procurement process right, because the end result is a long-term investment of time and money in a system critically important to museum operations. The more thoughtful staff are when choosing the museum’s CMS, the less likely it is that the museum will need to navigate a subsequent CMS procurement and replacement process. Including the right stakeholders, identifying and ranking CMS specifications, and exercising due diligence through testing and vetting are all required elements for the successful selection of a museum CMS.

CHAPTER

4

How to Prepare for CMS Implementation & Migration

“The backbone of success is hard work, determination, good planning, and perseverance.”

– Mia Hamm

A migration from one collections management system (CMS) to another can be tough, but necessary, and there are several reasons why a museum may need to migrate to a new system. Not all CMS options are the same— and CMS companies who started with one product may now offer a variety of products to suit different levels of museum needs. This section will review scenarios that lead to a CMS migration, and how to prepare for a CMS implementation and migration.

Scenarios that Lead to a CMS Migration

There are several scenarios that can prompt a CMS migration. Even if a museum chose an excellent CMS in 2010, circumstances may have changed that necessitate finding a different CMS solution in 2020. What kind of changes would push museums to change their CMS? Here are a few common scenarios:

1. An increase or decrease in the CMS budget
2. Museum staff interest or ability to use the CMS changes
3. There's a shift in how technology is used
4. There's a change in operating system requirements
5. The CMS dies, becomes outdated, or is acquired and merged with a different company's product

The fact is, for these reasons and more, many museum professionals will see at least one CMS migration during their career.

Historically, Migrations Have Been a Pain

Migrating collection content from one museum CMS to another is no one's favorite job. Migrations are known for being costly, long, and painful. Historically, a CMS migration was laborious, didn't go as planned, and left a lot of manual clean up. Fortunately, collections management systems have been around long enough that many now offer a standard migration option. Additionally, many CMS companies are now experienced enough in migrating museum content to offer standard tools and protocols that ensure the migration is as seamless as possible. Even so, museum staff still have work to do and will still need to prioritize and plan for CMS implementation.

How to Prepare for a Museum CMS Implementation & Migration

In order to minimize the labor and anguish that can result from a poorly executed CMS implementation, there are decisions and activities that should first be undertaken by museum staff. The following six steps will help staff prepare for CMS implementation and migration realities.

Step 1: Fully Get to Know the New CMS

Work with the new CMS representatives to make sure relevant staff know how the new CMS operates and what to expect during implementation and migration. Speak with fellow museum colleagues at different museums who are currently using the new CMS—or those who have exited the CMS currently in use by your museum. Speaking with peers can reveal items that are obvious from the user perspective and not as obvious from the CMS representatives' perspective.

TIP: CMS representatives have led many museums through the implementation and migration process. Take advantage of their expertise and ask them if they have a checklist to follow or tips they can share to help the museum prepare.

Step 2: Implement the CMS

Depending on which CMS option is selected there will be a series of actions the museum will need to take in order to implement the system. For example, some CMS options require a secure installation on a museum or contracted host server. Other CMS platforms are vendor hosted, and the museum will need to establish secure access to the CMS company's servers. Implementation actions may also include the selection of catalog standards and thesauri, customization of templates and reports, and constructing the front-end look and feel. The majority of these tasks will require cooperation between the CMS company, the museum IT staff, and the collection experts (i.e. collection managers and curators).

Step 3: Understand How Content Will Exit the Existing CMS and Enter the New CMS

All CMS options were created differently and will behave differently when exporting or importing museum collection content. In order to accurately prepare for how museum content will exit one CMS and enter another, work with both CMS vendors to review how sample museum content exits and enters a system. This practice will help museum staff anticipate and identify any collection information cleanup or massaging that may need to occur as a result of the migration.

Step 4: Test and Troubleshoot

Test the CMS to ensure implementation was done correctly. Test how the templates are setup, collection data is displayed, and how reports are pulled. Additionally, test the migration of the museum collection content even if (in theory) the CMS migration should occur flawlessly. How each museum uses a CMS is different and CMS implementation and migration results will vary. While this is common, it can alter the implementation experience and therefore results will differ from how sample data tested. It's important to test implementation with real museum content in order to identify potential pitfalls—before the mass migration or input of collection content occurs. This will limit staff time needed to document and facilitate collection information cleanup.

Step 5: Clean Up Existing CMS Content

Migrations can highlight bad past practices, evolved cataloging practices, or a lack of adherence to cataloging standards. It's important to note these issues early and measure how pervasive they may be. Migration can offer an opportunity to address issues so that content entering the new museum CMS will meet all current best practices. If testing revealed that little to no data cleanup was required post-migration, collection information cleanup should occur pre-migration. If test migration indicated cleanup will be needed post-migration, data cleanup can take place in conjunction with migration-caused issues.

Step 6: Establish (or Re-establish) Museum Cataloging Best Practices & Adjust Workflows

Implementing a new museum CMS provides an opportunity for staff to establish or re-establish museum CMS best practices, update CMS documentation, and review workflows specific to the collections management system. It's natural for cataloging practices to change over time due to staff turnover or through the adoption of new best practices, and periodic reviews should take place to ensure best practice compliance. *For more on cataloging and workflows, please see the next section: CMS Workflows, Templates, and Tools to Use.*

Prepare Staff for CMS Migration Realities

If museum staff have never experienced a migration, it's important to review what a CMS migration entails, what issues are likely to arise, and to put solutions in place to deal with those issues promptly. It's also important for both museum staff and leaders to know that a migration can take up a large amount of staff time and will need to be prioritized over other standing museum activities. In order to avoid staff burnout and missed deadlines it's critical that museum staff and leadership prepare for the time commitment and labor necessary to successfully migrate to a new CMS.

TIP: Before launching a CMS migration, reach out to museum peers who've recently endured a CMS migration. Ask them to speak at a museum staff meeting to discuss what the migration experience was like, share tips, and reveal lessons learned.

Conclusion

The implementation of a CMS and subsequent content migration doesn't need to be a stressful or drawn out event. If museum staff are given adequate time to prioritize and plan for CMS implementation and migration realities, mistakes can be avoided or, at least, prepared for. By following the above six steps museum staff can avoid costly oversights and enjoy a swift and successful CMS implementation.

CHAPTER

5

CMS Workflows, Standards, and Tools to Use

“The best investment is in the tools of one’s own trade.”

– Benjamin Franklin

If selected and used correctly, the museum collections management system (CMS) has the power to positively impact museum staff work and increase digital user enjoyment. Once a CMS is up and ready to use museum staff will next need to focus on CMS cataloging workflows, templates, and tools to use in order to maximize CMS capabilities. This section will cover workflow creation, catalog standards selection, creation of CMS best practices, and the assortment of tools to use. Since museum volunteers and interns are often assigned to work within the CMS, this section will also review how to effectively train them.

Workflow Creation

A workflow is an accumulation of actions taken for each step in a process. Cataloging object records is a process and one that comes with a unique workflow specific to each museum. A sample workflow can look like this:

1. Select an object to catalog
2. Review any existing object file notes
3. Retrieve or capture a digital image of the object

4. Research the object to establish basic information such as: title, creator, creation date, and description
5. Enter required information into CMS object record per established standards and best practices
6. Submit the record for approval or publish (dependent upon staff permissions)

Depending on museum staff size and what object information is already available, this workflow can be expanded or contracted. When using a CMS, it's important for staff to create and periodically review their CMS-specific workflows to help ensure consistent quality and quantity of CMS content. This will decrease future clean-up costs and assist in providing the support museum staff need to be happy and successful.

Museum Catalog Standards

While the concept of a catalog of curious objects is centuries old, it's important to note how the catalog has evolved. The largest recent change was the adoption of the digital CMS. In the last 40 years, museum catalog systems and rules have evolved. Unlike libraries and archives where there are only a few endorsed descriptive standards—and controlled vocabularies to choose from—the museum field has several options and tends to be less regulated. Often, cataloging rules are predicated on the type of collections held at the museum, as opposed to universal rules adopted by the field.

CMS Catalog Fields & Controlled Vocabularies

The following are fields commonly used to capture important object data. It's important for the museum to determine which fields are required or recommended, and how field content should be entered. For example, the title field should use headline capitalization and the description field must use full sentences, spell out acronyms, and use proper grammar.

Object Identification Number (must be unique, usually the accession number)

Object Title

Object Creator

Object Description

Object Provenance

Object Materials & Format

Object Size

Object Location

In addition to object-specific information, the catalog record should also include controlled vocabularies to help identify and cross-reference related materials through: classification,

creator, subject, taxonomy, and other term delineations. Commonly recognized vocabularies are: Art and Architecture Thesaurus, Library of Congress, Nomenclature for Museum Cataloging, and Chenhall's Nomenclature.

TIP: Not sure where to start? Review the object records cataloged by peer museums to see which fields and controlled vocabulary they commonly use to describe their objects.

Establishing & Following Museum CMS Best Practices Helps Everyone

In order for the catalog to meet the needs of the museum and the expectations of the museum audience, it's important to create a set of museum CMS best practices that fit both. A review of catalog standards and controlled vocabularies available should be conducted by museum staff with a set of standards and vocabularies chosen and documented. Afterward, the following steps should be taken to develop sustainable and easy-to-follow catalog instructions:

1. Identify cataloging fields with indications of "required" and "recommended".
2. Articulate guidelines for how data should be entered into each field, including standardized language, avoidance of abbreviations and acronyms, and appropriate writing style.
3. Communicate which catalog standards and controlled vocabularies will be followed; provide examples of how each may be used within a catalog record.

TIP: Review the CMS to determine what standard templates and controlled vocabularies are built-in and can be utilized. This can save staff time by eliminating the need to create templates from scratch or manually import vocabularies.

These steps are the foundation of CMS best practices for any museum.

Establishing museum CMS best practices has multiple benefits:

- Consistent data (in quality and quantity) across all museum object records
- Museum staff confident in their cataloging

- Less staff time spent on unnecessary cataloging
- Decrease in occurrences of cataloging burnout among staff
- More items cataloged
- Less chance of error (incorrect field and/or incorrect information)
- Limited scope when data clean-up is required
- Succession of cataloging practices not at-risk during staff turnover

Tools to Use

Museum collections management systems typically come with a suite of tools available for customizing the CMS back-end. Once cataloging standards and best practices are agreed upon by museum staff, the next step is to customize the CMS to reflect those decisions. This customization is fairly easy for staff to execute and an investment of time and attention now can help minimize object record errors and uneven content information across object records.

Here are the recommended CMS tools to use to customize the museum CMS experience for staff:

- Customize the catalog template so that only fields the museum wishes to use are visible. If possible, mark these fields as required or recommended.
- If a set of standards or rules can be selected within the CMS, do so.
- Select or pre-load the controlled vocabularies the museum has elected to follow.

Effective CMS Training Directions for Volunteers & Interns

Limited staff and resources make it difficult for museums to tackle the Sisyphean task of digitizing, cataloging, and publishing museum objects via a CMS. Museums rely on volunteers and interns to try and address this labor gap. As such, volunteers and interns must be adequately trained and supported in order to effectively contribute accurate content to the CMS. Hands-on training paired with clearly written directions is very effective; written directions reiterate the training, and can be referred back to at any time. For written directions to be successful there must be clearly articulated step-by-step instructions, examples of how text should be entered, and screenshots for visual illustration of instructions.

If these elements aren't incorporated, museums run the risk of overwhelming their volunteers and interns, owning incomplete digitization projects, and dealing with inaccurate content populating the CMS.

Conclusion

All the actions described in this section help create a sustainable cataloging practice—one that includes: a clearly determined scope, easy to read documentation, relevant CMS customization that reflects museum best practices, and a staff commitment not to deviate from the practice. The more forethought and effort museum staff put into the establishment of standards and best practices prior to the use of a new CMS, the more accurate and effective the collection information will be.

CHAPTER

6

Maximize the Value of Your CMS

“Beware of monotony; it’s the mother of all the deadly sins.”

– Edith Wharton

A collections management system (CMS) is critical to how a museum meets its mission. While the CMS is a work engine that can capture, display, and report on museum objects, it’s important to know how the CMS can support additional museum activities. CMS functionality can enable museums to better meet digital user expectations, strengthen museum financial health, and complement community outreach efforts. This section will cover how the CMS influences digital visitorship, income streams, and social media engagement.

Museum Digital User Types & Expectations

A museum CMS user can be classified into two main types: researcher or hobbyist. Each type has a set of expectations that dictate how they anticipate the CMS should behave, and how they evaluate the value of information they derive from the CMS. While some expectations for CMS behavior and value may differ or even be in conflict, the important part is to understand how each user type’s expectations overlap. It’s not possible for a museum to meet every user expectation, but it is possible (and smart) for a museum to strive for meeting expectations shared across all user types.

Digital Researchers

Digital researchers leverage the museum CMS with a specific purpose in mind. Researchers want a platform that allows for advanced filtered searches, the ability to curate a personal research collection, and a mechanism to capture object information and export it for research purposes. All three CMS tools are a high priority for this user type. Clearly broadcasting what CMS tools are available to researchers encourages the swift use of those tools and, by

extension, the CMS. The more a CMS meets researcher expectations the more the researcher will return—and come to rely on it for research, presentations, publications, and curriculum construction.

Digital Hobbyists

Digital hobbyists engage with the museum CMS in a passive fashion—often opting to use browse or predetermined searches offered by the museum; for example: “Objects Currently on Display”. Hobbyists want the main CMS landing page to obviously convey the areas of online collection content available. Basic, general museum information needs to be noticeable and up front, and the museum must provide a clear navigation structure to assist the hobbyist with museum content engagement. Tools such as prepopulated or favorite searches, object highlights, and a landing page carousel of popular images are all features the hobbyist will want to see; these tools encourage their browsing behavior.

Utilize These CMS Tools to Increase Digital Visitor Engagement

As covered in the previous section *CMS Workflows, Standards, and Tools to Use*, there are easily employed CMS tools that help increase digital visitor engagement with CMS content. Here are recommended CMS tools for customizing the external visitor’s museum CMS experience:

- Add social media links to object records for easy sharing.
- Choose a CMS that can provide ADA compliance or a dual site that offers equitable, ADA compliant search capabilities.
- If the museum owns multiple collection types (e.g., museum and archives) take advantage of one front-end for users (even if there are two separate back-ends) to search both collections at once.
- Offer an array of options for visual content in the form of: zoom, contact sheets, and download capabilities.
- Take popular searches and bottle them for easy to access listings of highly-viewed CMS content.
- Embed and stream oral histories and other audiovisual content within the CMS so that users don’t have to leave the CMS to view additional museum content.
- Experiment with capturing user generated content via the CMS to better inform museum records, transcribe documents, gather community memories, and solve collection mysteries.

TIP: Google Chrome’s translation plugin can translate on the fly in 100 languages. Browser-based CMS platforms are usually compatible with this plugin. If the museum CMS is browser-based, advertise to digital users that they can browse the CMS in their preferred language via the Google Chrome translation plugin.

How a Museum CMS is Critical to Its Income Stream

The survival of a museum cannot be solely predicated on the number of physical visitors it receives. A healthy museum (as with any organization) must have a diversity of income streams originating from separate and independent sectors. By exploring why money is given to a museum we can begin to identify new ways of how to *harness* the “why of giving” and orient the CMS to provide for it. A typical museum will have income streams from the following areas: visitor admissions and member passes, grant and foundation funding, stocks and investments, donors and endowments, and municipal and business sponsorships. With the exception of stocks and investments, the remaining four income stream areas have expectations a museum CMS can help meet.

Visitorship & Member Passes: View Current & Upcoming Exhibitions via the CMS

What’s the first thing people do when they’re preparing to travel to a new place? They Google it, read reviews, and view what’s available online for information needed to facilitate a visit. The CMS’ display of objects, and highlights of which collection items are on display, absolutely help to sway a potential visitor’s decision to go to the museum. Similarly, the museum can tease upcoming exhibitions to members using the CMS to inspire their next museum visit. Using the CMS to showcase current or forecasted items on exhibit and inspire in-person attendance is an easy way to support this income stream.

Grant & Foundation Funding: Providing a CMS Shared Catalog

The current grant landscape favors proposals that are collaborative and assist in putting museum collection content online. One possible iteration of this is producing a shared catalog or a shared digital exhibit. Objects arrive at museums through various means including, but not limited to: donation, auctions, and private purchases. Over time, acquisition practices have led to objects being distributed across a number of museums that most likely don’t have a formal relationship with one another. A few decades ago this wasn’t considered a problem. However, now, in the digitally connected world, museum visitor and funder expectations have changed. Visitors expect like things to be together. If the museum owns a capable CMS

a shared catalog can be presented on the front-end without requiring the comingling of collections on the back-end. Digital visitors expect to see related items displayed together regardless of which museum owns them; a shared catalog is a fairly effective and achievable way to meet this visitor expectation and funder requirement.

Donors & Endowments: Meaningful Experiences Delivered by the CMS

Donors give money to a museum because at some point the museum provided the donor with a meaningful experience they haven't received elsewhere. The money donors give and the endowments they create are an investment in the future of that museum, ensuring that it can continue to deliver meaningful experiences. These experiences should occur both in-person and online, and museums need to consider how they can harness a CMS to support their experience offerings. For example, a CMS can be used to offer an "Adopt the Art" fundraiser where donors can self-select which art work they wish to sponsor. Sponsorship can be for restoration or conservation work, a digitization project, supporting additional research, or any other museum activity that supports the museum's stewardship of that piece of art.

Municipal & Business Sponsorship: Using the CMS to Meet Community Needs

Local governments and businesses generally acknowledge that museums and cultural institutions help contribute to a healthy and vibrant community ecosystem. As such, it's in the governments' and businesses' best interest that museums continue to provide services to the community. Working with CMS platforms that are capable of ADA-compliance and can be translated into multiple languages on the fly will become increasingly important to museums as they continue to demonstrably meet their communities' needs.

Social Media and the Museum CMS

Ideally a museum will have a cultivated social media strategy with regularly scheduled content published across social media platforms. While objects from the museum CMS won't be the only content shared via social media, the CMS should factor in as a major content contributor due to the inherent interest digital users have in museum objects. As such, knowing where, what, and how to share digital objects via social media is an important process to learn and experiment with. The following are the three most popular social media platforms with tips on how to share digital objects per medium.

Facebook

Facebook is perpetually popular, especially as the user demographics continue to skewer towards older adults. The museum should consider the multiple ways content can be contributed: text-only and text with audio-visual media (photograph, audio recording, or

video). Audio-visual media will always generate more interest than text-only content. A good approach would be to create and share a combination of text with media. Make sure to provide enough information about the object or recording within the post, but not so much that it overwhelms casual viewers. Then add a direct link to the CMS object record to encourage museum fans to view the object within the museum CMS.

TIP: Facebook is a platform where more formal digital images are still widely accepted, but be sure to keep the information light. Pull some descriptive information from the CMS and sprinkle in a current tie in or additional “behind the scenes” information to make the piece interesting beyond the everyday content.

Instagram

Instagram is a visual-based platform composed predominantly of photographs with some video content. Include the object title and date and maybe a sentence or two of descriptive information with appropriately related hashtags. A website link to a digital object within the CMS can be included. Common practice is to link to the museum CMS via the museum Instagram profile page so that social media users can reliably access it for more information.

TIP: Instagram first became popular due to its attention-grabbing filters. Do not use stock images or formal images of the museum objects. The museum object will be at its most interesting if it is photographed in an ad-hoc way, at an angle, and with a unique filter applied.

Twitter

Twitter can be text-based or text with media. With a 280-character limit the museum needs to keep its text content to a minimum and provide just enough information to introduce the object and provide a direct link to the object record in the CMS. Photographs, video, and links to other content (such as the CMS) will take up additional real estate within a Twitter feed and will assist with grabbing the social media user’s attention.

TIP: While text-only is an option on twitter, it should rarely be employed unless conveying important and concise museum information. Some hashtags can be used, but should be done so sparingly.

Conclusion

Investment in a strong collection management system provides access to a suite of tools that support meaningful museum user engagement. Properly employing the tools mentioned in this chapter will help museums better meet their mission, satisfy external stakeholder demands, and strengthen their income streams. Not every tool needs to be used, but every tool should be considered against the museum's identified digital visitors and their content and engagement preferences. Test, play, and adopt tools to fit the museum and the museum digital visitor.



About the author:

Rachael is the Owner of Rachael Cristine Consulting, and provides services to museums, libraries, and archives. She specializes in museum collections management systems, digitization technology, digital project management, and digital usership. Previously she was at the Freer|Sackler Museum of the Smithsonian Institution and the Oregon Wine History Archive at Linfield College, where she successfully launched multiple digital projects that included advanced digitization technology, collaborative portals, and the migration of collection information into collections management systems. Rachael is a contributing member at the American Alliance of Museums, Oregon Museum Association, National Council on Public History, Society of American Archivists, and Northwest Archivists. She is also a popular guest author for Lucidea's *Think Clearly Blog*, and her first book for Lucidea Press, *Survivor's Guide to Museum Grant Writing*, was extremely well received.



About Lucidea:

Lucidea is a leading global knowledge management, collections management and library automation software company, helping clients navigate the universe of information and turn it into actionable knowledge and delightful user or visitor experiences. They achieve this by providing tools that accelerate access to knowledge and multimedia content resources, while simplifying their management. Through products such as Argus, ArchivEra, Eloquent Archives, CuadraSTAR Knowledge Center for Archives, SydneyEnterprise, Inmagic Presto, GeniePlus, and DB/TextWorks, Lucidea fulfills their mission of enabling museum, knowledge center, library, and archives clients to optimize delivery of knowledge, information and content while achieving financial and operational goals—and to help ensure that information management is tied to organizational strategy.

In addition to offering products and services that help ensure their clients' sustainability and success, Lucidea is committed to offering professional development resources for museum practitioners, archivists, special librarians, knowledge managers and other information professionals. Their program includes webinars delivered by internal and external experts, the *Think Clearly Blog*, conference presentations and panels, and now the fifth in their lineup of offerings from Lucidea Press.

NO CMS—OR A BAD CMS —IS A BURDEN TO STAFF

If this is the first CMS for the museum or if it's the first time staff are involved in choosing a new CMS, it's crucial to understand how the CMS selection and procurement process works.

How to Select, Buy, and Use a Museum CMS

offers advice from Rachael Cristine Woody, a seasoned museum expert and consultant with significant experience in museum, history and heritage organizations as both a practitioner and advisor.

A CMS is a long-term investment in staff time, collections care, and money; therefore, a museum must be confident in its choice.

This book will explain how to search for, select, buy, implement, and maximize the value of the museum collections management system—reviewing the important elements of the process, highlighting areas museum staff should be particularly aware of, and sharing tips that will help museum staff navigate the process successfully.

