

Workflow Basics

What a Workflow Is

Before diving into digital preservation workflows and processes, I want to take some time to explain what I mean when I use the word *workflow*. In its simplest form, a workflow is a series of steps taken to complete a task. A workflow can be so practiced in our personal and professional lives that we often don't even realize that we are following one—that is, until we try to teach someone else how to complete the task we have created the workflow for. A cooking recipe is a great example of this. My mother has this amazing chocolate mousse recipe that she cooked by rote, with no written instructions. However, when I asked for the recipe, it took her four attempts to successfully make the mousse, before she could translate the recipe from her brain to paper. We learned our lesson. The next time we needed to write down one of her mental recipes, I watched her and wrote out exactly what she was doing as she did it. This helped her not be distracted by trying to do two completely separate processes at once, cook and document what she was cooking. We all have professional workflows just like this. Just as in this example, we may need a little help documenting these workflows.

Workflows can be high-level and theoretical, or they can be simple and concrete. The high-level workflows are extremely useful when describing multiple interrelated processes that must be performed to complete a task. High-level workflows are also useful when creating documentation to share with fellow institutions, when trying to advocate to administrators for resources, or when teaching broad concepts. An example of a high-level workflow in digital preservation is the Open Archival Information System (OAIS) reference model.¹

This is a purposefully abstract model so that it can be used by any size or type of institution to develop a digital preservation program. The model describes how to package information received from a creator,

stabilize it, process it, and provide it to an end user. The model also documents the understanding that these steps are encapsulated by an ecosystem of preservation planning and administrative management required for a preservation program. How these high-level processes, plans, and management are achieved is left completely to the institutions implementing the OAIS model.

Low-level workflows are like the recipe I mentioned. They are a series of steps, most often written as instructions, that are followed the same way every time so that tasks are completed in an efficient and consistent manner. I describe these workflows as low-level, but that does not necessarily make them simple. It just means that the documentation describes the process in such a way that implementors need to make few, if any, independent decisions when following the workflow.

I will say that not every process will be able to be broken down into a low-level workflow. The more human interaction required in a process, the more likely the workflow will need some level of abstraction. The abstraction allows implementors to respect the needs and wishes of those they are working with to complete the task described by the workflow. An example of where abstraction is important in a digital preservation workflow is any process that involves a donor, creator, or end user. These abstract workflows are most commonly part of the pre-acquisition/acquisition phase and the access phase.

Why Documenting Workflows Is Important

I make the distinction here between workflows themselves and documenting workflows because I want to emphasize that we all have workflows for the processes we do every day. These workflows are so practiced that they are unconscious processes, to the point

that we don't even notice when we tweak and change how we perform the tasks. These changes happen to make the steps in the workflow easier or because a new skill was learned or a new tool implemented that makes the workflow more efficient. Without documentation, it is difficult to remember when and why the changes to the workflow occurred, which, among other complications, introduces a lack of transparency into the processes performed.

Documented workflows are evidence of past and present practices that create transparency, provide an audit history of processes and tools used, and prevent institutional memory from being concentrated in one person. Like any other design process, documenting and using workflows is an iterative process that changes over time. Having versioned documents tracks those changes. This can be especially important in digital preservation because if errors or corruptions occur in digital materials, knowing how these materials were treated in the past increases your ability to retrieve a clean copy of the materials affected to replace the corrupted content.

Beyond the everyday use of workflow documents, which is to perform processes consistently and efficiently, there are advocacy, educational, and relationship-building functions of documented workflows. Having workflow documents you can share with an institution just starting out or trying to ramp up its digital preservation program increases your ties to that institution and saves it time and resources it would have spent reinventing the wheel. Examining your workflow documents allows you to take a critical look at your processes to determine if there are gaps, outdated practices, or even institutional biases that need to be remediated. Examples of institutional biases include how processing priorities are assigned, which donors are approached for potential accessions, and how open the archives are to community input in arrangement, description, and access decisions. Finally, being able to share your workflow documents, or your analysis of your workflows, as evidence to support an argument for new resources or potential policy changes with administrators and funders can increase the likelihood that these advocacy efforts will succeed.

How to Document Existing Workflows

There are many ways to document a workflow, including visual diagrams, outline style instruction lists, paragraph style narratives, and spreadsheet style checklists. For an existing process, my favorite place to start is with an empty surface. I recommend a whiteboard or a very large presentation notepad and a pile of sticky notes. The beauty of this method is

that it works for someone doing this process alone or for a group of people working together. On the sticky notes are written all of the steps in the process. If the surface used is a wall or some other material that does not allow for erasable writing, sticky notes can also have directional indicators, such as arrows, on them. After you think you have all your steps written on individual sticky notes, place the notes in the order that you perform the tasks, either drawing arrows to indicate the direction of the steps or using other sticky notes as directional indicators. The beauty of the sticky notes is that they are easy to reposition. This is an essential function because it is very rare to get the documentation correct on the first pass. The sticky note method also allows you or your team to set aside disputed steps to come back to later. This makes it more likely that you will be able to focus on the bigger picture of the entire process instead of hyper-focusing on a single step. This method, heavily focusing on teamwork, is more fully explained in "Process Mapping as Organizational Assessment in Academic Libraries" by Sarah Barbrow and Megan Hartline.²

This is only one example of how to translate current processes to paper. Other methods are described in "OSSArcFlow Guide to Documenting Born-Digital Archival Workflows," which includes a questionnaire that delves into *why* you are currently taking the steps you take and if the priorities driving your current efforts are the priorities you want guiding future iterations of your workflows.³

Whatever method you use to document your workflows, the process should be done for all the workflows you do not currently have documentation for. Importantly, even if you have current documentation for all your workflows, you could use these processes as a way to step away from your current documents and reexamine your workflows.

When working through these efforts, you may find that you want to start in the way this report has modeled, with a high-level document that simply lists out the various stages of the archival process: developing a relationship with a donor or creator, acquiring a collection, accessioning, appraisal, arrangement and description, providing access, and continual maintenance of the materials. Then break down each of these processes further into a series of more detailed workflows until you are satisfied that the tasks cannot be further differentiated from one another.

Your situation will determine who is involved in the documentation effort. As the digital archivist at a small archive, I can do almost the entire process on my own with some consultation with the head of the archives regarding donor relations and the information technology department regarding the tools and systems I do not have complete authority over. At a much larger institution or an institution of the same size with a different organizational structure, this

process will involve multiple people and will therefore take longer and include more complex workflows because the materials change hands at different stages. A high degree of collaboration is essential to creating an accurate document, even though the documentation process may take longer and involve several negotiations over how the processes are documented.

It is vital to be completely honest about your current process. The purpose of the documentation, at this stage, is to create evidence of what you do now. It is not meant to document your ideal process or the standard process espoused by, in this case, the digital preservation community. An honest documentation of your current workflow is the only way to truly understand what you are currently doing, where your gaps and your priorities are, and how your resources are allocated. Only after creating this honest workflow

can you determine where effective and efficient changes can be made.

Notes

1. Brian Lavoie, *The Open Archival Information System (OAIS) Reference Model: Introductory Guide*, 2nd ed. (Digital Preservation Coalition, 2014), <https://doi.org/10.7207/twr14-02>.
2. Sarah Barbrow and Megan Hartline, "Process Mapping as Organizational Assessment in Academic Libraries," *Performance Measurement and Metrics* 16, no. 1 (2015): 34–47, <https://doi.org/10.1108/PMM-11-2014-0040>.
3. "OSSArcFlow Guide to Documenting Born-Digital Archival Workflows," Educopia Institute, June 23, 2020, <https://educopia.org/ossarcflow-guide/>.