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SIPOC, RACI & Brainwriting

Exposing Digital Preservation and Access Workflows

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[Dan]

Hello, I am Dan Noonan the Digital Preservation Librarian at The Ohio State University's Libraries. Today Sue Beck and I will be discussing the use of SIPOC, RACI and Brainwriting in exposing our existing workflows that surround digitization and born digital acquisition, as well as the arrangement and description of, providing access to and preservation thereof. Sue, a Senior Systems Consultant, and I are members of the University Libraries' Information Technology unit. We will be using a scripted presentation for the sake of future clarity, as well as observing our commitment to use our limited amount of time most effectively.

We are gathered on the unceded land of Indigenous people who have been coming to what is now the state of Ohio for thousands of years, and the series of large-scale geometric, boundary, and effigy earthworks still visible in central and southern Ohio bear witness to this region's historical importance as a center for economic, spiritual, artistic, and intellectual endeavor and exchange. We acknowledge central Ohio as the traditional homeland of the Shawnee, Miami, Hopewell, Wyandotte and other Indigenous nations who have strong ties to these lands. Today, individuals from a broad range of Indigenous backgrounds call Columbus and central Ohio home.

Digital Preservation & Access Work Group

- Grassroots
- Cross-functional
- Consistent Strategies
- Knowledge Management
- Transparency
- Areas of focus
- **Task #1: Identify Workflows**

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[Dan]

At the beginning of 2020, when the University Libraries was back at full complement with various roles that affect the management of our digital content, a group of librarians and curators proposed the revival of a work group to provide a cross-functional, consistent approach to managing our born digital acquisitions and our digitized materials.

Various work groups over the past decade have come together around issues pertinent to our digital content with success in developing guidance, while other groups' efforts have not necessarily seen the light of day. Further, there is confusion at times as where to find definitive University Libraries' information regarding digitizing materials, accessioning born digital materials, and where we will preserve and provide access to them.
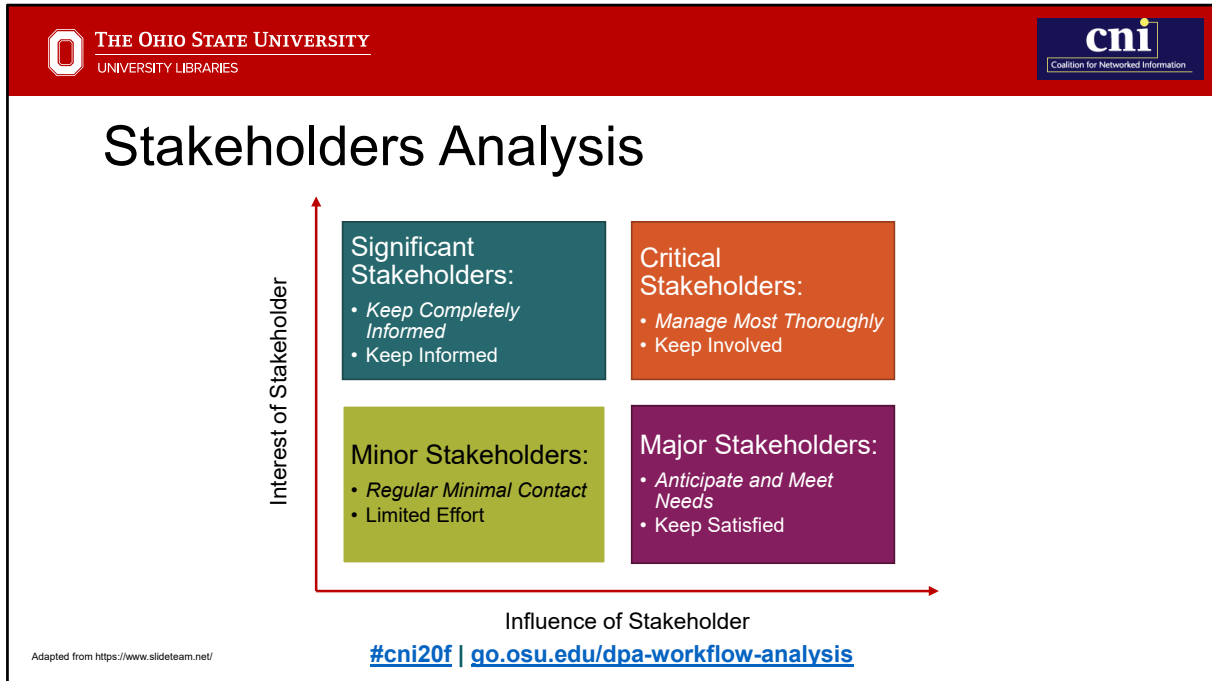
One of the goals of this group, the Digital Preservation & Access Work Group—or DP&A— will be to provide a single point of access to find, discover and manage this institutional knowledge. Further, the DP&A, intends to provide transparency in decision-making regarding priorities, guidelines and standards that the Libraries adopts in these areas.

The DP&A will:
- Define, refine, and clarify roles and responsibilities around preservation and

curation of digital collections
- Standardize the
    - accessioning and processing of born digital collections
    - digitization processing for at risk collections
    - digitization prioritization and processing for providing online access to collections
- Work to ensure consistent implementation of metadata profiles
- Implement best practices for digital collection lifecycle management
- Continually evaluate University Libraries' current capabilities, and make recommendations with input from all stakeholders around the evolution of services

The initial charge from the sponsoring Associate Deans, Jennifer Vinopal and Karla Streib, meant to eventually achieve these loftier goals, is something much more basic, to identify our existing workflows that affect born digital acquisitions and processing, digitization, providing access to digital materials and the preservation thereof. Answering the question, "What are the intersections, gaps, redundancies and areas for improvement?"

Stakeholders Analysis

Interest of Stakeholder (vertical axis)

Significant Stakeholders:
- *Keep Completely Informed*
- Keep Informed

Critical Stakeholders:
- *Manage Most Thoroughly*
- Keep Involved

Minor Stakeholders:
- *Regular Minimal Contact*
- Limited Effort

Major Stakeholders:
- *Anticipate and Meet Needs*
- Keep Satisfied

Influence of Stakeholder

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Adapted from https://www.slideteam.net/

[Dan]

But first we had to ask ourselves, "Who are we doing this for? Who are our stakeholders?"

"Stakeholder" is not a one-size fits all category or just a singular target; this is where we can often err in not being transparent enough.

When contemplating who our stakeholders are, we need to gauge their influence versus their interest. Clearly our critical stakeholders are those that have both high interest and influence, and we need to keep them involved and most thoroughly manage them. But who are our other stakeholders?

- Major stakeholders are those that have a significant ability to influence, but possibly a lower level of day-to-day interest. These are the type of folks we need to keep satisfied by anticipating and meeting their needs.
- Significant stakeholders are those that have a interest in what we are doing, but do not have as much influence on our outcomes; these are folks we need to keep completely informed.
- Finally, minor stakeholders are those that have low interest and minimal ability to influence; these are folks we need to provide a limited effort to keep informed via

minimal contact.

Stakeholders by University Libraries' Unit

Content & Access	Special Collections & Area Studies	Research & Education	IT	Other
•Access services •Archival Description & Access •Bibliographic Initiatives •Collection Strategy •Copyright Services •ILS •Metadata Initiatives •Preservation & Digitization •Publishing & Repository Services	•Area Studies •Billy Ireland •Byrd Polar Archives •Exhibits •Hilandar Research Library •Theatre Research Institute •Ohio Congressional Archives •Rare Books & Manuscripts •University Archives	•Geology & Maps Library •Music Library	•AD&O •Digital Initiatives & Infrastructure •Digital Preservation	•Accessibility •Business Office •Sponsors •Exec

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[Dan]

So who are our stakeholders? It is a long list.

Clearly this represents a wide swath of the University Libraries, and some may suggest it isn't wide or complete enough. But it is a starting point. Are these all "critical" stakeholders? That depends…it will vary as we work though the workflow mapping and analysis.

Some stakeholders may have a relatively static role; for example, a couple Major Stakeholders, who we need to anticipate and meet their needs throughout process are our sponsors, our Associate Deans, and by extension the Dean of Libraries and the rest of Executive Team. Whereas, myself as representing digital preservation may have a more fluid stakeholder role ranging from Significant to Major to Critical depending upon the workflow or process.

We also do not necessarily see this as a complete list; we wholly expect to reveal (and have) other stakeholders through this process that we may not have previously contemplated.
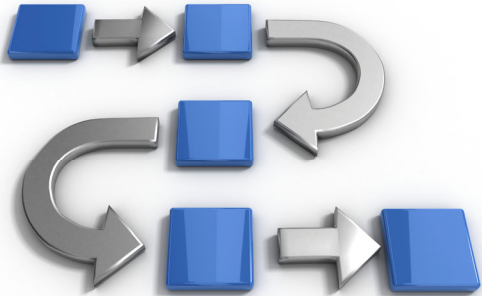
[Dan]

Having identified our stakeholders, at least initially, what did we do next?

We needed to begin to identify and differentiate our processes and workflows. This initially should be conducted from a high level point of view, identifying the activities, functions and handoffs associated with our work around acquiring and processing born digital collections, digitizing our existing materials, and addressing how we actively preserve and provide access to these digital materials.

High Level POV Metaphor…

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[Dan]

By "high level point of view" imagine looking at a map zoomed out to show Ohio State in relation to Franklin County, OH and surrounding areas, [CLICK] as opposed to be zoomed in to identify campus buildings and roads.

[CLICK] It is this broader abstraction that we are aiming for at the beginning of the process.

[Dan]

We have engaged in utilizing three techniques, to help us visualize and understand the workflows and processes that allow us to provide access to and preservation of, our born digital and digitized content. These techniques come to us from the realm of process improvement, with roots in total quality management that continue to be used in Lean and Six Sigma programs.

The SIPOC exercise provides for a very high-level view of our workflow or process. The steps in the process are aggregated up to a level of abstraction that still allows us to understand suppliers, inputs, outputs, handoffs and customers. The intent is to ensure that all processes are represented.

Following up on the SIPOC, each group will be asked to conduct a RACI to determine for each step within a process who is responsible, accountable, consulted or needs to be informed.

Finally, we will engage in brainwriting to further tease out the granularities of the steps identified within the SIPOCs.

SIPOC

S Suppliers: Provider of Inputs to the Process

I Inputs: Define the material, service &/or information…

P Process: A defined sequence of activities that xfrms I to O…

O Outputs: products, services, &/or information valuable to the Customer

C Customers: users of the Outputs produced by the Process

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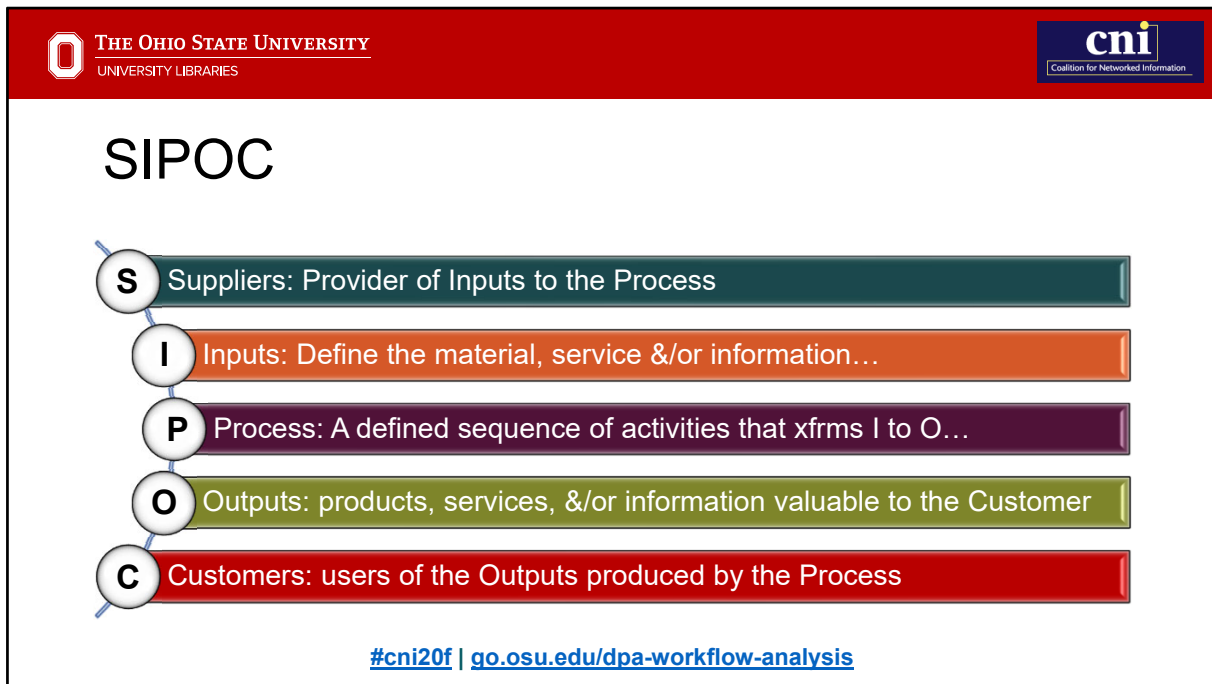
[Sue]

SIPOC simply stands for:
- Suppliers
- Inputs
- Process
- Outputs ... and
- Customers

- Suppliers are the providers of Inputs to the Process

- Inputs define the material, service and/or information that are used by the Process to produce the Outputs

- A Process is defined as a sequence of activities, that usually add value to Inputs to produce Outputs, or transform Inputs to Outputs for the Customers
  - In a traditional SIPOC, there are at a minimum four and a maximum of seven high level steps that should be constructed in a Verb--Noun structure.

- Outputs are the products, services and/or the information that is valuable to the Customer.

- The Customers are users of the Outputs produced or transformed by the process; they can be people, organizations, machines or even software.

SIPOC Diagram Methodology

Phase 1: Identify & name the high-level process

Suppliers	Inputs	Process	Outputs	Customers

• Phase 6	• Phase 5	• Phase 2
		  • First Step
		  • Step 2
		  • Step 3
		  • Step 4
		  • Step 5
		  • Step 6
		  • Last Step
			• Phase 3	• Phase 4

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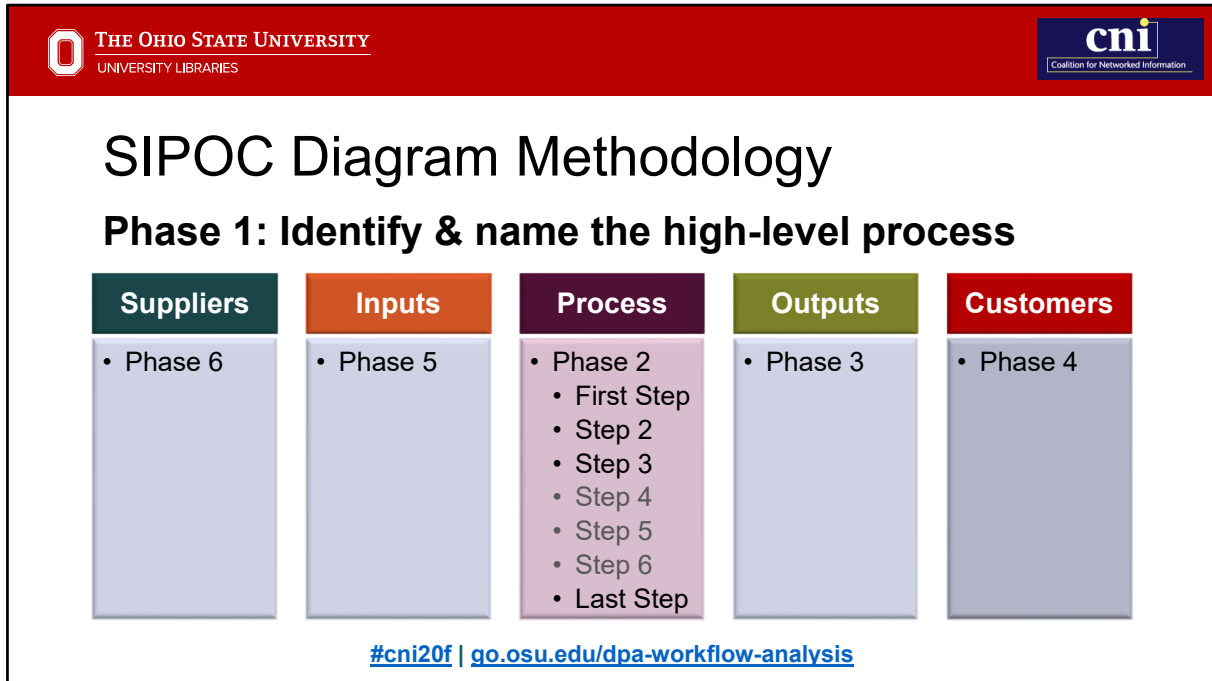
[Sue]

Conceptually a SIPOC looks like a table and it lends itself well to being documented in a spreadsheet.

However, the interesting thing about a SIPOC, is that it is not created in the linear manner that the acronym suggests.

The creation of a SIPOC, actually happens inside out:

- The first Phase is to identify and name the high-level process or workflow   [CLICK]
- This is followed by moving to the middle, and mapping it in 4 to 7 high level process steps:
    - There has to be a First Step and Last Step
    - With a minimum of two and a maximum of five additional steps [CLICK]
- Next, we move to the right-side to identify the outputs of these process steps.   [CLICK]
- Which is followed by identifying the customers that will receive these outputs.   [CLICK]
- Now we jump to the left-side, in order to identify the inputs required for each of the process steps to function properly.   [CLICK]
- Finally, we identify the suppliers of the inputs that are required by the process steps.

Once you complete a SIPOC, it can be reviewed with project sponsor(s), champion(s) and other involved stakeholders for verification.

Identifying and articulating the Process Steps may be the most difficult part of the process, as participants can get sidetracked in the granular details, instead of abstracting the steps up, to a higher more modelized level.

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University Libraries Digital Preservation & Access SIPOC Template

High Level Process (Phase 1):	Archives Digitzation			Prepared By:	Tamar Chute, Carly Dearborn, Michelle Drobik, Kevlin Haire, Laura Kissel & Halle Mares
Suppliers	**Inputs**	**Process**	**Outputs**		**Customers**
Who provides the inputs?	What inputs are provides?		What are the high level process steps?	What outputs are provided?	Who recieves a deliverable from the process?
SIPOC (Phase 6)	SIPOC (Phase 5)		SIPOC (Phase 2)	SIPOC (Phase 3)	SIPOC (Phase 4)
Patron Archives staff External funding (grant or donor)	Patron request Project proposal	First Step	Request for digitization	content identification/location information	Archives staff (paging)
Archives staff	Original materials	Step 2	Assess the original materials	Conditon analysis	Archives staff Conservation staff Digitization staff Patron
Archives staff Digitization staff Conservation staff Patron	Decision to digitize	Step 3	Prepping for digitization	Metadata documentation (spreadsheet/database) patron invoice/payments (list of materials to be digitized) send to off-site vendor	Archives staff Digitization staff Vendor Patron
Archives staff Digitization staff Vendor Patron	Original material Patron payment	Step 4	Digitize materials	Digital files Digitization metadata	Archives staff
Archives staff Digitization staff	Digitized materials	Step 5	Quality Control & Evaluation	Approved quality of product	Archives staff Digitization staff Vendor
Archives staff Digitization staff	Completed digital files and metadata	Step 6	Delivery of digitized content	Access copy Preservation copy	Patron Archives staff Library Staff
Archives staff Library Staff	Original material Digitized material	Last Step	Storage of materials	Access copy Preservation copy Stored Original Materials	Researchers (internal & external) Access & Preservation platform(s) Stacks

[Sue]

This is an example of a completed SIPOC for our Archives group—Archives Digitization

University Libraries Digital Preservation & Access SIPOC Template

High Level Process (Phase 1):	Archives Digitzation				Prepared By:	Tamar Chute, Carly Dearborn, Michelle Drobik, Kevlin Haire, Laura Kissel & Halle Mares
Suppliers	**Inputs**	**Process**	**What are the high level process steps?**	**Outputs**		**Customers**
Who provides the inputs?	What inputs are provides?			What outputs are provided?		Who recieves a deliverable from the process?
SIPOC (Phase 6)	SIPOC (Phase 5)		SIPOC (Phase 2)	SIPOC (Phase 3)		SIPOC (Phase 4)
		First Step	Request for digitization			
		Step 2	Assess the original materials			
		Step 3	Prepping for digitization			
		Step 4	Digitize materials			
		Step 5	Quality Control & Evaluation			
		Step 6	Delivery of digitized content			
		Last Step	Storage of materials			

[Sue]

However, this is where they started from:
Naming the process, … and

Starting with the First Step: Request for digitization, followed by …
Identifying the Last Step: Storage of materials

Then they fill the remaining steps in between.

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Suppliers	**Inputs**	**Process**		**Outputs**	**Customers**
Who provides the inputs?	What inputs are provides?	What are the high level process steps?		What outputs are provided?	Who recieves a deliverable from the process?
SIPOC (Phase 6)	SIPOC (Phase 5)	SIPOC (Phase 2)		SIPOC (Phase 3)	SIPOC (Phase 4)
		First Step	Request for digitization	content identification/location information	
		Step 2	Assess the original materials	Conditon analysis	
		Step 3	Prepping for digitization	Metadata documentation (spreadsheet/database) / patron invoice/payments (list of materials to be digitized) / send to off-site vendor	
		Step 4	Digitize materials	Digital files / Digitization metadata	
		Step 5	Quality Control & Evaluation	Approved quality of product	
		Step 6	Delivery of digitized content	Access copy / Preservation copy	
		Last Step	Storage of materials	Access copy / Preservation copy / Stored Original Materials	

[Sue]

After recording the Process Steps, we begin to identify Outputs of those Steps…

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SIPOC (Phase 6)	SIPOC (Phase 5)	SIPOC (Phase 2)		SIPOC (Phase 3)	SIPOC (Phase 4)
		First Step	Request for digitization	content identification/location information	Archives staff (paging)
		Step 2	Assess the original materials	Conditon analysis	Archives staff Conservation staff Digitization staff Patron
		Step 3	Prepping for digitization	Metadata documentation (spreadsheet/database) patron invoice/payments (list of materials to be digitized) send to off-site vendor	Archives staff Digitization staff Vendor Patron
		Step 4	Digitize materials	Digital files Digitization metadata	Archives staff
		Step 5	Quality Control & Evaluation	Approved quality of product	Archives staff Digitization staff Vendor
		Step 6	Delivery of digitized content	Access copy Preservation copy	Patron Archives staff Library Staff
		Last Step	Storage of materials	Access copy Preservation copy Stored Original Materials	Researchers (internal & external) Access & Preservation platform(s) Stacks

[Sue]

Which leads to identifying the Customers of those Outputs…

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University Libraries Digital Preservation & Access SIPOC Template

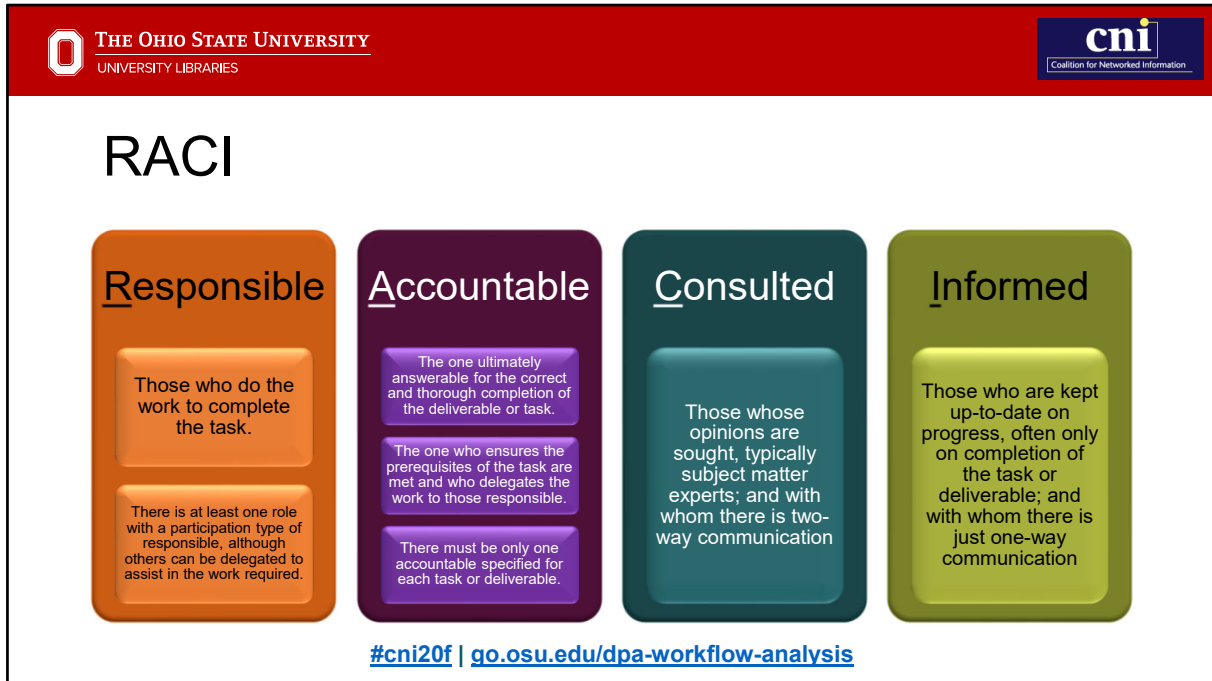| High Level Process (Phase 1):	Archives Digitzation			Prepared By:	Tamar Chute, Carly Dearborn, Michelle Drobik, Kevin Haire, Laura Kissel & Halle Mares
Suppliers	**Inputs**	**Process**		**Outputs**	**Customers**
Who provides the inputs?	What inputs are provides?		What are the high level process steps?	What outputs are provided?	Who recieves a deliverable from the process?
SIPOC (Phase 6)	SIPOC (Phase 5)		SIPOC (Phase 2)	SIPOC (Phase 3)	SIPOC (Phase 4)
	Patron request Project proposal	First Step	Request for digitization	content identification/location information	Archives staff (paging)
	Original materials	Step 2	Assess the original materials	Conditon analysis	Archives staff Conservation staff Digitization staff Patron
	Decision to digitize	Step 3	Prepping for digitization	Metadata documentation (spreadsheet/database) patron invoice/payments (list of materials to be digitized) send to off-site vendor	Archives staff Digitization staff Vendor Patron
	Original material Patron payment	Step 4	Digitize materials	Digital files Digitization metadata	Archives staff
	Digitized materials	Step 5	Quality Control & Evaluation	Approved quality of product	Archives staff Digitization staff Vendor
	Completed digital files and metadata	Step 6	Delivery of digitized content	Access copy Preservation copy	Patron Archives staff Library Staff
	Original material Digitized material	Last Step	Storage of materials	Access copy Preservation copy Stored Original Materials	Researchers (internal & external) Access & Preservation platform(s) Stacks

[Sue]

From there we jump back to the other side of the matrix and begin to identify the Inputs to the Process Steps…

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Suppliers	**Inputs**	**Process**	**What are the high level process steps?**	**Outputs**	**Customers**
Who provides the inputs?	What inputs are provides?			What outputs are provided?	Who recieves a deliverable from the process?
SIPOC (Phase 6)	SIPOC (Phase 5)		SIPOC (Phase 2)	SIPOC (Phase 3)	SIPOC (Phase 4)
Patron Archives staff External funding (grant or donor)	Patron request Project proposal	**First Step**	Request for digitization	content identification/location information	Archives staff (paging)
Archives staff	Original materials	**Step 2**	Assess the original materials	Conditon analysis	Archives staff Conservation staff Digitization staff Patron
Archives staff Digitization staff Conservation staff Patron	Decision to digitize	**Step 3**	Prepping for digitization	Metadata documentation (spreadsheet/database) patron invoice/payments (list of materials to be digitized) send to off-site vendor	Archives staff Digitization staff Vendor Patron
Archives staff Digitization staff Vendor Patron	Original material Patron payment	**Step 4**	Digitize materials	Digital files Digitization metadata	Archives staff
Archives staff Digitization staff	Digitized materials	**Step 5**	Quality Control & Evaluation	Approved quality of product	Archives staff Digitization staff Vendor
Archives staff Digitization staff	Completed digital files and metadata	**Step 6**	Delivery of digitized content	Access copy Preservation copy	Patron Archives staff Library Staff
Archives staff Library Staff	Original material Digitized material	**Last Step**	Storage of materials	Access copy Preservation copy Stored Original Materials	Researchers (internal & external) Access & Preservation platform(s) Stacks

[Sue]

Before finally, identifying the Suppliers of those Inputs, leading to a completed SIPOC.

RACI

Responsible

Those who do the work to complete the task.

There is at least one role with a participation type of responsible, although others can be delegated to assist in the work required.

Accountable

The one ultimately answerable for the correct and thorough completion of the deliverable or task.

The one who ensures the prerequisites of the task are met and who delegates the work to those responsible.

There must be only one accountable specified for each task or deliverable.

Consulted

Those whose opinions are sought, typically subject matter experts; and with whom there is two-way communication

Informed

Those who are kept up-to-date on progress, often only on completion of the task or deliverable; and with whom there is just one-way communication

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[Sue]

After completing the SIPOC we can begin to conduct the RACI exercise. This exercise allows us to identify the roles and their accompanying responsibilities that they may have for each process step. This acronym stands for:

- Responsible
- Accountable
- Consulted, and…
- Informed

We need to make a distinction between a role and individually identified people:
- A role is a descriptor of an associated set of tasks that an individual is capable of completing; these may be performed by many people, for example:
    - A role might be a scan technician
- Whereas, an individual, is one person that performs a particular role or roles.
    - Individual #1 could be a scan technician
    - While Individual #2 could be a scan technician; and maybe a conservation technician

In a RACI we define Responsible, Accountable, Consulted and Informed as follows:

- A role is "Responsible" if they are those who do the work to complete the task. There has to be at least one role that is responsible, although others can be delegated to assist in the required work.

- The role who is ultimately answerable for the correct and thorough completion of the deliverable or task, is deemed Accountable. They ensure the prerequisites of the task are met, and delegate the work to those responsible. There must be one, and only one accountable role specified for each task or deliverable.

- The first of the two optional roles are those that are Consulted. These are roles whose opinions are sought, typically subject matter experts; and with whom there is two-way communication.

- The second optional and final role is that of the Informed. These folks are kept up-to-date on progress, often only on completion of the task or deliverable; and with whom there is just one-way communication

RACI v1 Example

SIPOC Process Step	Responsible	Accountable	Consulted	Informed
Request for digitization: Patron Request	Archives staff	Collection Head		Archives paging staff
Request for digitization: Project Proposal	Archives staff	Collection Head	Preservation & Digitization	Archives paging staff
Assess the original materials	Archives staff	Collection Head	Preservation & Digitization	Archives staff Patron
Prepping for digitization	Archives staff	Collection Head	Preservation & Digitization	
Prepping for digitization: Vendor	Preservation & Digitization	Digitzation Unit Head	Archives Staff	Vendor
Digitize materials: Internal	Archives staff	Collection Head	Preservation & Digitization	
Digitize materials: Preservation & Digitzation	Preservation & Digitization	Digitzation Unit Head	Archives Staff	
Digitize materials: Vendor	Vendor	Preservation & Digitization	Archives Staff	
Quality Control & Evaluation: Internal	Archives staff	Collection Head		
Quality Control & Evaluation: Preservation & Digitzation or Vendor	Preservation & Digitization	Digitzation Unit Head		Archives staff
Delivery of digitized content	Archives staff	Collection Head		Patron
Storage of materials	Archives staff	Collection Head	Digital Preservation Publishing & Repository Services	Archives paging staff

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[Sue]

The RACI can be completed by creating a matrix where the rows are at a minimum the Process Steps from the SIPOC, but could be augmented with more granular steps, as in our example here, based upon the Archives Digitization SIPOC that we just shared. The First Step along with Steps 3, 4 and 5 have been further broken down due to divergence in actual workflow and applicable roles.

The RACI can be completed in one of two manners.

In version 1, which we see here, the columns represent R-A-C-I, and for each process the roles or persons are identified.

Each step must have <u>at least</u> one Responsible, but <u>only</u> one Accountable role or individual.

In this version one can quickly identify who is Responsible, Accountable, Consulted and Informed; particularly to verify that there is one--and only one--Accountable person or role for each step, while there may be multiple roles or people responsible, consulted or informed.

In our example, it was an initial pass that identified multiple Accountable roles for a few Process Steps, which led us to further dividing those.

RACI v2 Example

SIPOC Process Step	Internal			External					
	Archives Staff	Collection Head	Archives Paging Staff	Preservation & Digitization	Digitization Unit Head	Vendor	Digital Preservation	Publishing and Respository Services	Patron
Request for digitization: Patron Request	Responsible	Accountable	Informed						
Request for digitization: Project Proposal	Responsible	Accountable	Informed	Consulted					
Assess the original materials	Responsible Informed	Accountable		Consulted					Informed
Prepping for digitization	Responsible	Accountable		Consulted					
Prepping for digitization: Vendor	Consulted			Responsible	Accountable	Informed			
Digitize materials: Internal	Responsible	Accountable		Consulted					
Digitize materials: Preservation & Digitzation	Consulted			Responsible	Accountable				
Digitize materials: Vendor	Consulted			Accountable		Responsible			
Quality Control & Evaluation: Internal	Responsible	Accountable							
Quality Control & Evaluation: Preservation & Digitzation or Vendor	Informed			Responsible	Accountable				
Delivery of digitized content	Responsible	Accountable							Informed
Storage of materials	Responsible	Accountable	Informed				Consulted	Consulted	

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[Sue]

In version 2, the columns represent the various roles, and can be further broken down by individuals.

For each step, one indicates if the role or individual is Responsible, Accountable, Consulted and/or Informed.

In this version, one can see how a role or an individual's participation changes throughout the process as well as the aggregate of their responsibilities.

Both versions provide us with valuable insight into the workflow and its processes.

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[Sue]

The RACI is an important bridge to the Brainwriting process. It helps us identify who needs to be in the proverbial room for the Brainwriting exercise.

We are using the term *brainwriting* not *brainstorming*. What is the difference? In a brainstorming session we approach the exercise with an open mind where the sky is the limit, trying to get all the potential ideas on the table from various points of view.

However, the objective in front of us, is to document the now, and what we are currently doing; not what we want to be doing, regardless of whether we are doing the right thing or not. Brainwriting allows us to dive deeper beyond those four to seven process steps and examine our processes with a finer granularity.

There are various Brainwriting methods available, such as 3-6-5, but we decided on a simplified version. We selected this method with the following benefits in mind:
- Fast and efficient.
- Less social anxiety and competing personalities. And…
- Avoiding the group-think consensus.

This process would ensure that all ideas were recorded by the individual who thought of them, additionally eliminating the recorder's bias and control.

[Sue]

If we were to conduct this exercise in a traditional venue, we would be in a conference room with a whiteboard, and the folks in the room would have pads of Post-It notes in front of them. We would ask them to itemize all the micro-processes and activities involved in each of the Process Steps identified in the SIPOC, on a series of Post-It notes and then have them all placed on the whiteboard.

However, we are currently in the throws of COVID-19 related restrictions that only allow us to meet virtually. Therefore, we looked for virtual whiteboard tools in order to accomplish this activity.

Having settled upon Google's Jamboard as a no-cost alternative, we quickly ran into some limitations. Our problem was two-fold:

1. The tool itself, whether Jamboard or other like tools, are cumbersome for the average users
2. There is no way for the individuals to create their set of Post-It notes, before sharing them; they are right out there in front of everyone, and folks start reacting to them

without doing their own brainwriting, thus stifling the progress.

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Brainwriting Example

		Workflow: Archives Digitization											
		Channel: 01-01 Patron Request - Photos											
First Step		Step 2		Step 3		Step 4		Step 5		Step 6		Last Step	
Request for digitization	Notes or Dependencies	Assess the original materials	Notes or Dependencies	Prepping for digitization	Notes or Dependencies	Digitize materials	Notes or Dependencies	Quality Control & Evaluation	Notes or Dependencies	Delivery of digitized content	Notes or Dependencies	Storage of materials	Notes or Dependencies
Patron request	May be via email, phone or in person	Determine if materials have already been digitized or not	DN: If Yes, it is just sent to patron; are they charged for it?	Add order into Photos Order database (UA only)		Internal: Scan to requested file format	We do not have a clear indicator of what we do with the scanned image once supplied to the patron. For example, do we add it to an internal DB for re-use? Where would this step	Permanent Archives staff review scans		Patron sent scans typically via Box link		Preservation & Digitization returns materials to Archives	
Identify patron use		Determine if materials can be digitized	DN: If No; then what?	Give photo to student with information about scan requirements		Preservation & Digitization scan/image to TIFF and files transferred						Vendor returns materials to Archives	
		Evaluate condition	DN: If No; then what?									Materials returned to stacks	
		Evaluate rights	DN: If No; then what?			Vendor scans typically transferred via external media, that is then transferred to the K-Drive.	Photo scans rarely sent to vendor						
		Determine tools to be used											
		Determine if it can be done in house	May need to consult w/Preservation & Digitization										
		If it needs to be outsourced determine cost to patron	Need to consult w/Preservation & Digitization										
			DN: Any charge for inhouse?										
		Charge patron for the digitization											

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[Sue]

So, we went back to the drawing board—pun intended. We constructed a spreadsheet option that would allow each team individual to itemize the steps, as well as identify general notes and/or dependencies. Additionally, as Dan and I review these, we're adding our own notes and questions for clarification.

It is from these spreadsheets that we will begin to diagram visualized process maps and workflows.

[Dan]

Once we have our SIPOCs, RACIs and Brainwriting complete, we will be able to analyze the data, along with validating and confirming it.

Based upon the validated/confirmed results, we will be able to develop the process maps with accurate information about the steps within the process, the roles and individuals involved, and where there are intersections and hand-offs, as well as missed opportunities.

Process Map Example

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[Dan]

Sue and I are taking the information gathered in the Brainwriting exercise to begin to visualize the actual workflows. As with the Brainwriting exercise, we had originally hoped to use online tools for drawing the visualizations of the workflows, but we ran into the same issue of them being time consuming and cumbersome for the average user. Therefore, we have gone old-school as can be seen here with hand drawn visualizations. Once these have been validated with the particular groups, we will turn these over to someone competent with drawing tools to finalize the visualizations in Vizio.

The ultimate goal will be to assemble a larger visualization of all of the processes, identifying not only the steps within the processes, the roles and individuals involved, and where there are intersections and hand-offs, but the organizational redundancies, gaps and best practices. It is the intention that this will allow us to chart a more holistic, cohesive approach to acquiring, accessioning and processing born digital materials, digitizing existing content, then actively preserving, and providing access to this digital content.

[Dan]

As a recap of the steps in this overall project:

- We will be identifying all existing processes related to providing access to and preservation of our born digital and digitized content.
- We are utilizing the SIPOC, RACI and Brainwriting tools to complete the list of process steps, capturing roles, individuals and handoffs…
- …leading to the development of a process map.
- The draft process map will be shared and validated with the stakeholders, and presented to our Digital Preservation and Access work group for final considerations before sharing with the Sponsors and greater University Libraries' community.

Lessons Learned Thus Far…

Challenges

- Pivot
- Limitations of not "being in the same room"
- Getting hung up on details
- "Didn't we already discuss this?"
- Getting hung up on what they are seeing

Benefits

- Created opportunity to contemplate processes for the first time
- Encourage systems thinking
- Consolidated documentation
- Surfaced documentable gaps that we kind of knew were there
- Pivot

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[Dan]

This is an ongoing project. You can track our progress at the go-link shared on these slides.

As with any project there are challenges and benefits that we can identify as we progress.

On the Challenges front, we had to pivot early on as the pandemic disrupted how we intended to conduct this exercise, and we had to determine ways to transform a typically tactile, face-to-face task into one conducted in a virtual environment.

The SIPOC activity can be extremely challenging in getting participants to focus on modeling the process in a series of limited macro-steps, and not get caught up in the granular minutiae.

And then transitioning them back at a later date to focus on the micro-processes and minutiae, inevitably leading to the response, "Didn't we already discuss this? And you didn't want this detail?" Yes, but now is the time to discuss it.

And as discussed, by utilizing tools within the virtual environment, instantly putting it into a shared spreadsheet or on a Jamboard, the fact that it is right there in front of everyone,

sometimes stifles the discussion.

On the flipside, we have been told by many participants, that this has created the opportunity to examine, contemplate and interrogate their process and workflows for the first time. It has encouraged systems thinking among our Libraries' colleagues.

While we have had to revise our approach for data collection as we have progressed, we now have the SIPOC, RACI and Brainwrting consolidated in a single workbook for each workflow.

We have been able to document gaps that we kind of knew were there, as well as ones we didn't.

Finally, we learned that the need to be able to pivot is a challenge and not an obstacle.

Thank you!

[Dan]

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- SIPOC Template (go.osu.edu/ul-sipoc-template)
- *SIPOC* in Wikipedia
    - https://en.wikipedia.org/wiki/SIPOC
- *Lean Six Sigma Technique Tips* – SIPOC by Pyzdek Institute
    - https://www.youtube.com/watch?v=AlN7eNOBPzg (7 minutes)
- *How to complete the SIPOC Diagram* by Six Sigma Development Solutions Inc.
    - https://youtu.be/x8_I19PJBY8 (1 minute)
- *SIPOC* by LeanOhio
    - https://www.youtube.com/watch?v=_2_Ijfg4EVk (4 minutes)
- *SIPOC Diagram explained (with example)* by Bzhwen A Kadir
    - https://www.youtube.com/watch?v=j9oWnnbtkOo (7 minutes)

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