

Metadata Specification, Workflow, and Curation

METADATA COLLECTION USING SURVEY123 CONNECT

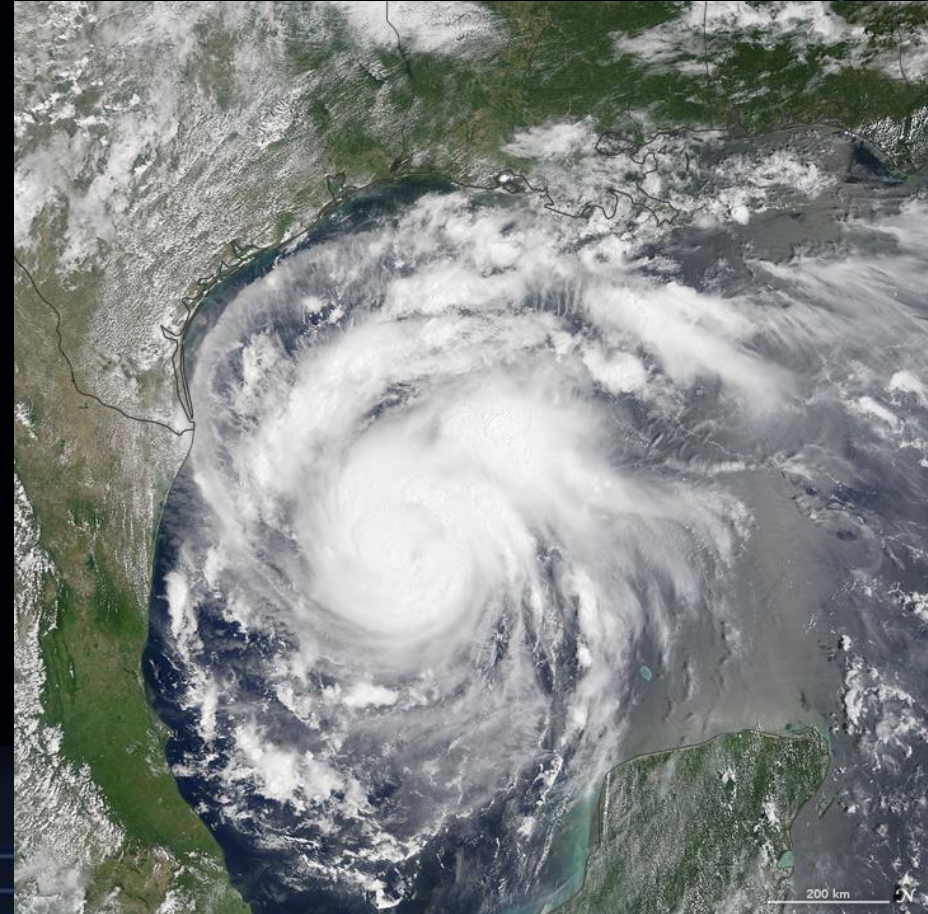
Paul Buschow
MAGIC Team
Center for Space Research



Metadata Collection Using Survey123 Connect

Topics for Today

- **Metadata Specification**
- Survey123 Connect
- Workflow
- Curation



Hurricane Harvey, August 24, 2017

Metadata Specification

What is metadata?

"Metadata is a Love Note to the Future"

-Rachel Lovinger, 2015

Metadata Specification

What is metadata?

Data about data?

"Metadata is structured information that describes, explains, locates, or otherwise makes it easier to retrieve, use, or manage an information resource."

-National Information Standards Organization (NISO)

Metadata Specification

- Heavily Influenced by the FGDC Standard
 - Simplified descriptive elements
 - Reduces input time burden

- Controlled Terms
 - Used as pick lists in application user interfaces
 - Standardizes vocabulary, when possible
 - **Examples**
 - **Boundary type** (counties, cities, aquifers, MUDs, TxDOT urbanized areas, ...)
 - **Contact Role** (metadata creator, submitter, creator, steward, ...)
 - **Organization** (TxGIO, USGS, TCEQ, TDEM, Texas Senate, Texas Trinity River Authority, +2,000 more...)

Metadata Specification

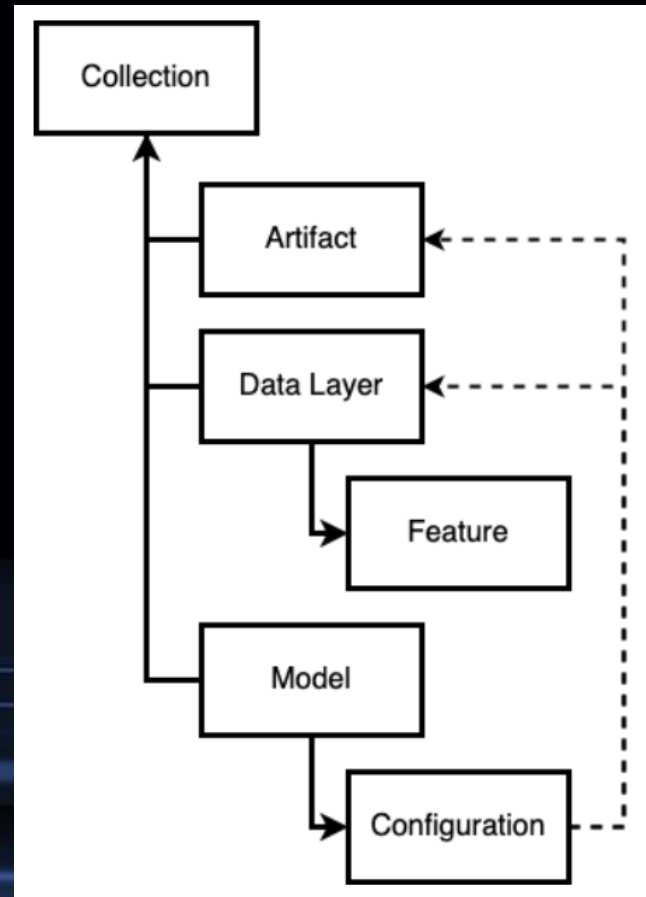
- Metadata Model: Tiered Structure
- Metadata Model: Descriptive field count by level

Collection: 16

Artifact: 45

Data Layer: 54

Model: 42



Metadata Collection Using Survey123 Connect

Topics for Today

- Metadata Specification
- **Survey123 Connect**
- Workflow
- Curation



Bethel, Alaska Village, 2019

Survey Design, Share & Manage Process

ArcGIS Pro – Create Feature Class & Publish (desktop)

Survey123 Connect – Build Survey & Publish (desktop)

Survey123 Website – Survey Collaboration, Analysis & Curation

ArcGIS Enterprise Portal – Survey Management & Storage

Survey Design Process – ArcGIS Pro

The screenshot displays the ArcGIS Pro interface with the following components:

- Map View:** Aerial imagery with two yellow polygons overlaid. A scale bar shows 1:1,370,541. Coordinates are 18,166,691.83W 8,650,011.31N m. Selected Features: 0.
- Table View:** A table with columns: OBJECTID, Id, GlobalID, title, description, _creator. It contains two rows of data.
- Geoprocessing Panel:** 'Create Relationship Class' tool. Parameters include:
 - Origin Table: [Dropdown]
 - Destination Table: [Dropdown]
 - Output Relationship Class: [Dropdown]
 - Relationship Type: Simple
 - Forward Path Label: [Text Box]
 - Backward Path label: [Text Box]
 - Message Direction: None (no messages propagated)
 - Cardinality: One to one (1:1)
 - Relationship class is attributed:
 - Origin Primary Key: [Text Box]
 - Origin Foreign Key: [Text Box]
 - Destination Primary Key: [Text Box]
 - Destination Foreign Key: [Text Box]
- Share As Web Map Panel:** Shows 'demo_map' and 'Messages' (No errors or warnings found). Buttons for Analyze, Share, and Jobs are visible.
- Contents Panel:** Lists 'demo_map' with sub-items: World Boundaries and Places, NNA_Input_Form, World Imagery, Standalone Tables, Repeat_Table.

OBJECTID	Id	GlobalID	title	description	_creator
1	7	<Null> [FC147689-DA9B-4DA0-807E-15ADF866E5A5]	Demo input data 10 A...	Demo input data 10 A...	Demo ir
2	8	<Null> [3F6D47A7-B3FA-4D8C-8D2B-89E3DFE30222]	10 Aug Demo Data	10 Aug Demo Data	10 Aug

Web map shared successfully on 10/24/2023 6:24:12 PM. Manage the web map

Survey Design, Share & Manage Process

ArcGIS Pro – Create Feature Class & Publish (desktop)

Survey123 Connect – Build Survey & Publish (desktop)

Survey123 Website – Survey Collaboration, Analysis & Curation

ArcGIS Enterprise Portal – Survey Management & Storage

Survey Design Process – Survey123 Connect



The screenshot displays the ArcGIS Survey123 Connect application window. The title bar reads "ArcGIS Survey123 Connect". Below the title bar is a green header area with the text "My Survey Designs" and a search icon. A dark green bar below the header contains a "+ New survey" button, a search bar with a magnifying glass icon, and a refresh icon. The main area of the application is a grid of survey design templates, each represented by an icon and a text label. The templates are arranged in three rows and seven columns, with the last two cells in the third row being empty.

Multi-GeoPoints Esri-SS Portal	Form 11	18 Oct URL test	URL MultiGeoPoin...	URL MultiGeopoin...	URL Change Esri Sample	URL Change Tests
Website Sample Test	NNA Survey Sample	Form 10	Form 8	NNA Adv Geometry Test	Demo of Features	Test SStories Website 4
lamar_test	s123_metadata_form_example					

Survey Design Process – Survey123 Connect

New Survey - ArcGIS Survey123 Connect

New Survey

Title

GIS Forum 2023

Create a new survey from:

Blank

File

Organization

Feature services

Surveys

Esri

Templates

Samples

Community ⓘ

GIS

GIS_Forum_2023_WFL1

Modified: 10/24/23 6:24 PM

Owner: paulie

Access: org

☑ Create survey

⊗ Cancel

Survey Design Process – Survey123 Connect

The screenshot displays the ArcGIS Survey123 Connect application window. The title bar reads "ArcGIS Survey123 Connect". The main header area shows "GIS Forum 2023" and a sub-header "GIS_Forum_2023_WFL1".

On the left side, there is a vertical toolbar with the following icons and labels:

- XLSForm
- Update
- Files
- Tools
- Publish

The central area contains a form design for a "Polygon" feature. The form includes the following fields:

- Id**: A text input field.
- title**: A text input field.
- description**: A text input field.
- _creator**: A text input field.
- contact_name**: A text input field.

At the bottom of the application, there is a navigation bar with the following icons and labels:

- Form (highlighted with a yellow box)
- Details
- Options
- Map
- Media
- Linked Content
- Scripts
- Schema

A checkmark icon is visible in the bottom right corner of the form design area.

Survey Design Process – Survey123 Connect

The screenshot displays the ArcGIS Survey123 Connect application interface. The title bar indicates the application name and standard window controls. The main header shows the project name "GIS Forum 2023".

Left Sidebar: Contains navigation icons for XLSForm, Update, Files, Tools, and Publish.

Preview map section:

- Zoom level:** A slider set to 3.
- Coordinate format:** A dropdown menu set to "Decimal Degrees (d.dc)".
- Map:** A satellite-style map of Alaska with a blue location pin. The coordinates at the bottom are 60.891°N 162.478°W.

Detailed map section:

- Zoom level:** A slider set to 11.
- Latitude:** A text input field containing 60.89112883566895.
- Longitude:** A text input field containing -162.4782237832792.
- Coordinate format:** A dropdown menu set to "Decimal Degrees (d.dc)".
- Map:** A detailed topographic map of the Kasigluk and Nunapitchuk areas in Alaska. A house icon is placed on the Nunapitchuk ANVSA. The coordinates at the bottom are 60.891129°N 162.478224°W.

Bottom Navigation Bar: Includes icons for Form, Details, Options, Map (highlighted), Media, Linked Content, Scripts, and Schema.

Survey Design Process – Survey123 Connect

The screenshot displays the ArcGIS Survey123 Connect application window. The title bar reads 'ArcGIS Survey123 Connect'. The main header is 'GIS Forum 2023'. The interface is divided into several sections:

- Left Panel:** Contains navigation icons for XLSForm, Update, Files, Tools, and Publish.
- Layers/Tables:** Shows two items: 'NNA_Input_Form (Feature Layer)' and '+- Repeat_Table (Table)'. The 'NNA_Input_Form' is selected.
- Fields:** Lists 59 fields for the selected layer, including 'id', 'title', 'description', 'f_creator', 'contact_name', 'contact_affiliation', 'contact_affiliation_other', 'contact_dept', 'contact_email', 'contact_phone', 'contact_role', 'contact_role_other', 'accessibility', 'completeness', 'data_stage', 'date_last_updated', 'keyword_term', 'keyword_vocab', 'keyword_vocab_other', and 'horiz_coord_sys'.
- Field Properties:** Shows properties for the selected 'id' field, such as Alias (Polygon), Type (geoshape), Appearance, Esri Type (esriFieldTypeGeometry), Length (255), Required (No), Read Only (No), Default, Constraint, Relevant, Calculate, and Nodeset (/GIS Forum 2023/NNA Input Form polygon).
- Bottom Panel:** Contains navigation icons for Form, Details, Options, Map, Media, Linked Content, Scripts, and Schema (which is highlighted).

Survey Design Process – Survey123 Connect

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	type	name	label	hint	guidance_hint	appearance	required	required_message	readonly	default	calculation	constraint	constraint_message	relevant	choice_fil
2															
3	geoshape	NNA_Input_Form_polygon	Polygon												
4	integer	id	Id												
5	text	title	title												
6	text	description	description												
7	text	f_creator	_creator												
8	text	contact_name	contact_name												
9	text	contact_affiliation	contact_affiliation												
10	text	contact_affiliation_other	contact_affiliation_other												
11	text	contact_dept	contact_dept												
12	text	contact_email	contact_email												
13	text	contact_phone	contact_phone												
14	text	contact_role	contact_role												
15	text	contact_role_other	contact_role_other												
16	text	accessibility	accessibility												
17	text	completeness	completeness												
18	text	data_stage	data_stage												
19	dateTime	date_last_updated	date_last_updated												
20	text	keyword_term	keyword_term												
21	text	keyword_vocab	keyword_vocab												
22	text	keyword_vocab_other	keyword_vocab_other												
23	text	horiz_coord_sys	horiz_coord_sys												
24	text	horiz_datum	horiz_datum												
25	text	spatial_data_type	spatial_data_type												
26	text	spatial_data_type_other	spatial_data_type_other												
27	text	boundary_type	boundary_type												
28	text	boundary_unit_id	boundary_unit_id												
29	text	spatial_extent	spatial_extent												
30	text	update_frequency	update_frequency												
31	text	update_frequency_other	update_frequency_other												
32	text	use_constraint	use_constraint												
33	text	custody_chain	custody_chain												

Survey Design Process – Survey123 Connect

A2

	type	name	label	hint	guidance_hint
53	text	attribute_accuracy	attribute_accuracy		
54	text	attach_link	attach_link		
55	text	reserve_str1	reserve_str1		
56	integer	reserve_int1	reserve_int1		
57	text	reserve_str2	reserve_str2		
58	integer	reserve_int2	reserve_int2		
59	decimal	reserve_dbl1	reserve_dbl1		
60	decimal	reserve_dbl2	reserve_dbl2		
61	image	NNA_Input_Form_image	Image		
62					
63	begin repeat	Repeat_Table	Repeat_Table		
64					
65	integer	oid_	OID_		
66	integer	id	Id		
67	text	attribute_name	attribute_name		
68	text	attribute_description	attribute_description		
69	text	attribute_domain_type	attribute_domain_type		
70	text	attribute_codeset_name	attribute_codeset_name		
71	text	attribute_codeset_url	attribute_codeset_url		
72	text	attribute_value_range_min	attribute_value_range_min		
73	text	attribute_value_range_max	attribute_value_range_max		
74	text	attribute_domain_value	attribute_domain_value		
75	text	attribute_domain_value_de	attribute_domain_value_description		
76	integer	field	Field		
77	integer	field1	Field1		
78					
79	end repeat		Repeat_Table		
80					
81					
82					
83					
84					
85					

survey choices settings Version Question types Appearances

Survey Design Process – Survey123 Connect

A few hours later...

Survey Design Process – Survey123 Connect

	A	B	C	D	N	O	
	type	name	label	hint	message	relevant	choice_filter
1	begin group	page_0	Map and Attachments	<p>Testing Note: Limit			
2	note		Testing Note	<p>Limit your uploads to			
3	note		.				
4	note						
5	geoshape	NNA_Input_Form_polygon	Map: Study Area of Interest (Draw a polygon)	<p>Locations: Ex. Nuna			
6	file	NNA_Input_Form_file	File Attachment (generic)	<p>Find and attach from			
7	image	NNA_Input_Form_image	Image Attachment	<p>Find and attach from			
8	audio	NNA_Input_Form_audio	Audio Attachment	<p>Find and attach from			
9							
10	end group						
11							
12	begin group	page_1	Survey Questions (Controlled Lists, Conditional Visibility)				
13							
14	text	title	Title	<p>A name given to the			
15	text	description	Description	<p>An account of the data			
16	text	contact_name	Contact Name	<p>Name of a person who			
17	select_one list_data_layer_contact_affiliation_or_other	contact_affiliation	Contact Affiliation	<p>Organizational affiliation			
18	text	contact_affiliation_other	Other Contact Affiliation			selected(\${contact_affiliation}, 'other')	
19	select_multiple list_data_layer_contact_role_or_other	contact_role	Contact Role	<p>(Recommended) Select		string-length(\${contact_name}) > 0	
20	text	contact_role_other	Other Contact Role			selected(\${contact_role}, 'other')	
21	select_one list_data_layer_accessibility	accessibility	Accessibility	<p>How accessible is the			
22	select_one list_data_layer_completeness	completeness	Completeness	<p>A assessment of the			
23	select_one list_data_layer_data_stage	data_stage	Data Stage	<p>Is the data in a stage			
24	dateTime	date_last_updated	Date Last Updated	<p>The date the digital			
25	select_one list_data_layer_keyword_vocab_or_other	keyword_vocab	Keyword Vocabulary	<p>(Recommended) Vo			
26	text	keyword_vocab_other	Other Keyword Vocabulary	<p>Internet address to			

< >

survey

choices

settings

Version

Question types

Appearances

Field types

Reference

Reserved

+

:

<

—

>

Survey Design Process – Survey123 Connect

	type	name	label	hint	message	relevant	choice_filter
25	select_one list_data_layer_keyword_vocab_or_other	keyword_vocab	Keyword Vocabulary	<p>(Recommended) Vo			
26	text	keyword_vocab_other	Other Keyword Vocabulary	<p>Internet address to y			
27	select_one list_data_layer_update_freq_or_other	update_frequency	Update Frequency	<p>How often the conte			
28	text	update_frequency_other	Other Update Frequency			selected(\${update_frequency}, 'other')	
29	select_multiple list_data_layer_use_constraint	use_constraint	Use Constraint (all that apply)	<p>Constraints or restri			
30							
31	end group						
32							
33	begin group	page_2	Repeatable Entries (Ex. Multiple House	<p>Metadata elements			
34	begin repeat	Repeat_Table	and Conditional Field Wizard (Question visibility is predicated				
35							
36	text	attribute_name	Item Name	<p>Name of the attribut			
37	text	attribute_description	Item Description	<p>Description of the it		string-length(\${attribute_name}) > 0	
38	select_one list_page_2_attribute_domain_type	attribute_domain_type	Item Domain Type	<p>Type of domain for v		string-length(\${attribute_name}) > 0	
39	text	attribute_codeset_name	Item Code Set Name	<p>Name of coded valu		selected(\${attribute_domain_type}, 'code set')	
40	text	attribute_codeset_url	Item Code Set URL	<p>URL reference or ser		selected(\${attribute_domain_type}, 'code set')	
41	text	attribute_value_range_min	Attribute Value Range Maximum	<p>Max Value. A range		selected(\${attribute_domain_type}, 'range')	
42	text	attribute_value_range_max	Attribute Value Range Minimum	<p>Min Value. A range		selected(\${attribute_domain_type}, 'range')	
43	text	attribute_domain_value_descr	Attribute Domain Value Description	<p>Description of the va		string-length(\${attribute_name}) > 0	
44	text	attribute_domain_value	Attribute Domain Value	<p>Valid value for the it		string-length(\${attribute_name}) > 0	
45							
46	end repeat		Repeat_Table				
47	end group						
48							
49							
50							

survey

choices

settings

Version

Question types

Appearances

Field types

Reference

Reserved

Survey Design Process – Survey123 Connect

A2 : *f_x* list_data_layer_contact_affiliation_or_other

	A	B	↕
2278	list_data_layer_update_freq_or_other	Realtime	Realtime
2279	list_data_layer_update_freq_or_other	Near-Realtime	Near-Realtime
2280	list_data_layer_update_freq_or_other	Hourly	Hourly
2281	list_data_layer_update_freq_or_other	Daily	Daily
2282	list_data_layer_update_freq_or_other	Weekly	Weekly
2283	list_data_layer_update_freq_or_other	Monthly	Monthly
2284	list_data_layer_update_freq_or_other	Quarterly	Quarterly
2285	list_data_layer_update_freq_or_other	Biannually	Biannually
2286	list_data_layer_update_freq_or_other	Annually	Annually
2287	list_data_layer_update_freq_or_other	2 or More Years	2 or More Years
2288	list_data_layer_update_freq_or_other	Rarely Needed	Rarely Needed
2289	list_data_layer_update_freq_or_other	None	None
2290	list_data_layer_update_freq_or_other	Unknown	Unknown
2291	list_data_layer_update_freq_or_other	other	Other
2292	list_page_2_service_endpoint_type	REST	REST
2293	list_page_2_service_endpoint_type	SOAP	SOAP
2294	list_data_layer_spatial_data_type_or_other	vector - point	vector - point
2295	list_data_layer_spatial_data_type_or_other	vector - line	vector - line
2296	list_data_layer_spatial_data_type_or_other	vector - polygon	vector - polygon
2297	list_data_layer_spatial_data_type_or_other	vector - multipoint	vector - multipoint
2298	list_data_layer_spatial_data_type_or_other	vector - multipatch	vector - multipatch
2299	list_data_layer_spatial_data_type_or_other	raster - imagery	raster - imagery
2300	list_data_layer_spatial_data_type_or_other	raster - elevation	raster - elevation
2301	list_data_layer_spatial_data_type_or_other	raster - discreet	raster - discreet
2302	list_data_layer_spatial_data_type_or_other	raster - continuous	raster - continuous
2303	list_data_layer_spatial_data_type_or_other	raster - other	raster - other

< > survey choices settings Version Question types Appearances Field types ... +

Ready Scroll Lock Accessibility: Investigate

Survey Design Process – Survey123 Connect

The screenshot displays the ArcGIS Survey123 Connect application window. The title bar reads "ArcGIS Survey123 Connect". The main header is "GIS Forum 2023".

Layers/Tables: 2

- NNA_Input_Form (Feature Layer)
- + Repeat_Table (Table)

Fields: 59

NNA_Input_Form_polygon
id
title
description
f_creator
contact_name
contact_affiliation
contact_affiliation_other
contact_dept
contact_email
contact_phone
contact_role
contact_role_other
accessibility
completeness
data_stage
date_last_updated
keyword_term
keyword_vocab
keyword_vocab_other
horiz_coord_sys

Field Properties

Alias	Polygon
Type	geoshape
Appearance	
Esri Type	esriFieldTypeGeometry
Length	255
Required	No
Read Only	No
Default	
Constraint	
Relevant	
Calculate	
Nodeset	/GIS Forum 2023/NNA Input Form polygon

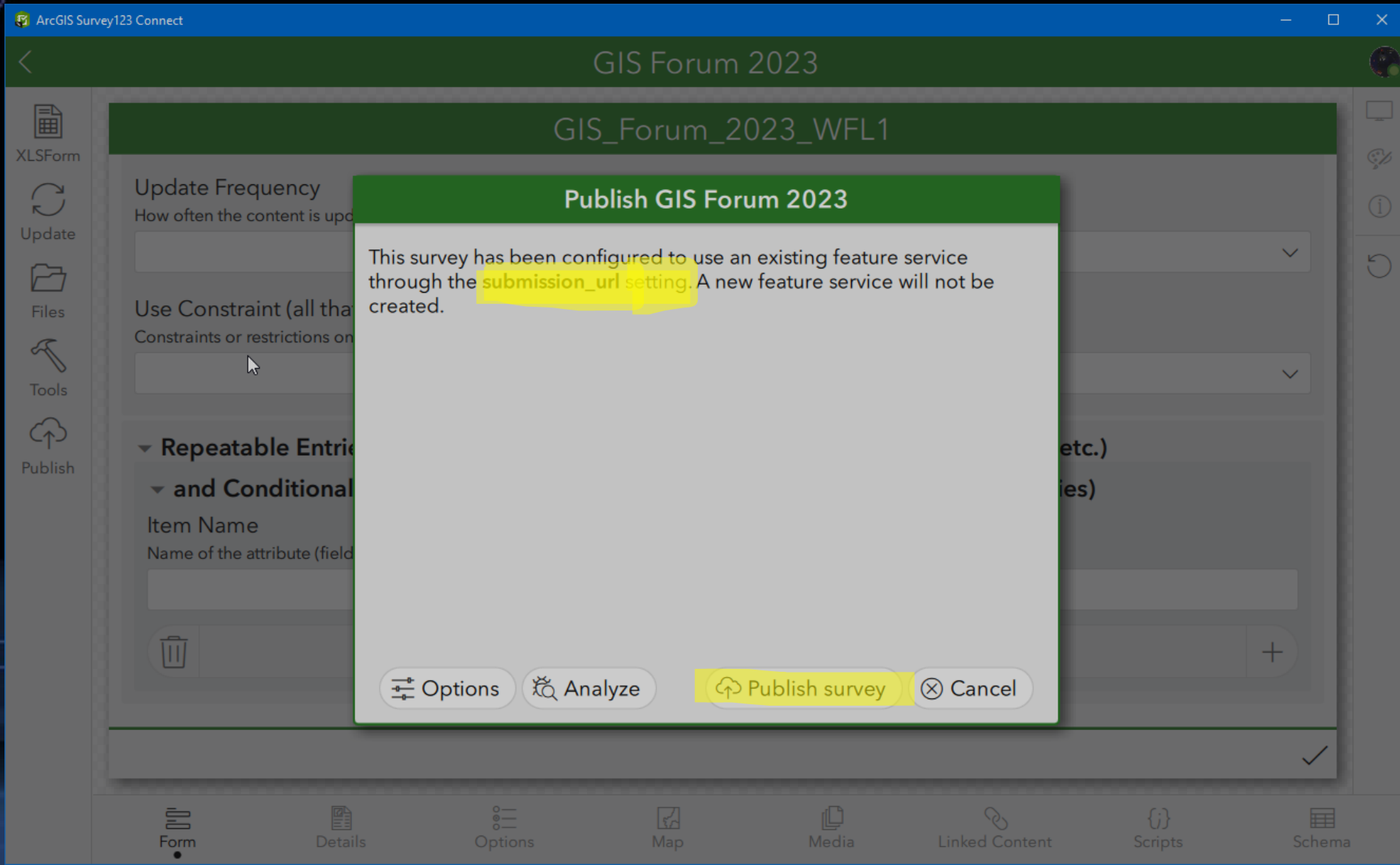
Left Panel (Navigation):

- XLSForm
- Update
- Files
- Tools
- Publish** (highlighted in yellow)

Bottom Panel (Navigation):

- Form
- Details
- Options
- Map
- Media
- Linked Content
- Scripts
- Schema

Survey Design Process – Survey123 Connect



Survey Design Process – Survey123 Connect

The screenshot shows the ArcGIS Survey123 Connect interface. A dialog box titled "Publishing GIS Forum 2023" is displayed in the center, listing the following steps:

- Creating folder Survey-GIS Forum 2023
- Getting service item information
- Getting feature service information
- Creating web form
- Creating form item
- Refreshing item information
- Creating web map

At the bottom of the dialog box, it says "Publishing complete" and has an "OK" button.

The background interface shows the "GIS Forum 2023" project with the following settings:

- Update Frequency: How often the content is updated
- Use Constraint (all the Constraints or restrictions on
- Repeatability: Repeatable Entries and Conditional
- Item Name: Name of the attribute (field

The bottom navigation bar includes icons for Form, Details, Options, Map, Media, Linked Content, Scripts, and Schema.

Survey Design, Share & Manage Process

ArcGIS Pro – Create Feature Class & Publish (desktop)

Survey123 Connect – Build Survey & Publish (desktop)

Survey123 Website – Survey Collaboration, Analysis & Curation

ArcGIS Enterprise Portal – Survey Management & Storage

Survey Share Process – Survey123 Website

The screenshot displays the ArcGIS Survey123 web interface. At the top, the navigation bar includes 'ArcGIS Survey123', 'My surveys', 'Organization', and 'Help'. On the right, it shows the 'Portal URL: https://sitestories.io/portal' with a 'Reset' button and the user profile 'Paul'. Below the navigation bar is a green header with 'My Surveys' and a 'New survey' button. A search bar is also present. The main content area is titled 'All surveys' and shows a grid of 8 survey cards. Each card features a blue icon representing a survey form, a record count, the survey title, the creator's name, and a set of action icons (edit, lock, view, list, and more).

Survey Title	Records	Created by
GIS Forum 2023	2	paulie
Multi-GeoPoints Esri-SS Portal	1	paulie
Form 11	3	paulie
18 Oct URL test	1	paulie
URL MultiGeoPoint Test	0	paulie
S123 Web Designer Test	0	paulie
URL MultiGeopoint Test5	0	paulie
URL Change Tests	3	paulie

Survey Share Process – Survey123 Website

ArcGIS Survey123 Connect

GIS Forum 2023

GIS_Forum_2023_WFL1

Polygon

Id

title

description

_creator

contact_name

Form Details Options Map Media Linked Conte

This screenshot shows the Survey123 Connect mobile application interface. The top bar is blue with the text 'ArcGIS Survey123 Connect'. Below it is a green header with 'GIS Forum 2023'. The main content area is titled 'GIS_Forum_2023_WFL1' and contains a form with several fields: 'Polygon' (with a map icon), 'Id', 'title', 'description', '_creator', and 'contact_name'. A left sidebar contains icons for 'XLSForm', 'Update', 'Files', 'Tools', and 'Publish'. At the bottom, there is a navigation bar with icons for 'Form', 'Details', 'Options', 'Map', 'Media', and 'Linked Conte'.



Paul

GIS_Forum_2023_WFL1

Map and Attachments

Testing Note
Limit your uploads to <10 MB using Survey123 Field app on phone/tablet, and <20 MB using your PC or laptop.

Map: Study Area of Interest (Draw a polygon)
Locations: Ex. Nunap, or Bethel, Alaska.

Find address or place

Kasigluk Nunapitchuk

Kasigluk ANVSA Nunapitchuk ANVSA

Atmaur

Esri, USGS | State of Alaska, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, EPA, NP... Powered by Esri

No geometry captured yet.

This screenshot shows the Survey123 website interface. The top bar is green with the text 'GIS_Forum_2023_WFL1'. The main content area is titled 'Map and Attachments' and contains a 'Testing Note' and a 'Map: Study Area of Interest (Draw a polygon)' section. The map section includes a search bar, a map of Alaska with a polygon drawn around the Kasigluk and Nunapitchuk areas, and a legend. The bottom of the page shows the Esri logo and the text 'Powered by Esri'.

Survey Share Process – Survey in Action

Map: Study Area of Interest (Draw a polygon)

Locations: Ex. Nunap, or Bethel, Alaska.

Find address or place

Zoom out

Kasigluk ANVSA

Nunapitchuk ANVSA

Atmaur

Esri, USGS | State of Alaska, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, EPA, NP... Powered by Esri

No geometry captured yet.

Survey Share Process – Survey in Action

Attachments


File Attachment (generic)

Find and attach from your native device.

Drop file here or select file


Image Attachment

Find and attach from your native device.

Drop image here or select image 

Audio Attachment

Find and attach from your native device.

Drop audio here or select audio 



Survey Share Process – Survey in Action

Map Geoshape & Attachments – Excel Form

	A	B	C	D
	type	name	label	hint
1				
2	begin group	page_0	Map and Attachments	<p>Testing Note: Limit your uploads to <10 MB usi
3	note		Testing Note	<p>Limit your uploads to <10 MB using Survey123 F
4	note		.	
5	geoshape	NNA_Input_Form_polygon	Map: Study Area of Interest (Draw a pc	<p>Locations: Ex. Nunap, or Bethel, Alaska. </p>
6	file	NNA_Input_Form_file	File Attachment (generic)	<p>Find and attach from your native device. </p>
7	image	JA_Input_Form_image	Image Attachment	<p>Find and attach from your native device. </p>
8	audio	NNA_Input_Form_audio	Audio Attachment	<p>Find and attach from your native device. </p>
9				
10	end group			
11				
12	begin group	page_1	Survey Questions (Controlled Lists, Conditional Visibility)	
13				
14	text	title	Title	<p>A name given to the data layer.</p>
15	text	description	Description	<p>An account of the data layer. The description m
16	text	contact_name	Contact Name	<p>Name of a person who is a responsible point o
17	select_one list_data_layer_contact_affiliation_or_other	contact_affiliation	Contact Affiliation	<p>Organizational affiliation for the responsible p
18	text	contact_affiliation_other	Other Contact Affiliation	

Survey Share Process – Survey in Action

Single & Multiple Lists



Update Frequency
How often the content is updated.

Biannually ▼

Use Constraint (all that apply)
Constraints or restrictions on use of the digital object.

-Please select- ▼

Repeatable Entries (Ex. Multiple Household Members, Truck Drivers, Equipment, etc.)

and Conditional Field Wizard (Question visibility is predicated on previous entries)

Survey Share Process – Survey in Action

Single & Multiple Lists – Excel Form

18	text	contact_affiliation_other	Other Contact Affiliation	
19	select_multiple list_data_layer_contact_role_or_other	contact_role	Contact Role	<p>(Recommended) Select one or more roles of th
20	text	contact_role_other	Other Contact Role	
21	select_one list_data_layer_accessibility	accessibility	Accessibility	<p>How accessible is the data? Is the data readily a
22	select_one list_data_layer_completeness	completeness	Completeness	<p>A assessment of the level of completeness of th
23	select_one list_data_layer_data_stage	data_stage	Data Stage	<p>Is the data in a stage that can easily be used for
24	dateTime	date_last_updated	Date Last Updated	<p>The date the digital object was last updated.</p>
25	select_one list_data_layer_keyword_vocab_or_other	keyword_vocab	Keyword Vocabulary	<p>(Recommended) Vocabulary for subject matter
26	text	keyword_vocab_other	Other Keyword Vocabulary	<p>Internet address to your preferred vocabulary c
27	select_one list_data_layer_update_freq_or_other	update_frequency	Update Frequency	<p>How often the content is updated.</p>
28	text	update_frequency_other	Other Update Frequency	
29	select_multiple list_data_layer_use_constraint	use_constraint	Use Constraint (all that apply)	<p>Constraints or restrictions on use of the digital
30				
31	end group			
32				
33	begin group	page_2	Repeatable Entries (Ex. Multiple House	<p>Metadata elements that are strongly recommen
34	begin repeat	Repeat_Table	and Conditional Field Wizard (Question visibility is predicated on previous entries)	
35				
36	text	attribute_name	Item Name	<p>Name of the attribute (field, variable) within th

Survey Share Process – Survey in Action

- **Repeatable Entries**
 - Define x number
 - Unlimited

The screenshot shows the configuration interface for a survey question. At the top right, the user's name 'Paul' is visible. The main section is titled 'Update Frequency' with the subtitle 'How often the content is updated.' Below this, there is a dropdown menu set to 'Other' and a text input field containing '72 hours'. The next section is 'Use Constraint (all that apply)' with the subtitle 'Constraints or restrictions on use of the digital object.' It features a dropdown menu showing '2 selected'. Below these sections, there is a heading 'Repeatable Entries (Ex. Multiple Household Members, Truck Drivers, Equipment, etc.)' followed by a green-bordered box containing the text 'and Conditional Field Wizard (Question visibility is predicated on previous entries)' and a '(0)' dropdown. At the bottom of this box is a '+ Add record' button. A green 'Submit' button is located at the bottom center of the form. The footer of the page reads 'Powered by ArcGIS Survey123'.

Survey Share Process – Survey in Action

Repeatable Entries – Excel Form

33	begin group	page_2	Repeatable Entries (Ex. Multiple House	<p>Metadata elements that are s	
34	begin repeat	Repeat_Table	and Conditional Field Wizard (Question visibility is predicated on previ		
35					
36	text	attribute_name	Item Name	<p>Name of the attribute (field,	
37	text	attribute_description	Item Description	<p>Description of the item (field	string-length(\${attribute_name}) > 0
38	select_one list_page_2_attribute_domain_type	attribute_domain_type	Item Domain Type	<p>Type of domain for values in	string-length(\${attribute_name}) > 0
39	text	attribute_codeset_name	Item Code Set Name	<p>Name of coded value domain	selected(\${attribute_domain_type}, 'code set')
40	text	attribute_codeset_url	Item Code Set URL	<p>URL reference or service link	selected(\${attribute_domain_type}, 'code set')
41	text	attribute_value_range_min	Attribute Value Range Maximum	<p>Max Value. A range domain s	selected(\${attribute_domain_type}, 'range')
42	text	attribute_value_range_max	Attribute Value Range Minimum	<p>Min Value. A range domain s	selected(\${attribute_domain_type}, 'range')
43	text	attribute_domain_value_descr	Attribute Domain Value Description	<p>Description of the valid value	string-length(\${attribute_name}) > 0
44	text	attribute_domain_value	Attribute Domain Value	<p>Valid value for the item.</p>	string-length(\${attribute_name}) > 0
45					
46	end repeat		Repeat_Table		+
47	end group				

2341	list_data_layer_boundary_type	Drainage District	Drainage District
2342	list_data_layer_boundary_type	Municipal Utility District (MUD	Municipal Utility District (MUD)
2343	list_page_2_attribute_domain_type	code set	Code Set
2344	list_page_2_attribute_domain_type	enumerated list	Enumerated List
2345	list_page_2_attribute_domain_type	range	Range
2346	list_page_2_attribute_domain_type	table join	Table Join
2347	list_page_2_attribute_domain_type	text	Text
2348	list_page_2_file_format_or_other	SHP	SHP
2349	list_page_2_file_format_or_other	LAS	LAS
2350	list_page_2_file_format_or_other	LAZ	LAZ

Survey Design, Share & Manage Process

ArcGIS Pro – Create Feature Class & Publish (desktop)

Survey123 Connect – Build Survey & Publish (desktop)

Survey123 Website – Survey Collaboration, Analysis & Curation

ArcGIS Enterprise Portal – Survey Management & Storage

Survey Design Process – ArcGIS Portal

Survey Management & Storage

- Manage Members
- Create Groups
- **Control Permissions and User Types**
- Manage Content & Create Derivative Products

The screenshot displays the ArcGIS Portal interface. The top navigation bar includes 'Home', 'Gallery', 'Map', 'Scene', 'Groups', 'Content', and 'Organization'. The 'Content' section is active, showing a search bar with 'GIS_Forum' and a table of items. The table has columns for 'Title', 'Type', and 'Modified'. The items listed are:

Title	Type	Modified
GIS_Forum_2023	Web Map	Oct 24, 2023
GIS_Forum_2023_WFL1	Feature layer (hosted)	Oct 24, 2023
GIS_Forum_2023_WFL1	Service definition	Oct 24, 2023

The left sidebar shows a 'Folders' list with 'GIS_Forum' selected. Below the folders is a 'Filters' section with a 'Categories' dropdown that is currently empty, displaying 'No Categories Yet'.

Metadata Collection Using Survey123 Connect

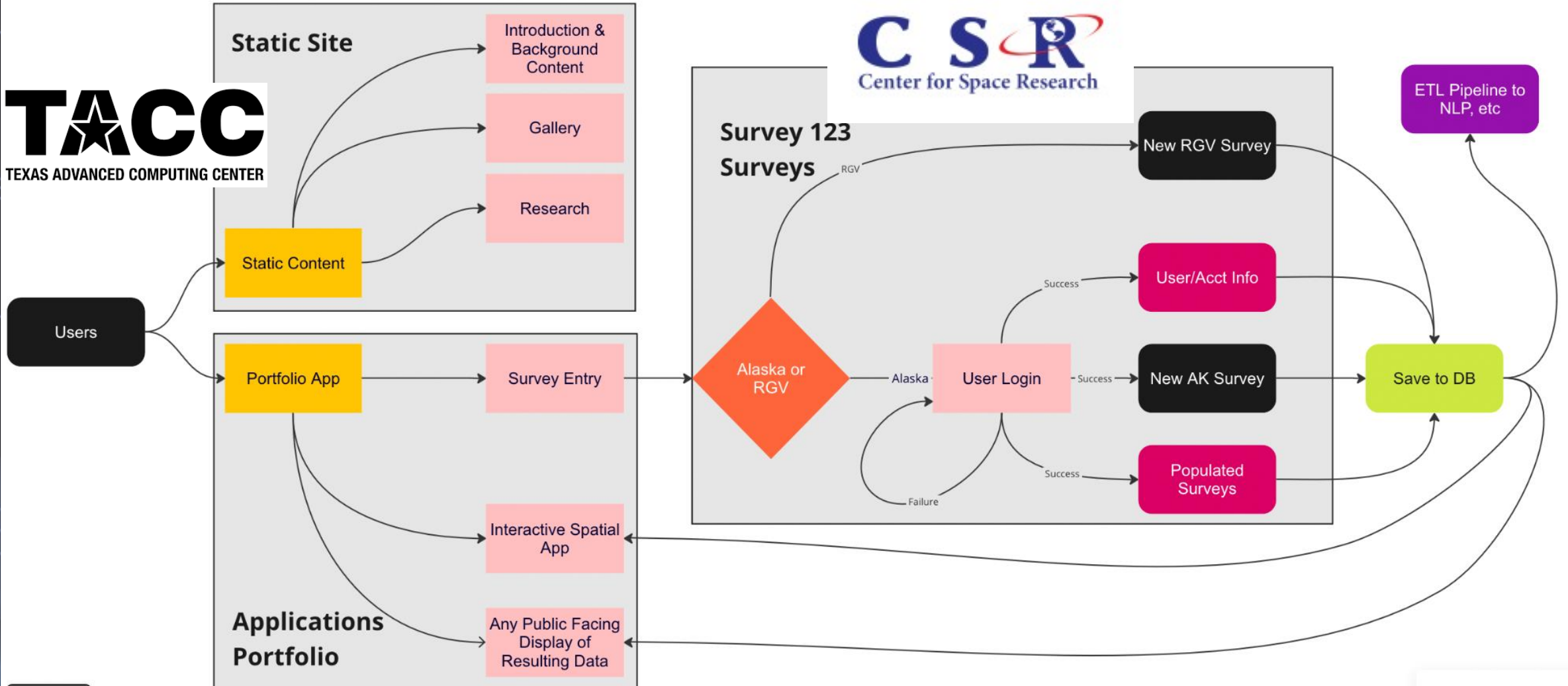
Topics for Today

- Metadata Specification
- Survey123 Connect
- **Workflow**
- Curation



Bethel, Alaska Home, May 22, 2013

Workflow & Architecture



Metadata Collection Using Survey123 Connect

Topics for Today

- Metadata Specification
- Survey123 Connect
- Workflow
- **Curation**



*Widespread Water Contamination in Alaska
KTVF, Sep. 25, 2019*

Metadata Curation

- Data Usability Rubric

- Data evaluation criteria largely based on provided metadata

- Accessibility
- Use Constraints
- Currentness
- Attribution
- Completeness
- Spatial Accuracy
- Data Stage
- Metadata

Use Constraints	To what degree is the data restricted vs freely available to the public? Does the data require a data use agreement and if so, can some less restricted data be shared? Can the data be shared with researchers and/or partners for vetted research purposes? Can the data be made available to the public under certain terms of use or can it be fully available to the public without terms?	<p>1 - Restricted - Restricted information is highly sensitive and its use should be limited on a need-to-know basis. Data usable only with Data Use Agreement. If disclosed, there would be a significant legal impact to the business.</p> <p>2 - Confidential - Complete data usable only at the team level. If disclosed, the confidential information could negatively affect your organization.</p> <p>3 - Internal – Complete data usable by researchers and/or partners for vetted research purposes with limited controls. If disclosed, internal information has a minimal impact to the organization</p> <p>4 - Limited – Data usable by public under designated License or Terms of Use.</p> <p>5 - Public - Data are public domain.</p>
Currentness	How current is the data? How often is it updated? This mainly applies to the non-static data sets that are expected to change through time. For instance, a data set that should be updated monthly, but has not been updated in five years should receive a lower score.	<p>1 – unknown or never updated</p> <p>3 – infrequently updated</p> <p>5 – frequently updated (or updates rarely needed)</p>

Summary

- Data is largely unusable and difficult to find without effective metadata
- Continue testing novel ways that encourage participation in metadata creation – keep it simple!

Paul Buschow
MAGIC Team
Center for Space Research
The University of Texas at Austin
paul@csr.utexas.edu

