

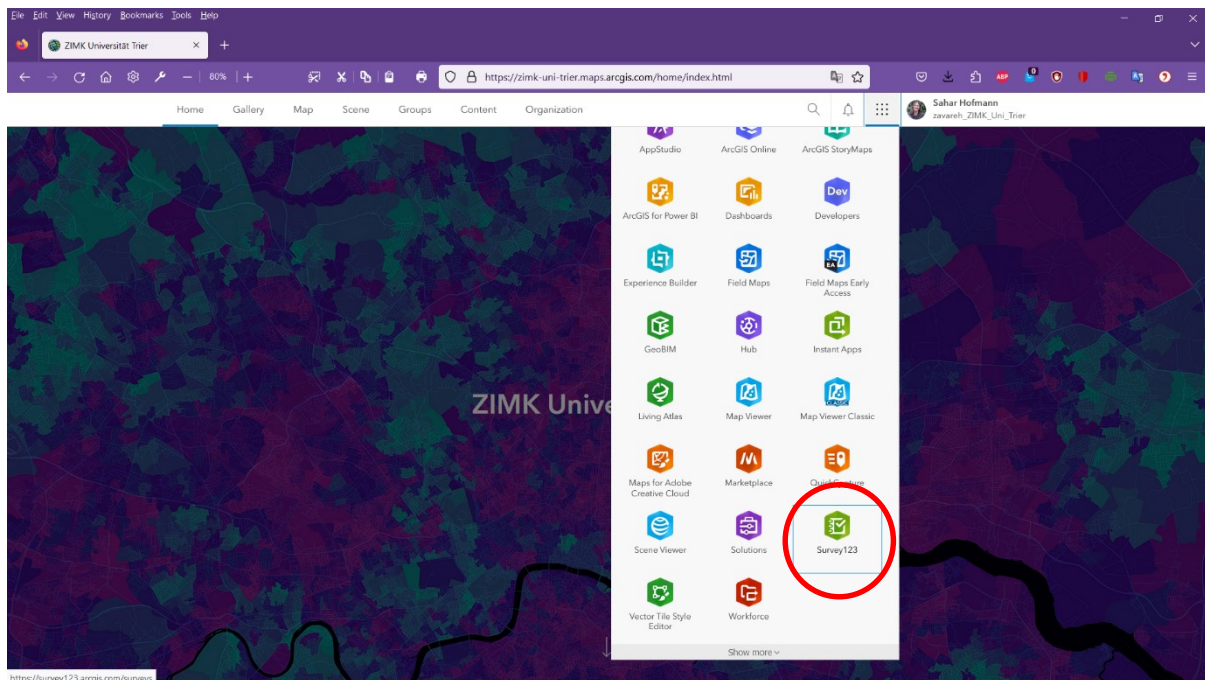
The Open Educational Resource (OER) Mapping with ArcGIS Survey123 is to provide an introduction and guide to develop qualitative and quantitative surveys and geographical maps with the surveys.

In this OER, we want to explore the recent flood event phenomena in Trier Ehrang that occurred in July 2021 to better understand flood recovery and reconstruction as well as disaster risk management at various scales (community, local government, regional government, state and federal governance systems). This OER links to other methods such as ethics of research, conducting interviews, collecting water and soil samples, and other forms of metadata that can be used to produce maps such as total number of homes under construction or the number of reconstruction resources needed.

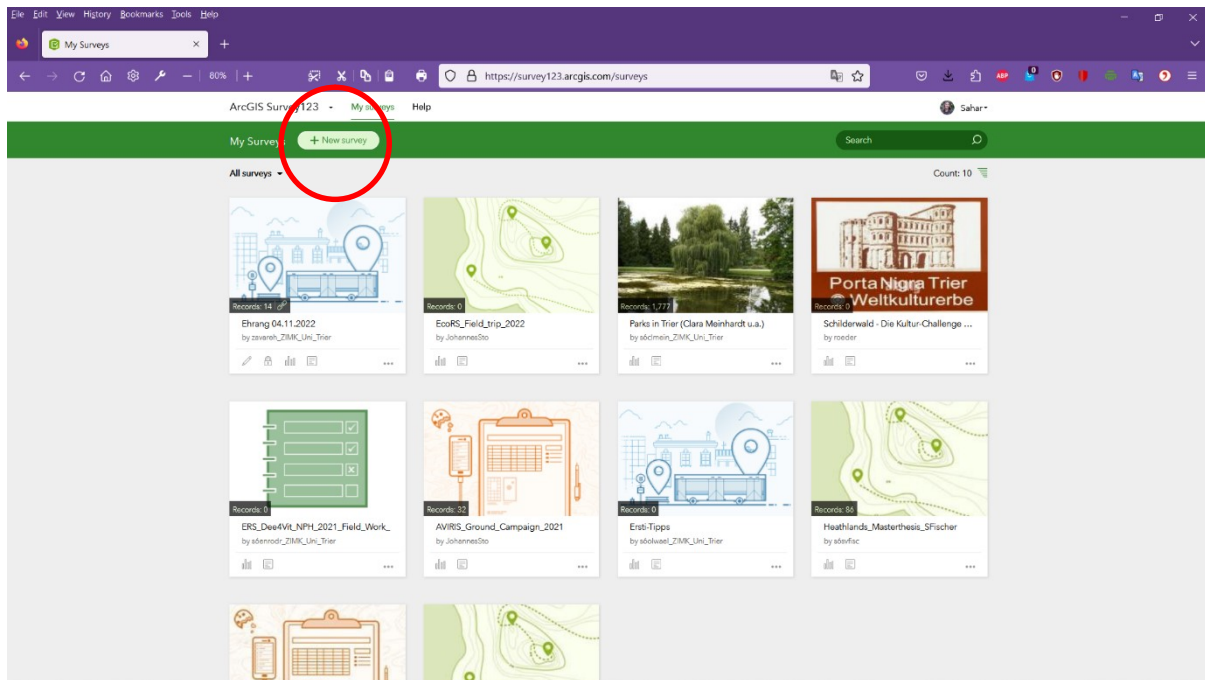
This Survey123 guide consists of two parts: (1) first to create a Survey123 survey for field data collection, and (2) the second part provides a guide to show how to use the survey data from the Survey123 App to create a completed map for written and communication use.

Part 1: Creating a Survey to Make a Survey123 Map

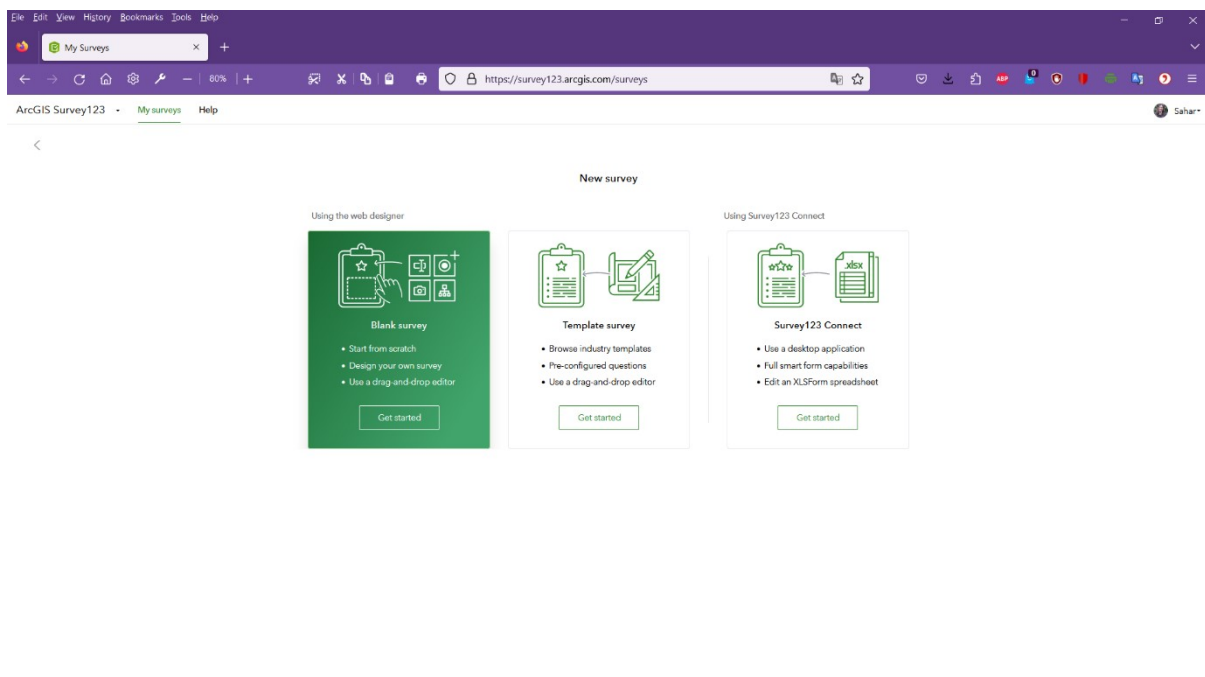
Step 1: Log into your ArcGIS online account and select Survey123 from the app content.



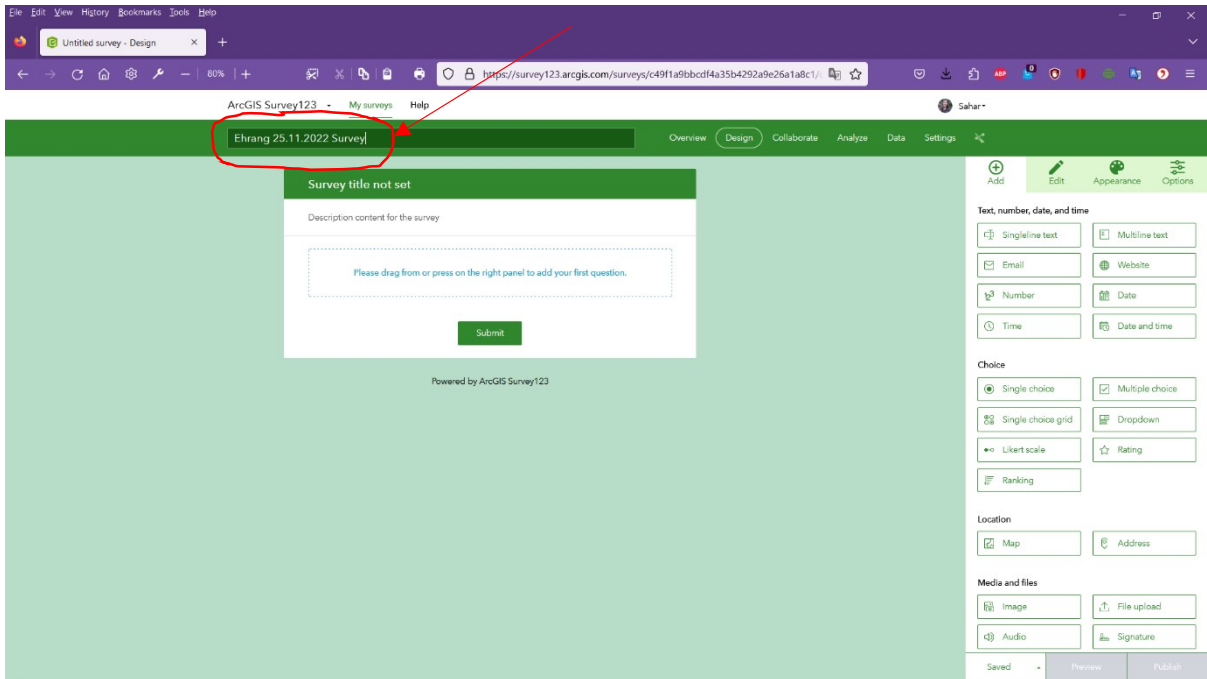
Step 2: Select New Survey



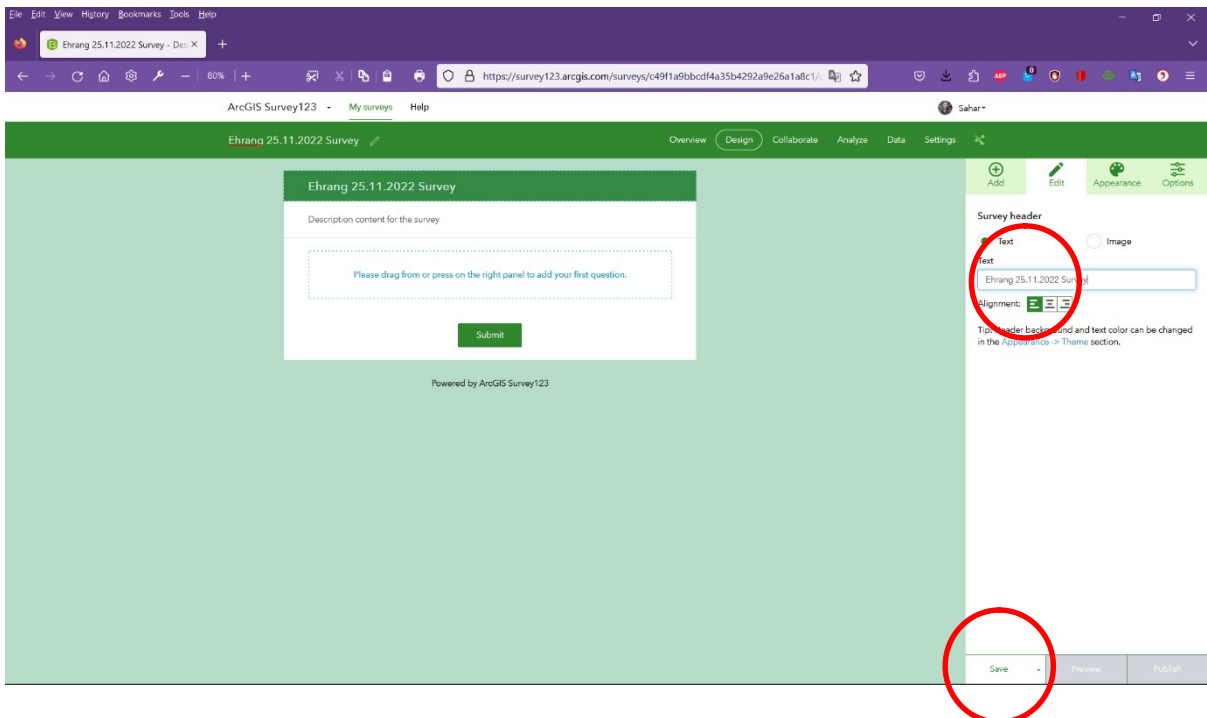
Step 3: Choose Blank Survey to begin creating a basic data collection survey to gather: Date/time, GPS location, images, audio recordings, notes, items to count.



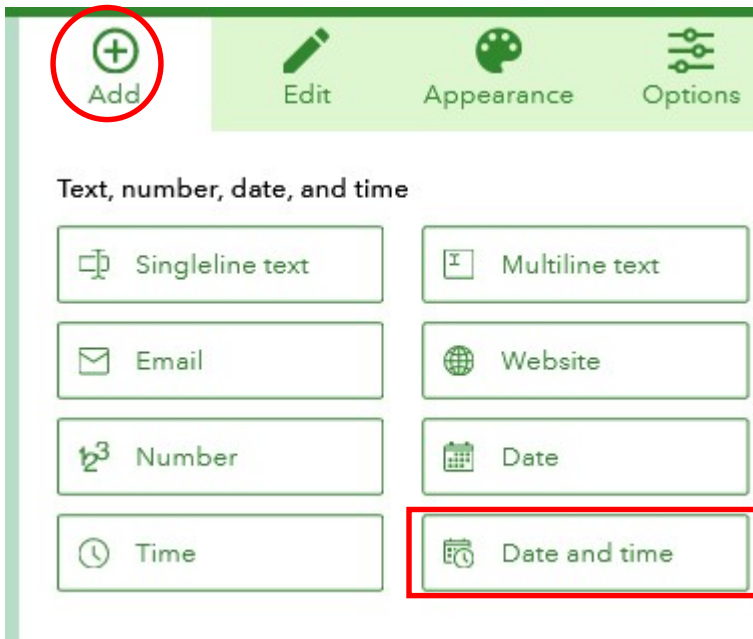
Step 4: Edit the name of the survey in the green field



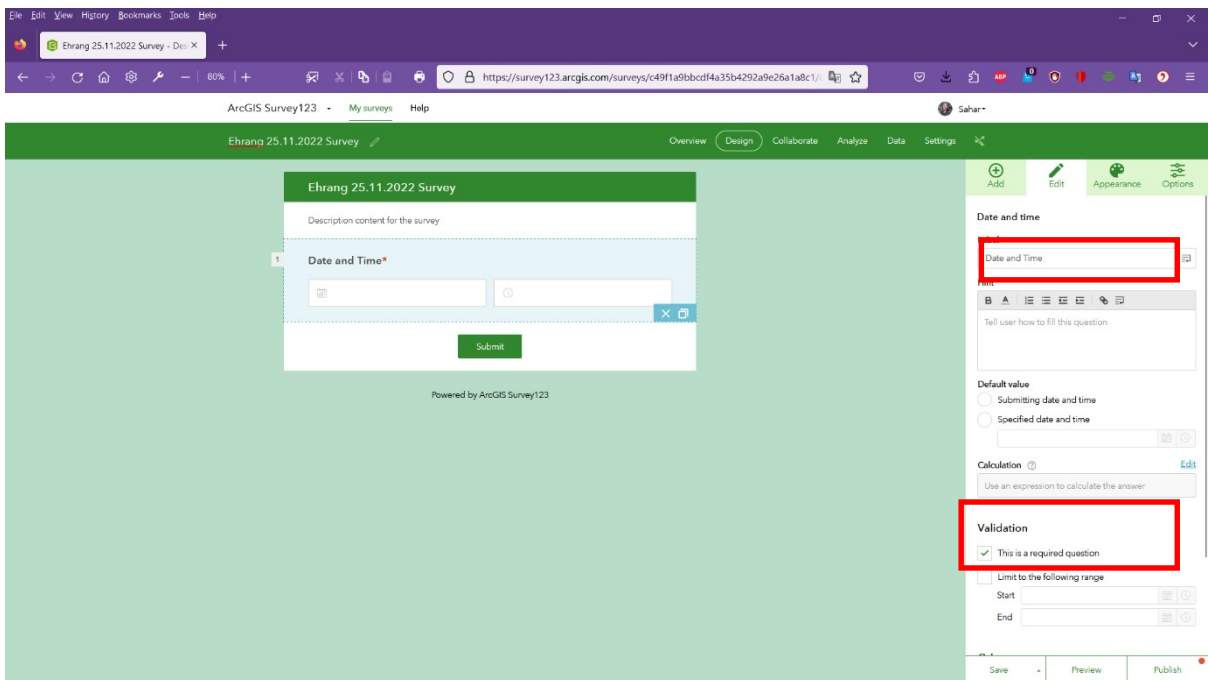
Additionally, you will need to edit the survey name here and choose save.



Step 5: We will add the survey fields of data we wish to collect. First, choose Add to create the survey data to be collected and select date and time.



Provide a name of date and time for the label and choose that the item is required and save, then go back to Add.



Add a location with GPS using Map under Location

Location



We will choose Point in order to collect the GPS coordinates directly from the device (e.g. mobile phone or tablet).

Drawing tools ?



And then we will choose use device location when answering the question.

Default location

- No default location
- Center of the map extent specified above
- Use device location and ask for location when answering this question ?
- Use device location and ask for location when opening this survey ?

This will be required and we will save again, then choose Add.

Validation

- This is a required question







We will choose a Number and label it as a count and save, return to Add. Please note that this is not a required question because we may or may not need this data for each survey collected.

Number

Label

Hint

B **A**      

Tell user how to fill this question

Default value

Calculation

[Edit](#)

Validation

This is a required question

Must be an integer

Set minimum and maximum value

Minimum

Maximum







We will choose to add image; add a label as image, choose browse images or use camera, we will not require the question, and allow up to 20 images at once to be uploaded, and now save then return to Add.

Image

Label

Hint

B **A**      

Tell user how to fill this question

Image source

- Browse images or use camera
- Camera only

Validation

This is a required question

File count

- Specify file count
- Set minimum and maximum file count
- Minimum
- Maximum

Please note the default max size is 10MB







We will now add Audio and use the label as audio and keep the default time limit to 10 minutes, save and return to Add.

Audio

Label

Audio 

Hint

B **A**      

Tell user how to fill this question

Validation

This is a required question


Duration

Maximum 10 minutes 







We will add a Note with a label as Note, save.






Note

Label

Note 

Description

B **I** **U**  **T_x** **”**     

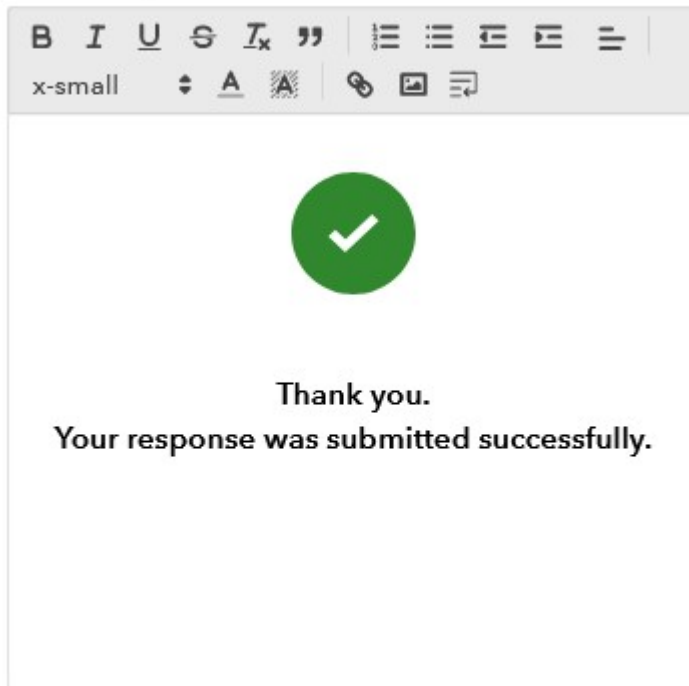
x-small  **A**    

Description of this note question

We will go to Option and mark the option to reload the survey and submit another response.

Thank you screen

Preview Off



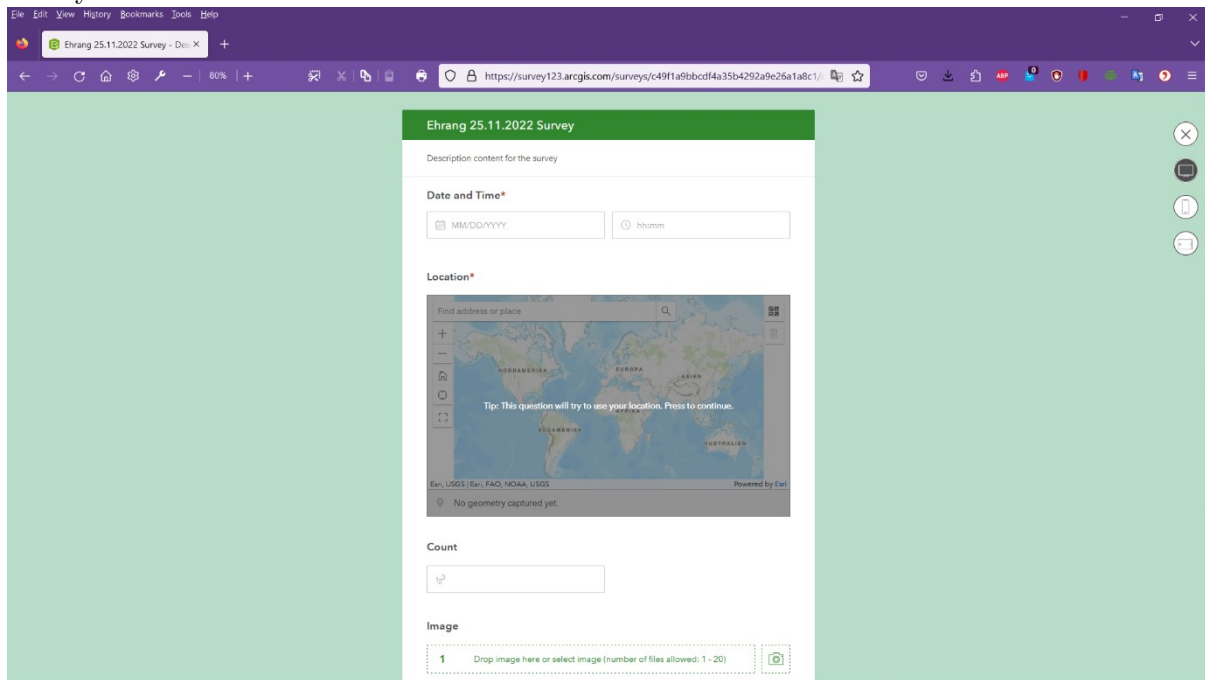
Submit another response

Show option to reload the survey

Automatically reload the survey

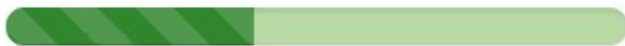
Specify the delay seconds

Step 6: Save your survey and we will choose to preview the survey before we Publish the survey

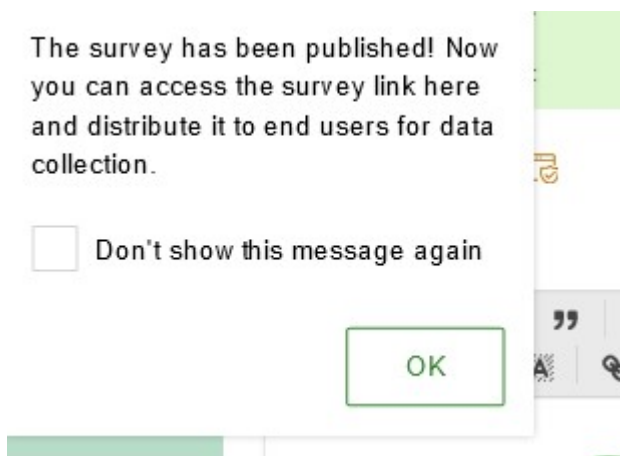


If you are satisfied with the survey, close the preview and choose publish

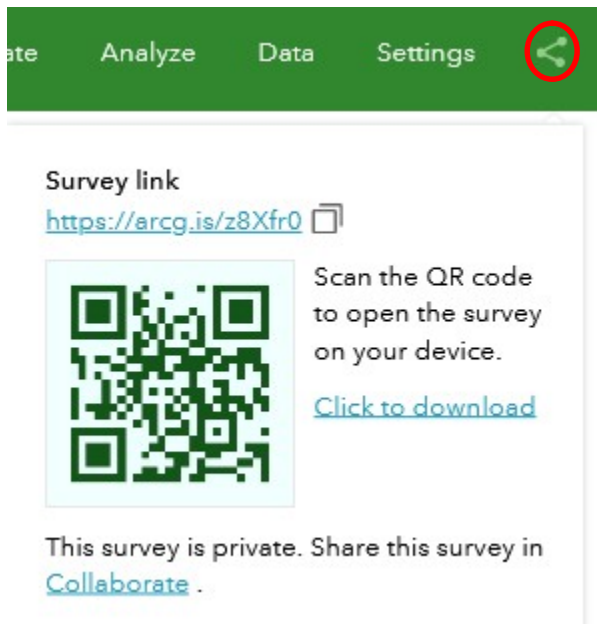
 Publishing...



Once it is ready we will receive this message



To get your QR code, select the arrows. This is also where you will need to change the settings for the survey if you wish to share the survey with other team members to use the survey on their device with the QR code.



You should be able to access the survey also from your App.

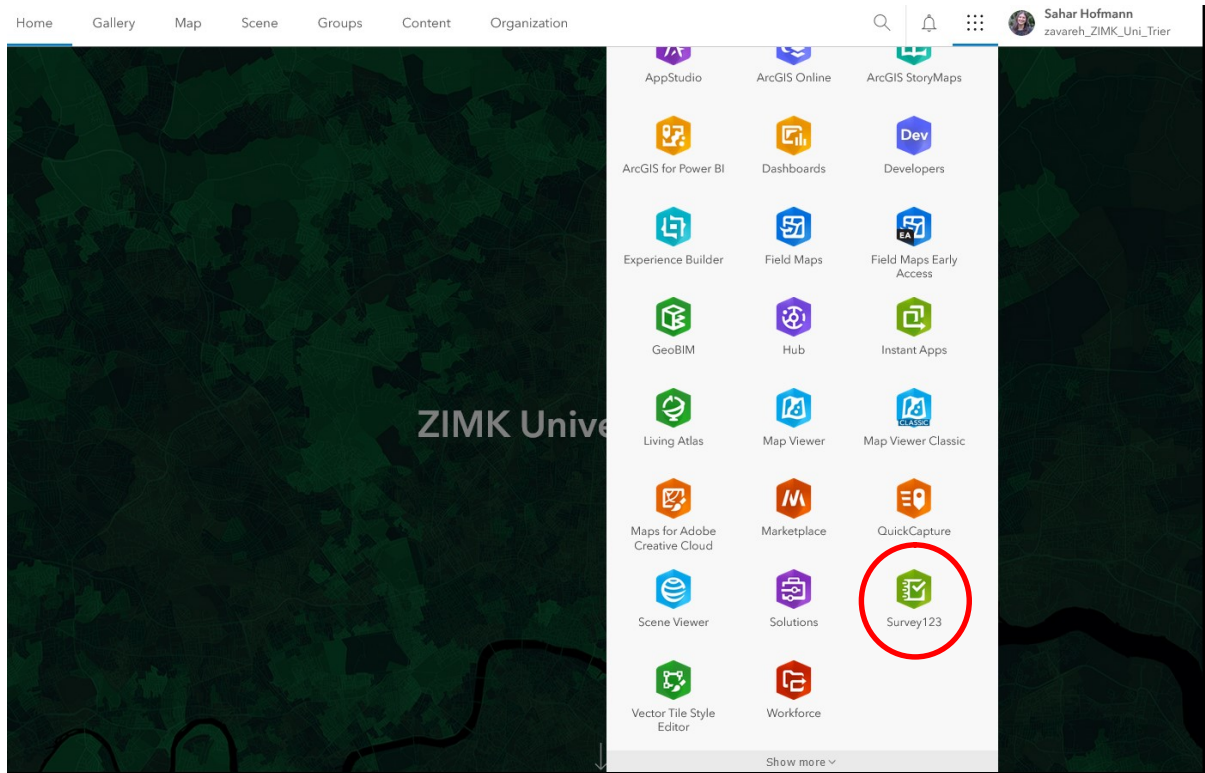
Recommended Videos

<https://www.youtube.com/watch?v=mxwF0k39fG0>

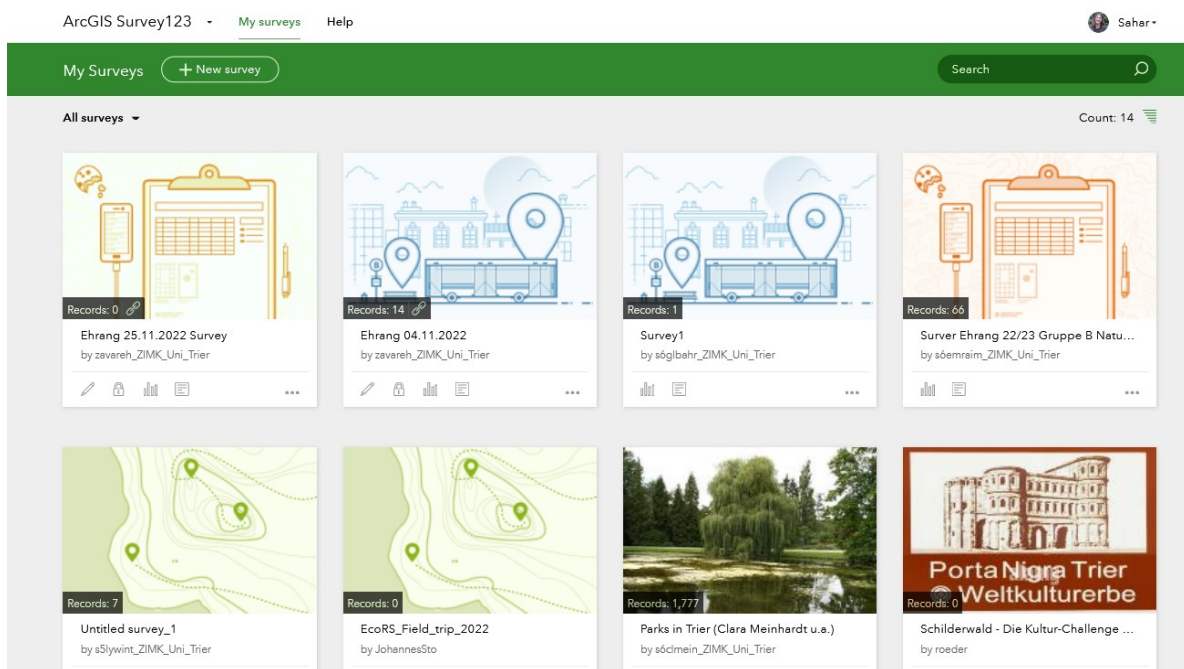
<https://www.youtube.com/watch?v=v2YhzW0t-F8>

Part 2: Making a Map With Your Survey123 App Data

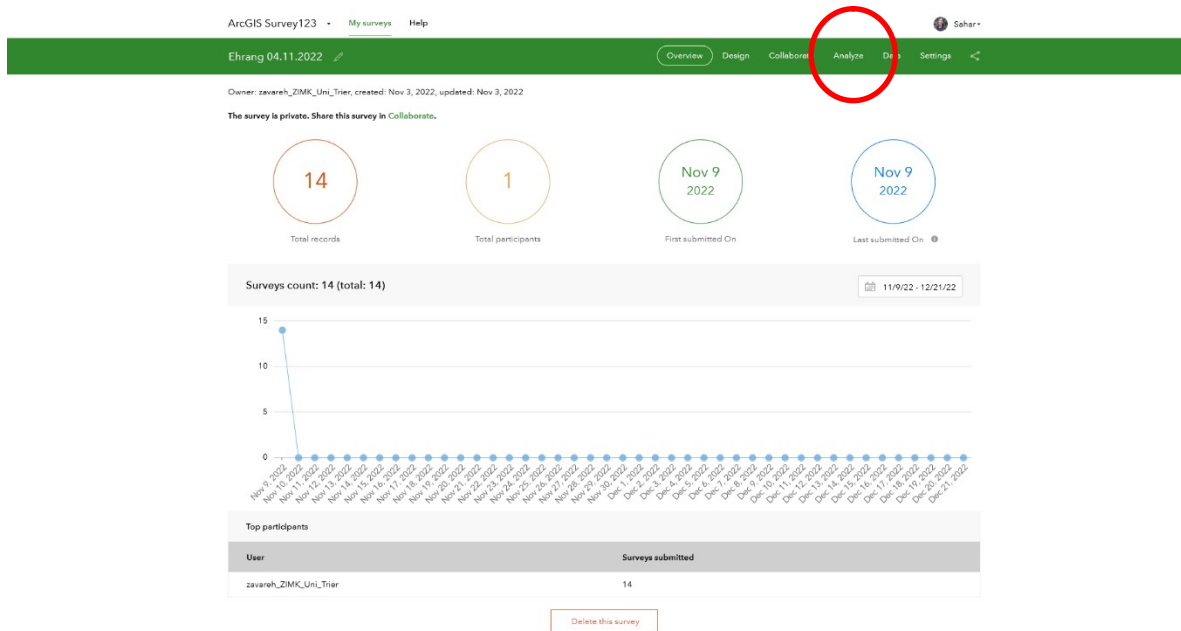
Step 1: Log into your ArcGIS online account and select Survey123 from the app content.



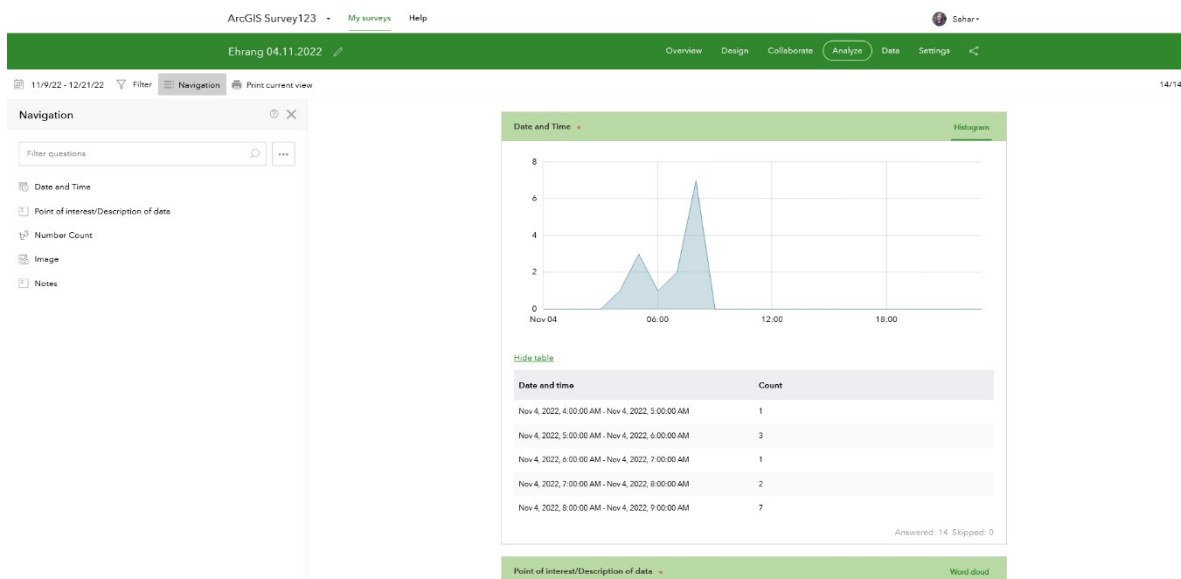
Step 2: Select the survey you wish to begin working with



Step 3: Once you select the survey you will be shown the following information: the total number of records collected, the number of participants, when the first record and last record was recorded and by whom (users authorized to access the survey). Now choose the Analyze tab to see what data is available.



Step 4: Now scroll through the survey to see each record and data collected from each participant or location data. The table on the left provides an outline of all the available data to quickly access if needed. We can also use the filter/search feature to look for certain keywords or data points.



ArcGIS Survey123 - My surveys Help

Ehrang 04.11.2022 Overview Design Collaborate Analyze Data Settings

11/9/22 - 12/21/22 Filter Navigation Print current view 14/14

Navigation

Filter questions

- Date and Time
- Point of interest/Description of data
- Number Count**
- Image
- Notes

Number Count Columns Bar Pie Map

1 to 1

Hide table Empty categories Sort

Stats	Value
Min.	1
Max.	1
Avg.	1
Sum.	7

Answered: 7 Skipped: 7

Image Gallery

ArcGIS Survey123 - My surveys Help

Ehrang 04.11.2022 Overview Design Collaborate Analyze Data Settings

11/9/22 - 12/21/22 Filter Navigation Print current view 14/14

Navigation

Filter questions

- Date and Time
- Point of interest/Description of data
- Number Count
- Image**
- Notes

Answered: 7 Skipped: 7

Image Gallery

Images: 21

Notes Word cloud

The word cloud requires at least 20 answers to show.

Hide table Show responses

Word	Count
Vacant	1

ArcGIS Survey123 - My surveys Help

Ehrang 04.11.2022 Overview Design Collaborate Analyze Data Settings

11/9/22 - 12/21/22 Filter Navigation Print current view 14/14

Navigation

Filter questions

- Date and Time
- Point of interest/Description of data
- Number Count
- Image**
- Notes

Answered: 3 Skipped: 11

Image Gallery

Images: 21

Notes Word cloud

The word cloud requires at least 20 answers to show.

Hide table Show responses

Word	Count
Vacant	1
Vacant/Abandoned	1
Building	1
Wiederaufbau	1

Step 5: Now choose the Data tab, next to Analyze. We can now see each survey record as a data point on the map and corresponding data records in the table.

Date And Time	Point of interest/Description of data	Notes	Number Count
Nov 4, 2022, 8:30 AM	Haus	Wiederaufbau	1
Nov 4, 2022, 5:26 AM	Damaged building	Vacant	
Nov 4, 2022, 5:59 AM	River Location 4		
Nov 4, 2022, 7:25 AM	River Location 5		
Nov 4, 2022, 6:48 AM	River Location 3		
Nov 4, 2022, 7:03 AM	River Location 2		
Nov 4, 2022, 5:25 AM	River Location 1		
Nov 4, 2022, 8:06 AM	Hospital	Vacant/Abandoned Building	1
Nov 4, 2022, 8:34 AM	Building under renovations		1
Nov 4, 2022, 8:32 AM	Water mark		1
Nov 4, 2022, 8:31 AM	House finished		1

Step 6: We will now choose to export the record as an Excel file so that we may analyze the data separately. This also allows us to create different kinds of map or new maps that are not part of the original survey. We may want to do this when we only want to show one parameter from our survey but also combine it with other indicators from other data collected or other data sources.

Date And Time	Point of interest/Description of data	Notes	Number Count
Nov 4, 2022, 7:25 AM	River Location 5		
Nov 4, 2022, 6:48 AM	River Location 3		
Nov 4, 2022, 7:03 AM	River Location 2		
Nov 4, 2022, 5:25 AM	River Location 1		
Nov 4, 2022, 8:06 AM	Hospital	Vacant/Abandoned Building	1
Nov 4, 2022, 8:34 AM	Building under renovations		1
Nov 4, 2022, 8:32 AM	Water mark		1
Nov 4, 2022, 8:31 AM	House finished		1
Nov 4, 2022, 8:29 AM	House		1
Nov 4, 2022, 8:28 AM	House		1
Nov 4, 2022, 4:57 AM	Bahnhof		

Step 7: We now can view the Excel file as table of all the records. Let us edit the table to only include the housing data records. We will also edit the table to include the indicator we wish to map for each house under the Points of Interest column. We will need to keep the GlobalID, date and time, x and y points in the table. We will rename this file as housing_survey.xlsx

ObjectID	GlobalID	CreationDate	Creator	EditDate	Editor	Date and Time	Point of Int Location	Notes	Number	Cox	Y
1	8.9088495	11/9/2022 14:15	javareh_zii	11/9/2022 14:15	javareh_zii	11/4/2022 11:27	Rainhof		6.688488	49.80937	
2	7.71060246	11/9/2022 14:15	javareh_zii	11/9/2022 14:18	javareh_zii	11/4/2022 12:25	River Location 1		6.681108	49.80824	
3	8.49402336	11/9/2022 14:15	javareh_zii	11/9/2022 14:20	javareh_zii	11/4/2022 12:26	Damaged building	Vacant	6.681123	49.80823	
4	8.0937539	11/9/2022 14:15	javareh_zii	11/9/2022 14:19	javareh_zii	11/4/2022 12:26	River Location 4		6.677892	49.81177	
5	8.0937539	11/9/2022 14:15	javareh_zii	11/9/2022 14:19	javareh_zii	11/4/2022 12:26	River Location 3		6.687299	49.80646	
6	8.0937539	11/9/2022 14:15	javareh_zii	11/9/2022 14:19	javareh_zii	11/4/2022 14:05	River Location 2		6.688305	49.80651	
7	8.0937539	11/9/2022 14:15	javareh_zii	11/9/2022 14:19	javareh_zii	11/4/2022 14:25	River Location 5		6.702781	49.80338	
8	8.0937539	11/9/2022 14:15	javareh_zii	11/9/2022 14:17	javareh_zii	11/4/2022 15:06	Hospital	Vacant/Abt	1.6.690712	49.80916	
9	8.0937539	11/9/2022 14:15	javareh_zii	11/9/2022 14:16	javareh_zii	11/4/2022 15:28	House		1.6.692893	49.81124	
10	8.0937539	11/9/2022 14:15	javareh_zii	11/9/2022 14:16	javareh_zii	11/4/2022 15:28	House		1.6.693101	49.81162	
11	11.481808d	11/9/2022 14:16	javareh_zii	11/9/2022 14:23	javareh_zii	11/4/2022 15:30	Haus	Wiederauf	1.6.693283	49.81185	
12	12.25758d76	11/9/2022 14:16	javareh_zii	11/9/2022 14:16	javareh_zii	11/4/2022 15:31	House finished		1.6.693615	49.81237	
13	13.07808d6	11/9/2022 14:16	javareh_zii	11/9/2022 14:16	javareh_zii	11/4/2022 15:32	Water mark		1.6.693172	49.81209	
14	14.6ab72942	11/9/2022 14:16	javareh_zii	11/9/2022 14:17	javareh_zii	11/4/2022 15:34	Building under renovations		1.6.692066	49.8123	

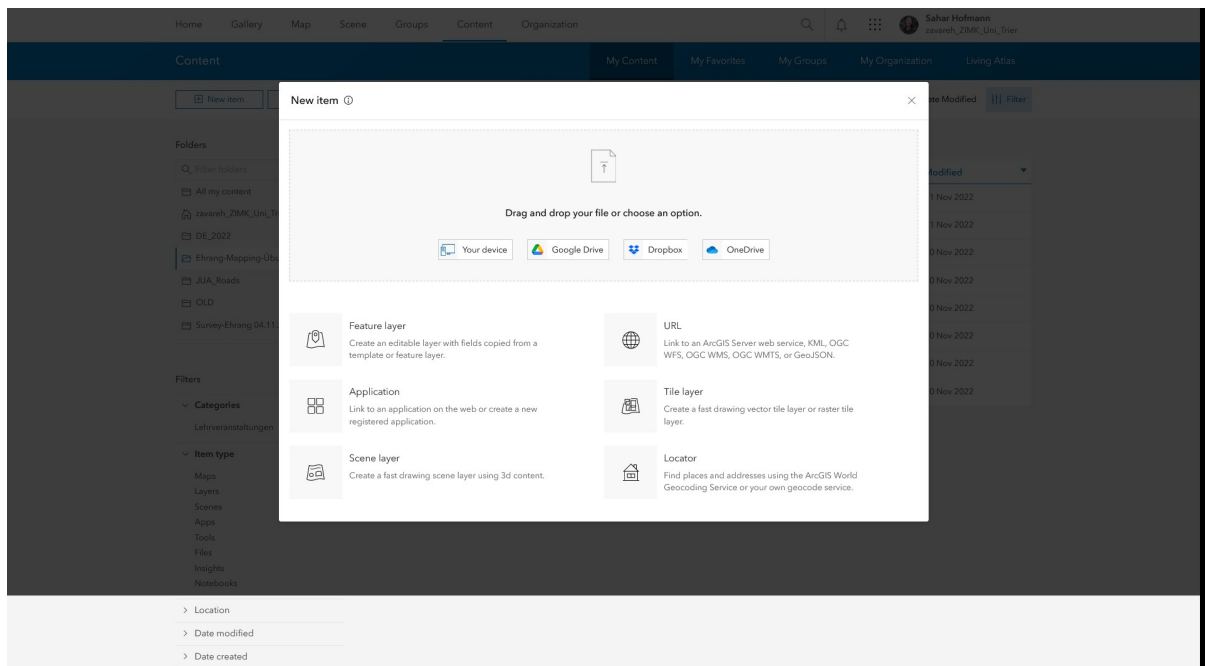
ObjectID	GlobalID	Date and Time	Point of Int	Y
1	8.0937539	11/4/2022 15:06	unbesetzt	8.690712
2	9.489359b7	11/4/2022 15:28	aufgebaut	6.692893
4	11.481808d	11/4/2022 15:30	Renovieren	6.693283
5	12.25758d76	11/4/2022 15:31	aufgebaut	6.693615
6	14.6ab72942	11/4/2022 15:34	im Bau	6.692066

Step 8: Let us now map our new formatted table. To do so, we need to go back to our ArcGIS online account and go to MyContent. Create a new folder and choose a name to identify your map. Lastly, select New item to upload the Excel file.

The screenshot shows the ArcGIS Online interface. The top navigation bar includes 'Home', 'Gallery', 'Map', 'Scene', 'Groups', 'Content', and 'Organization'. The 'My Content' tab is circled in red. Below the navigation bar, there are buttons for 'New item' and 'Create app', both circled in red. A search bar contains the text 'Ehrang-Mapping-Übung_1'. The main content area shows a list of folders on the left, with 'Ehrang-Mapping-Übung_1' highlighted by a red box. A table of items is displayed, with columns for 'Title', 'Type', 'Status', and 'Modified'. The items listed are:

Title	Type	Status	Modified
haus_umfrage	Feature layer (hosted)	🔒	11 Nov 2022
fluss_umfrage	Microsoft Excel	🔒 +	11 Nov 2022
fluss_umfrage	Feature layer (hosted)	🔒	10 Nov 2022
haus_umfrage	Microsoft Excel	🔒 +	10 Nov 2022
house_survey	Feature layer (hosted)	🔒	10 Nov 2022
house_survey	Microsoft Excel	🔒	10 Nov 2022
river_survey	Feature layer (hosted)	🔒	10 Nov 2022
river_survey	Microsoft Excel	🔒	10 Nov 2022

Step 9: Here you will be prompted to choose how you would like to select your file. Choose how you would like to upload your Excel file. You will then be prompted to select how you would like to add the file: choose to create a hosted feature layer or table. You will then be prompted to confirm which fields from the table you would like to include. For this exercise we will leave all items selected and choose next. We will then be asked to confirm the latitude/longitude and by default it will use our x/y axis points located in the table, select next. Lastly, we will choose the title name for our file.



New item ✕

File
house_survey.xlsx

How would you like to add this file?

- Add house_survey.xlsx and create a hosted feature layer or table**
Publish a hosted feature layer based on your spreadsheet. Spreadsheets without location information will display as a table that can be viewed, charted, and joined with other layers.
- Add house_survey.xlsx only**
Add Microsoft Excel without publishing. File can be shared and downloaded by others or published at a later date.

Back Cancel Next

New item



Fields

Select the fields that will be included in the hosted feature layer. Optionally, update the display name and field type.

Search for field All types ▼

7 selected Clear selection

<input checked="" type="checkbox"/> Field name	Display name	Type
<input checked="" type="checkbox"/> ObjectID	ObjectID	Integer ▼
<input checked="" type="checkbox"/> GlobalID	GlobalID	String ▼
<input checked="" type="checkbox"/> Date_and_Time	Date_and_Time	Date ▼
<input checked="" type="checkbox"/> Point_of_interest_Description_of_data	Point_of_interest_Description_of_data	String ▼
<input checked="" type="checkbox"/> Notes	Notes	String ▼

Time zone

Select the time zone your data is in.

(UTC) Coordinated Universal Time ▼

Back

Cancel Next

New item



Location settings

Specify the type of location information the file contains.

 **Latitude and longitude**
Location data are latitude and longitude. ▼

Location fields *

Location type	Field
Latitude	y ▼
Longitude	x ▼

Back

Cancel Next

New item



File

house_survey.xlsx

Title

house_survey

 A layer titled "house_survey" is already available. Please select a different title.

Folder

 Survey-Ehrang 04.11.2022

Categories

Assign categories

Tags

Add tags

Summary

Add a summary

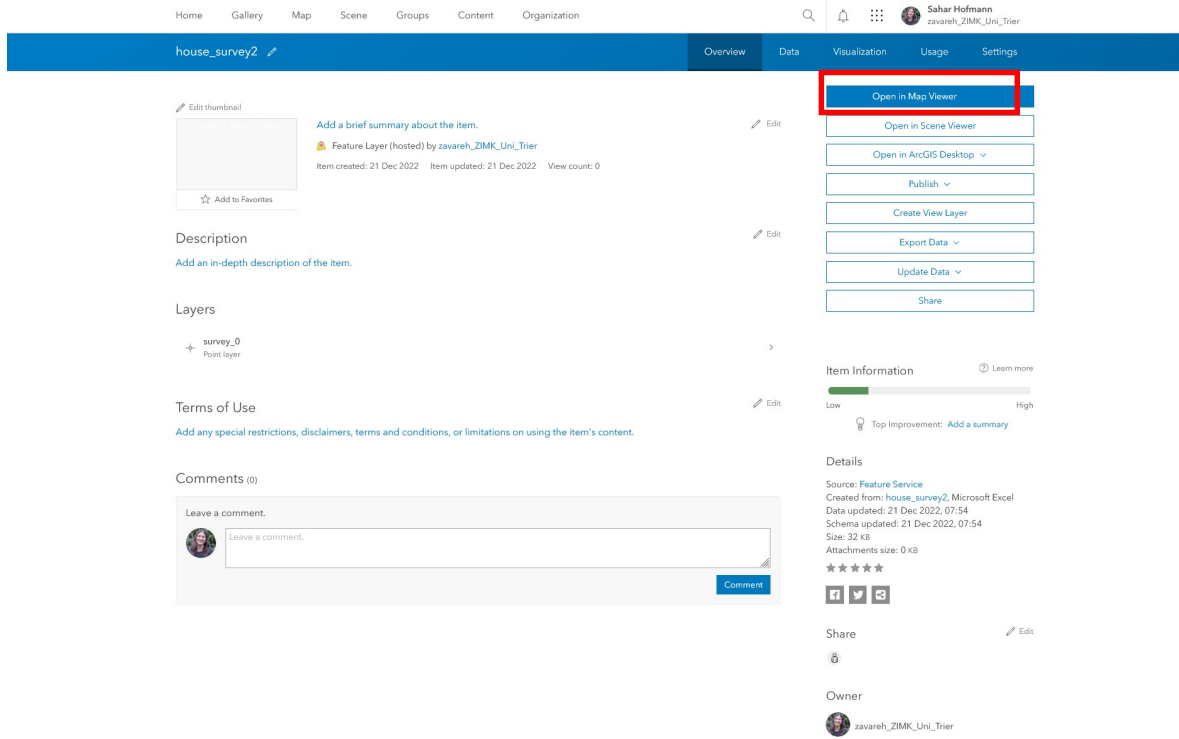
Characters left: 2048

Back

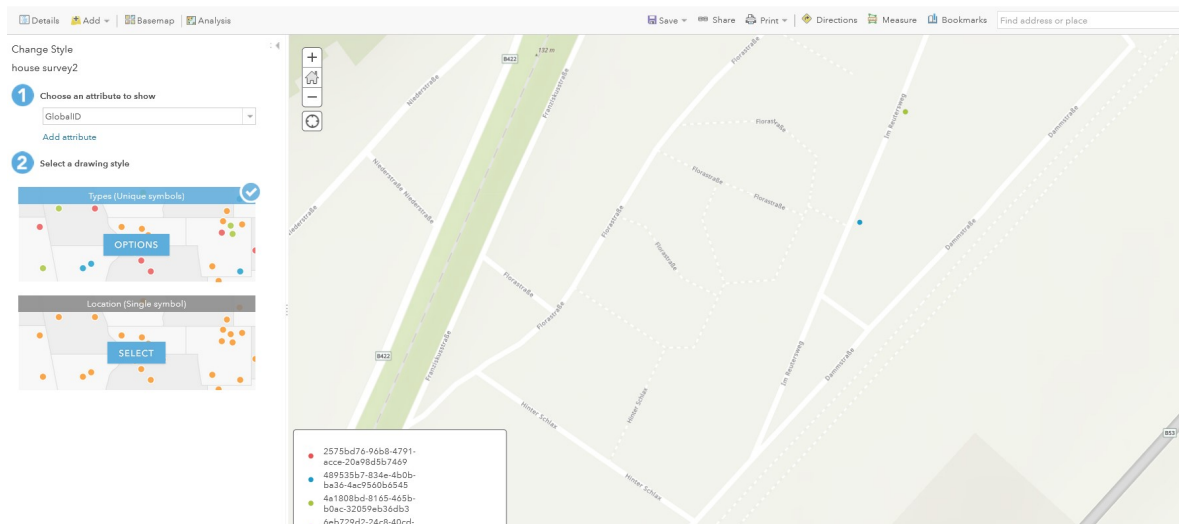
Cancel

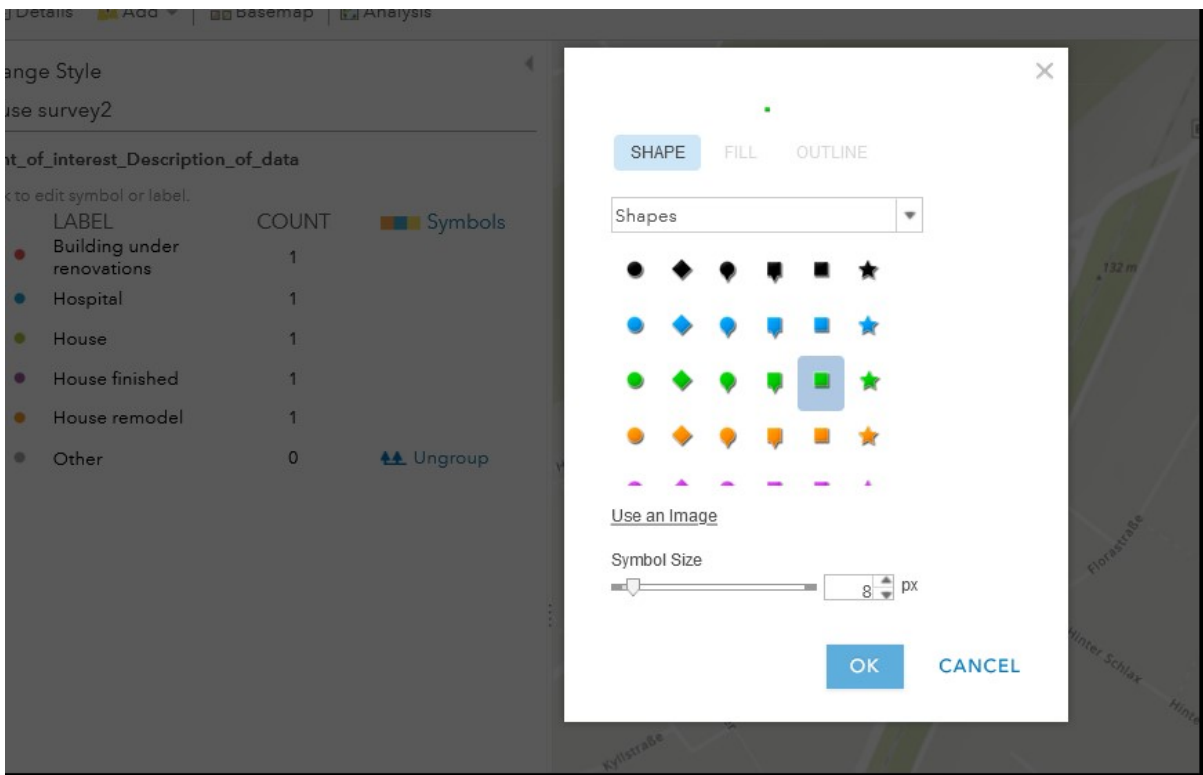
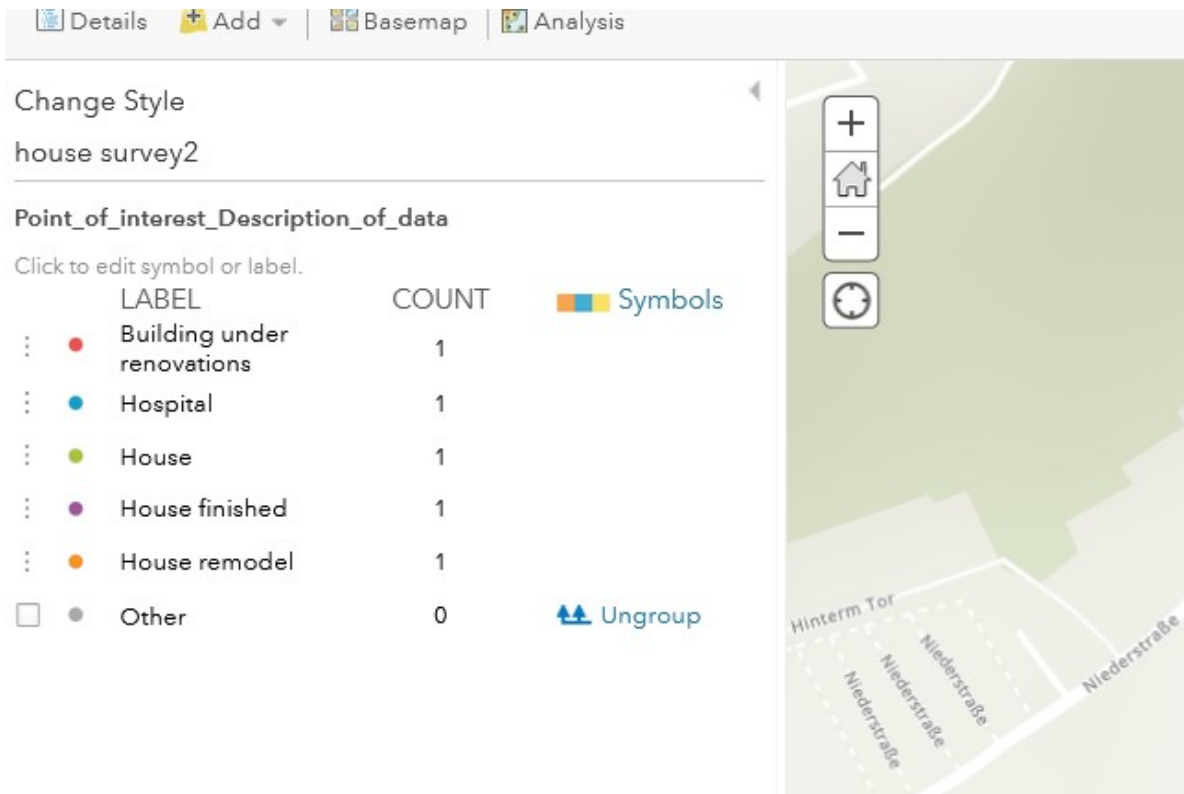
Next

Step 10: Now we can format our map with our selected survey data. Open the table in Map Viewer



Step 11: Now we can edit the map features by selecting the attributes (Number 1) and options (Number 2)





house_survey2

