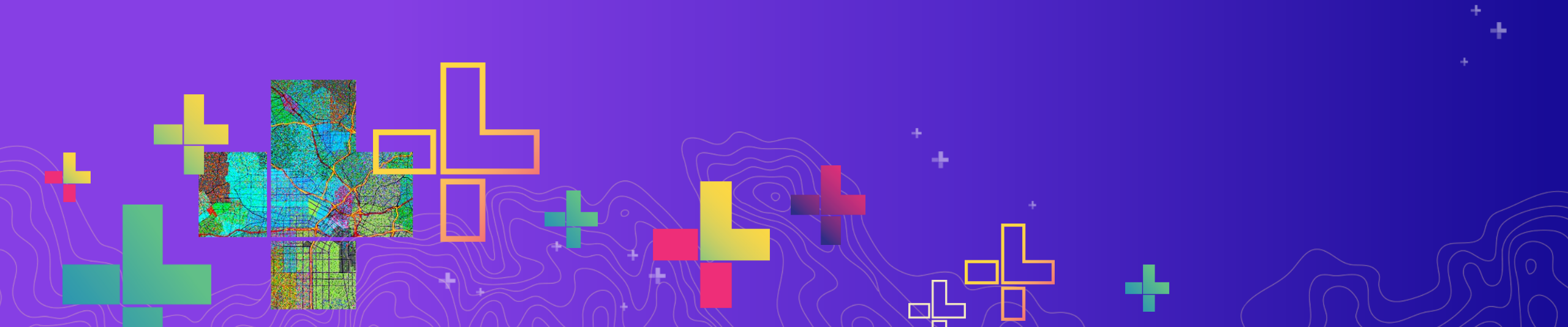




# Collecting, Mapping, Analyzing, and Communicating Field Data with ArcGIS

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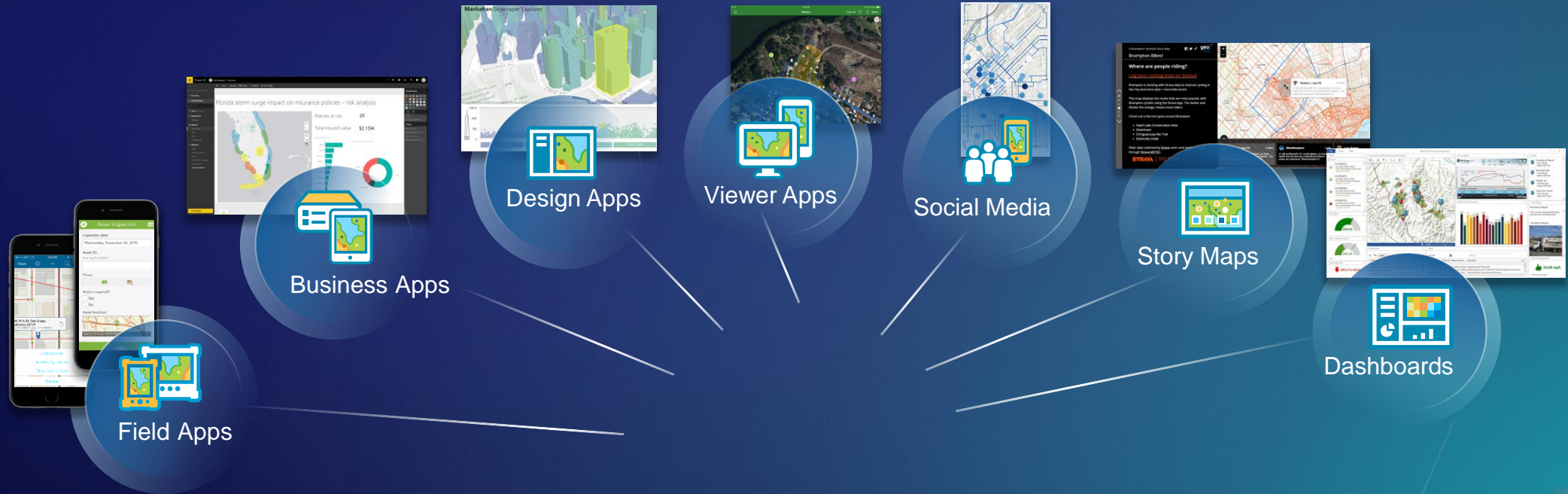
# The Web GIS Paradigm



ArcGIS for Developers

# ArcGIS Apps Bring the Power of Location to Everyone

Extending the Reach of GIS



*Across Organizations and Beyond*

# Apps by theme

Focused, powerful, ready to use



## Office



ArcGIS Earth



Esri CityEngine



Maps for Office



Maps for SharePoint



Insights for ArcGIS



Esri Business Analyst



GeoPlanner for ArcGIS



ArcGIS Story Maps



ArcGIS Dashboards



## Field



Workforce for ArcGIS



ArcGIS QuickCapture



ArcGIS Survey123



ArcGIS Field Maps



ArcGIS Drone2Map



ArcGIS SiteScan

# Workshop workflow



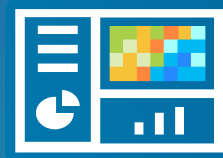
1- Collect data  
Using Survey123



2-Map data  
Using ArcGIS Online



4 - Create Story Map



3- Create  
Dashboard



Analyze data  
Using ArcGIS Online

# We will build this example: Survey, ArcGIS Online Map, Story Map, Operations Dashboard

<https://community.esri.com/community/education/blog/2019/08/27/how-walkable-is-your-community>

### What is the Walkability of this Location?

What is the Walkability of this location?

- Pedestrian Friendly
- Pedestrian Unfriendly

Map data © OpenStreetMap contributors, CC-BY-SA | Esri, FAO, NOAA, USGS

1 of 3

**The last 3 points submitted to the survey.**

This point was rated as **Neutral**

Last edited on 5/2/2024, 6:51 PM.

What percentage of surveyed points are pedestrian friendly and unfriendly?

Pedestrian Unfriendly 23.26%

Other 2.01%

Pedestrian Friendly 74.73%

Last update: 9 seconds ago

**1298**

Total number of surveys submitted as of 5/8/2024

**2**

data points were added last month.

Would you consider these locations to be walkable or not? Why?

What are the characteristics of the site?

Coastal Alley around the beach - excellent for walking	~250
dedicated_path_or_sidewalk	~800
Gated Residential Community	~250
obstructions_branches_snow_etc	~200
Park Sidewalk	~150
Unsafe	~126
the basemap is old	~100
velobiking	~100
wide path or sidewalk	~350

Dedicated Path Or Sidewalk	- 796
Wide Path Or Sidewalk	- 365
No Path Or Sidewalk	- 280
Poor Surface Condition	- 260
Dangerous Cross Traffic	- 243
Obstructions Branches Snow Etc	- 199
Unsafe	- 126
Other	- 118

Top 3 months for surveys

August, 2019	Number of Surveys: 188
November, 2023	Number of Surveys: 69
November, 2021	Number of Surveys: 65



A selection of walkability images submitted to the storymap.



**Let's go to work!**

**This lesson is organized in 4 parts:**

Part 1: Creating a field survey using Survey123.

Part 2: Creating and analyzing a map from your survey data.

Part 3: Creating a dashboard from your survey data.

Part 4: Creating a storymap from your field data.

# Why teach the platform?

1. Collect needed data.
2. Connect people with issues in their own community.
3. Develop skills in field data collection, citizen science, data assessment, mapping, spatial analysis, permissions, web apps, sharing.
4. Data fluency; critical thinking; spatial thinking. What they will encounter in the workplace.

Can you name this location?



# 1. Create Survey

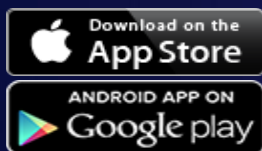
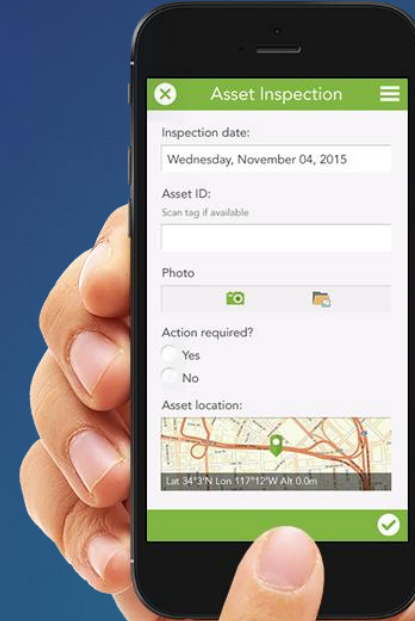
## Survey123 for ArcGIS



Form-centric field data collection

Leverages Smart forms

Analyze results immediately



# Survey123 workflow



**1- Ask Questions**  
(Design & Publish)



**2- Get Answers**  
(Capture Data)



**3- Make Decisions**  
(View & Analyze)

# 2 ways to create a Survey123


Today we will use this method



### Create a New Survey

#### Using the web designer


- Get started quickly
- Best for simple surveys
- Author your survey graphically



Get Started

#### Using Survey123 Connect

- Using a desktop application
- Full smart form capabilities
- Author through XLSForms (spreadsheet)



Get Started

## 2. Create map

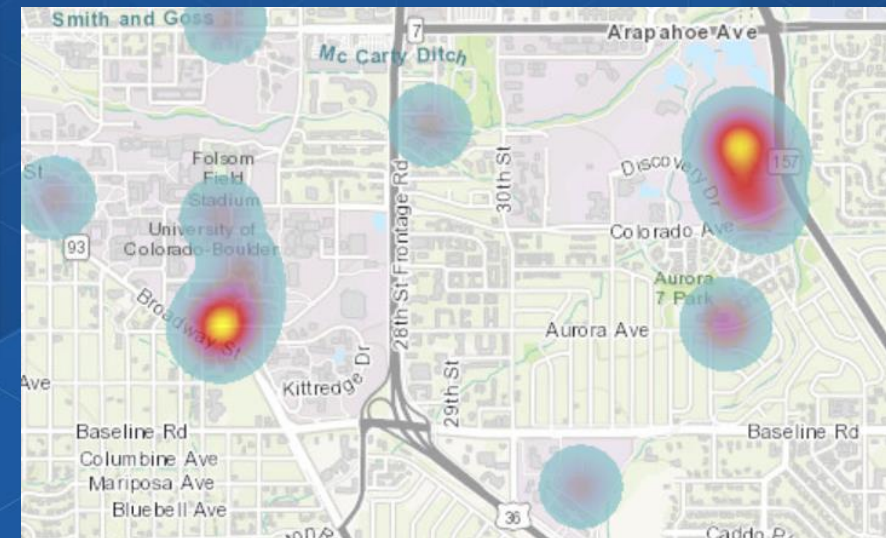
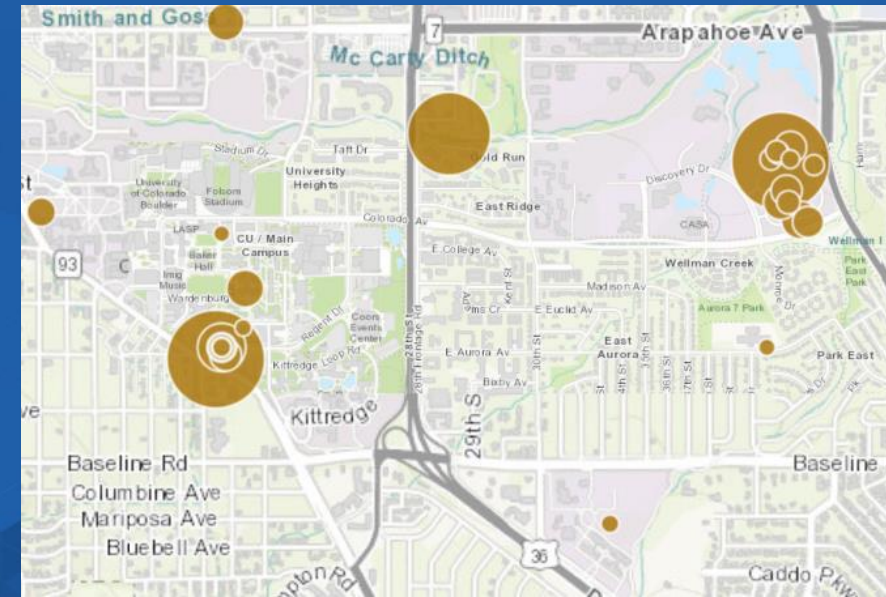
[2a]. Open feature layer (hosted) > fill in metadata.

[2b]. Open layer in ArcGIS Online Map Viewer. Save map.

**The End Goal:**

**Not – points on a map, but *understanding*.**

**Hence, analyze the results spatially.**

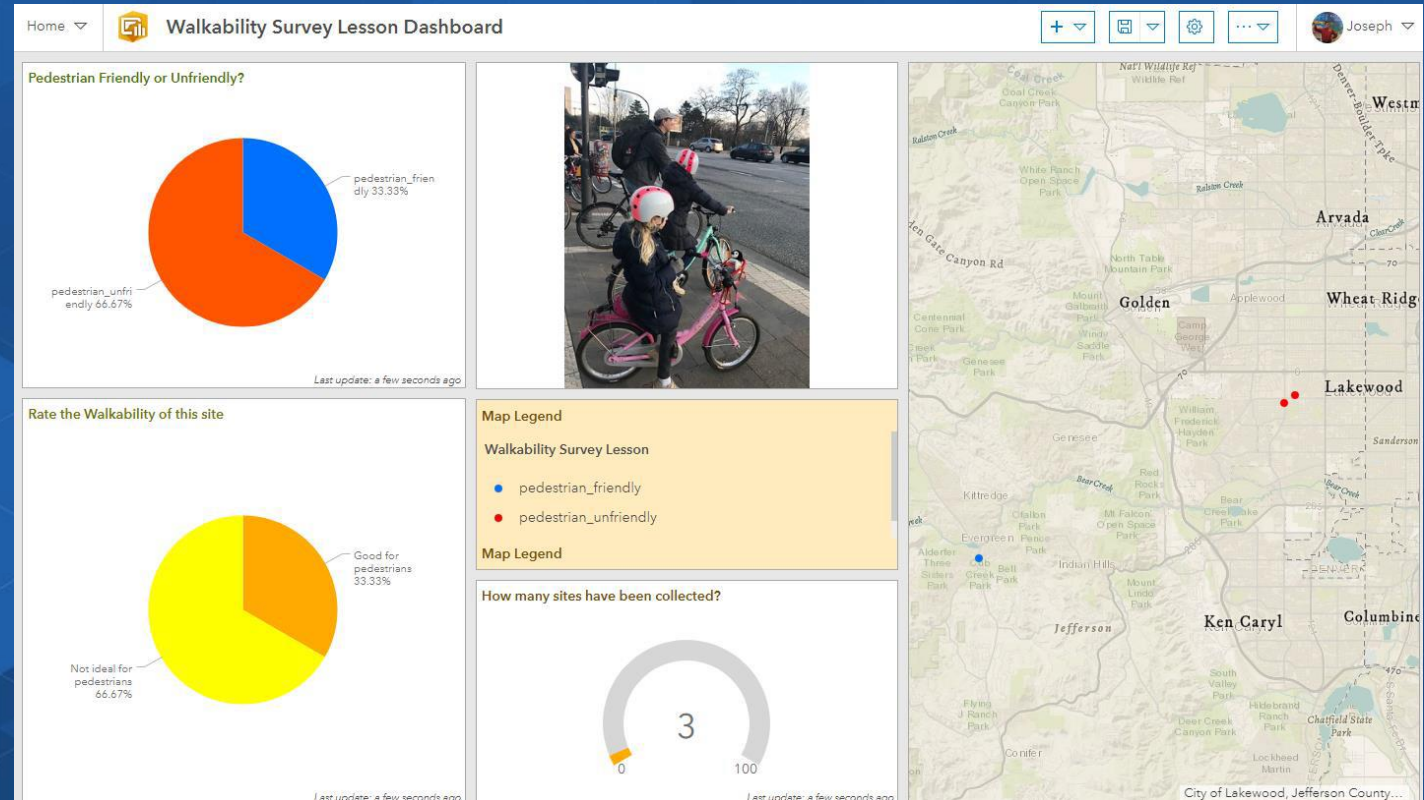


# 3. Create Dashboard

A dashboard allows you and others to quickly visualize your survey results in a series of maps and graphs.

[3a]. While viewing your web map, > Share > Create a web app > Dashboard.

[3b]. Edit your dashboard. Save. Share.

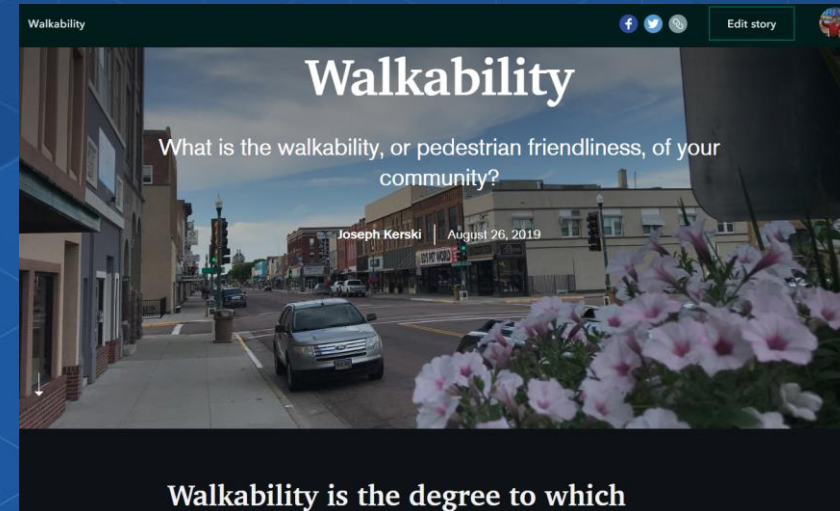
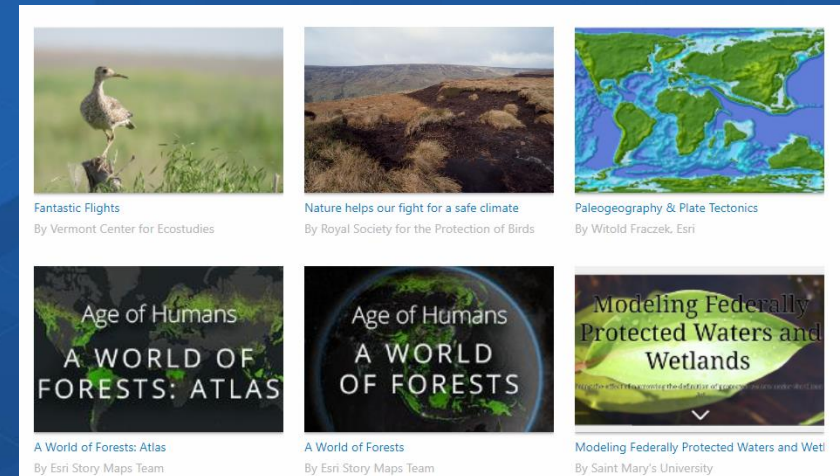


## 4. Create Story Map

A storymap allows you, with multimedia and interactive web maps, to tell the story about the problem you are studying, along with possible solutions.

[4a]. Go to: <https://storymaps.arcgis.com> > Create story map.

[4b]. Add elements to story map > save > share.



# Connect these tools—GIS is a platform!

Embed a survey in a story map:

[The Top 10 beautiful Ports](#)

Use a survey in a dashboard:

Learn Lesson:

[https://www.arcgis.com/home/item.](https://www.arcgis.com/home/item.html?id=856da9aeb6944e3da2384906c7139dea)

[html?id=856da9aeb6944e3da2384](https://www.arcgis.com/home/item.html?id=856da9aeb6944e3da2384906c7139dea)

[906c7139dea](https://www.arcgis.com/home/item.html?id=856da9aeb6944e3da2384906c7139dea)

The screenshot shows a web-based GIS application interface. At the top, the title reads "Happy GIS Day! Can You Name the Top 10 Most Beautiful Ports of the World?". Below the title is a navigation bar with tabs labeled "Start Here", "Port #1", "Port #2", "Port #3", "Port #4", "Port #5", "Port #6", "Port #7", "Port #8", and a menu icon. The main content area is split into two panels. The left panel contains a survey form with the following text: "prize. The deadline to complete the survey is **November 13th**. Winners will be announced during the **GIS Day Celebration on November 14th**. Thanks for participating and enjoy!". Below this is a question: "What is your name or your team's name?\*" with a subtext "First and Last Name (If you are working as a team, please include at least one of the team member's name)" and an empty text input field. The second question is "What is the name of Port #1" with a radio button and the text "Tacoma" next to it. The right panel shows a map of the world with numerous colored dots representing ports. A legend titled "LEGEND" and "Ports of the World" is overlaid on the map, showing four categories: "Large port" (red dot), "Medium port" (orange dot), "Small port" (blue dot), and "Very small port" (yellow dot). The bottom right corner of the map area includes the text "POWERED BY" and the Esri logo, along with a small attribution line: "Esri, HERE, Garmin, NGA, USGS | Esri".

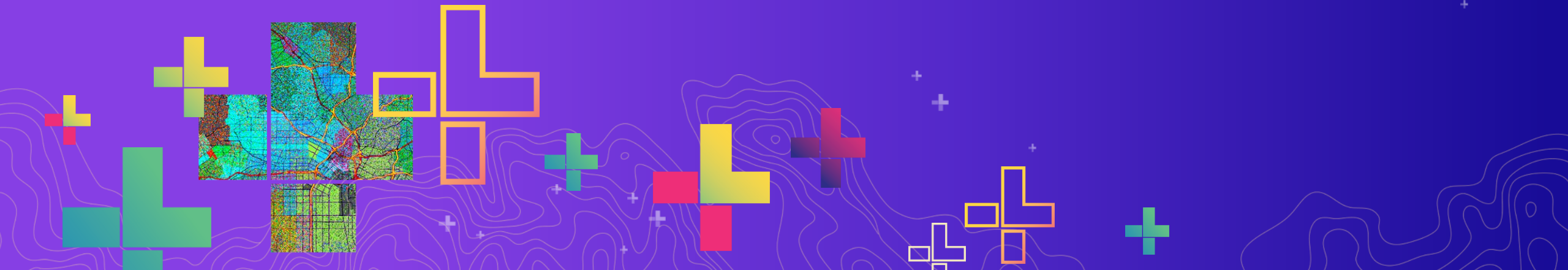
# This Lesson

Connecting surveys, maps, dashboards, storymaps:

<https://community.esri.com/t5/education-blog/new-workshop-and-lesson-on-connecting-surveys-maps/ba-p/1419582>

4-part video series with 30 minutes on each step:

<https://esriurl.com/ourearth>





# Keep learning!

Esri Training: <http://www.esri.com/training> (teaching with GIS, field data collection).

ArcGIS Survey123: <http://survey123.arcgis.com>

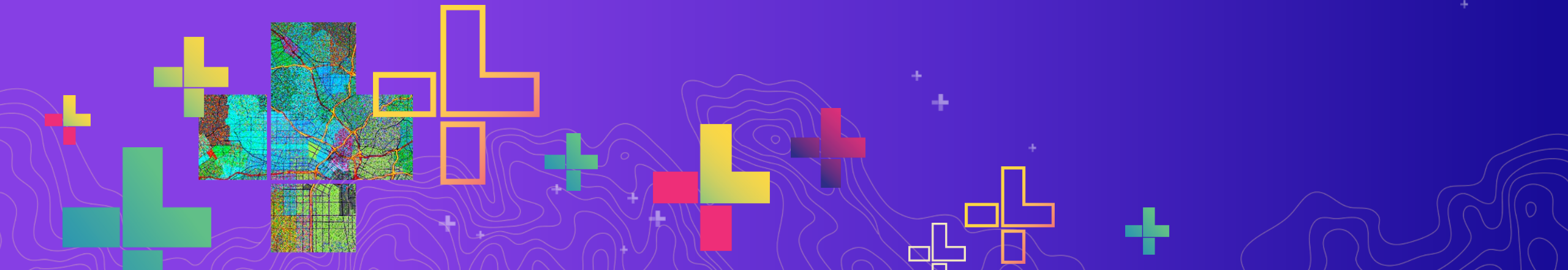
Esri MOOCs: <http://www.esri.com/mooc> (Do-it-yourself web apps).

GeoNet place on Survey123: <https://community.esri.com/groups/survey123>

Learn library of lessons: <https://learn.arcgis.com>

The fantastic 4 apps (story maps, Experience Builder, Dashboards):

<https://storymaps.arcgis.com/stories/b46fcdd8a28945499b4b1eada6936a94>





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