

Bridging the Gap: Integrating R and ArcGIS for Advanced Analysis

Marjean Pobuda

R and RStudio



Introduction to R and RStudio

- R is a statistical powerhouse programming language with thousands of libraries containing various statistical functions. These include functions for:
 - Data aggregation and manipulation
 - Statistical analysis
 - Spatial analysis
 - Vector and raster
 - Data classification and prediction
 - ... and more!
- RStudio is an integrated development environment (IDE) for R that provides a well-designed space to develop scripts, learn about packages and their functions, and visualize plots.

R-ArcGIS Bridge

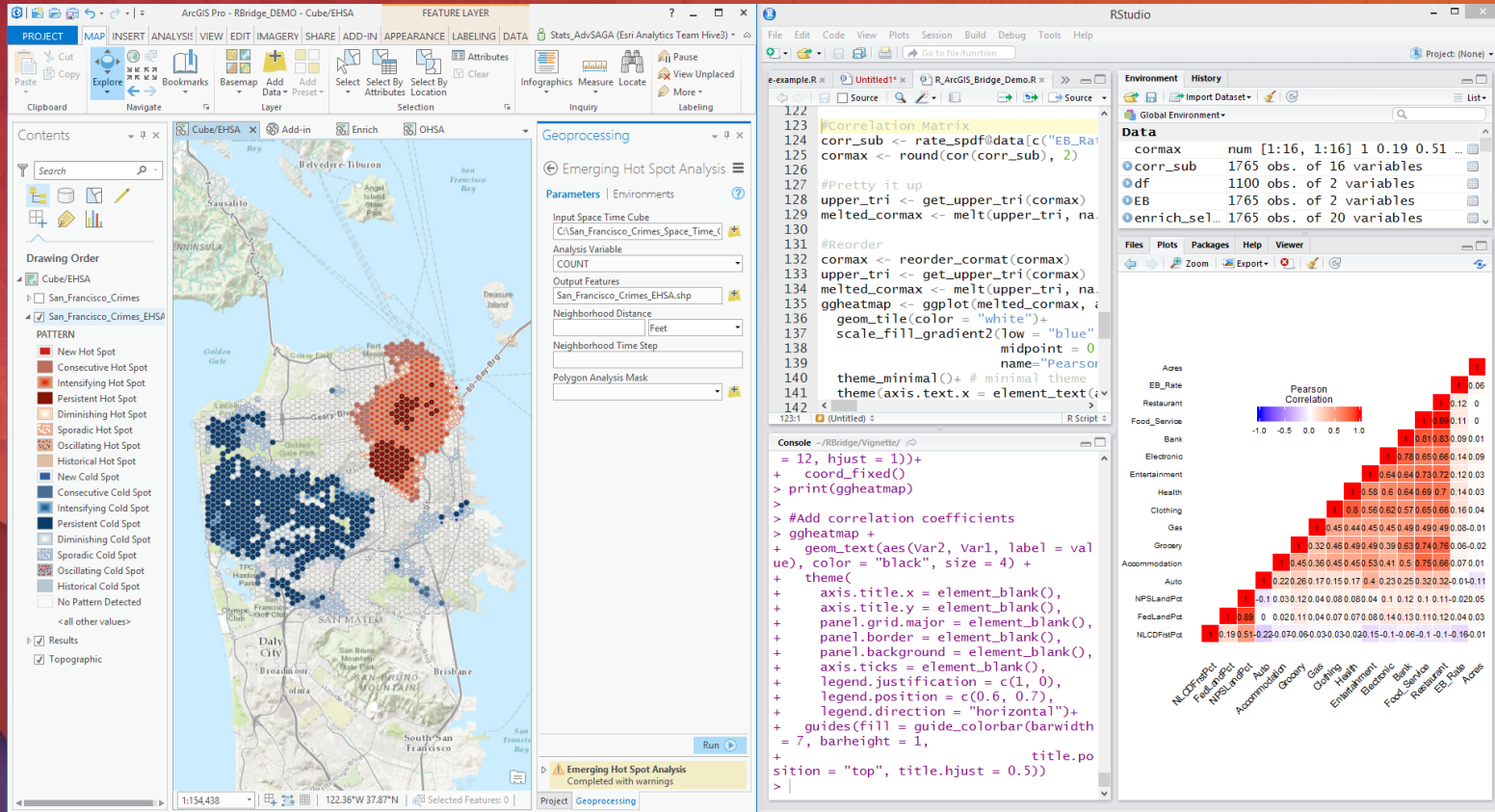


Introduction to the R-ArcGIS Bridge

The R-ArcGIS bridge allows you to connect ArcGIS to R and enables the seamless transfer of data back and forth, along with the ability to create Geoprocessing tools based on R scripts.

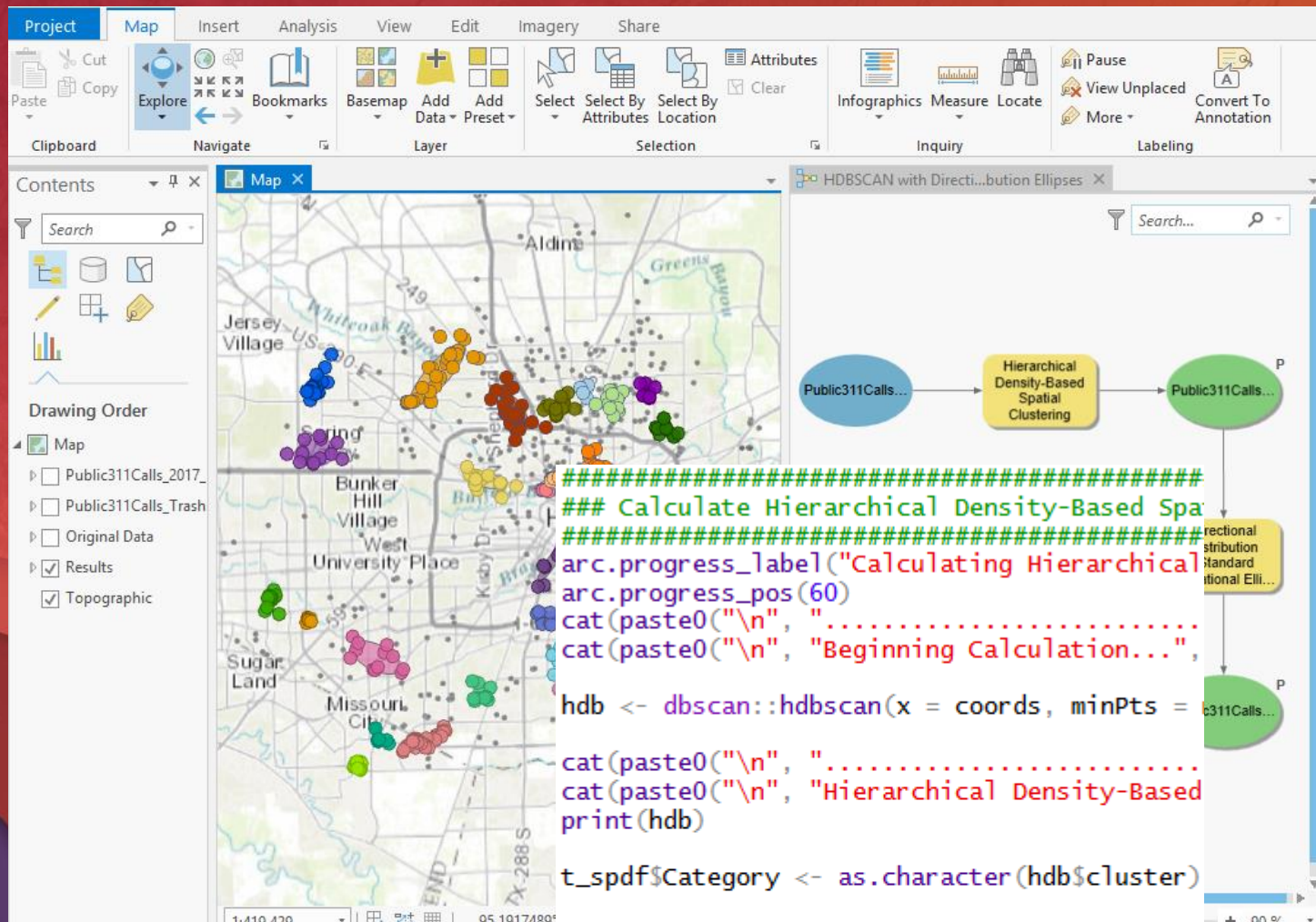
Reasons you might need the bridge:

- A particular tool or action is easier to perform in ArcGIS or R.
- A particular tool or analysis only exists in ArcGIS or R.
- You want to share R functionality with others who are not familiar with R.
- You need easy access to spatial data contained in shapefiles, geodatabases or stored online.



Introducing the R-ArcGIS Bridge

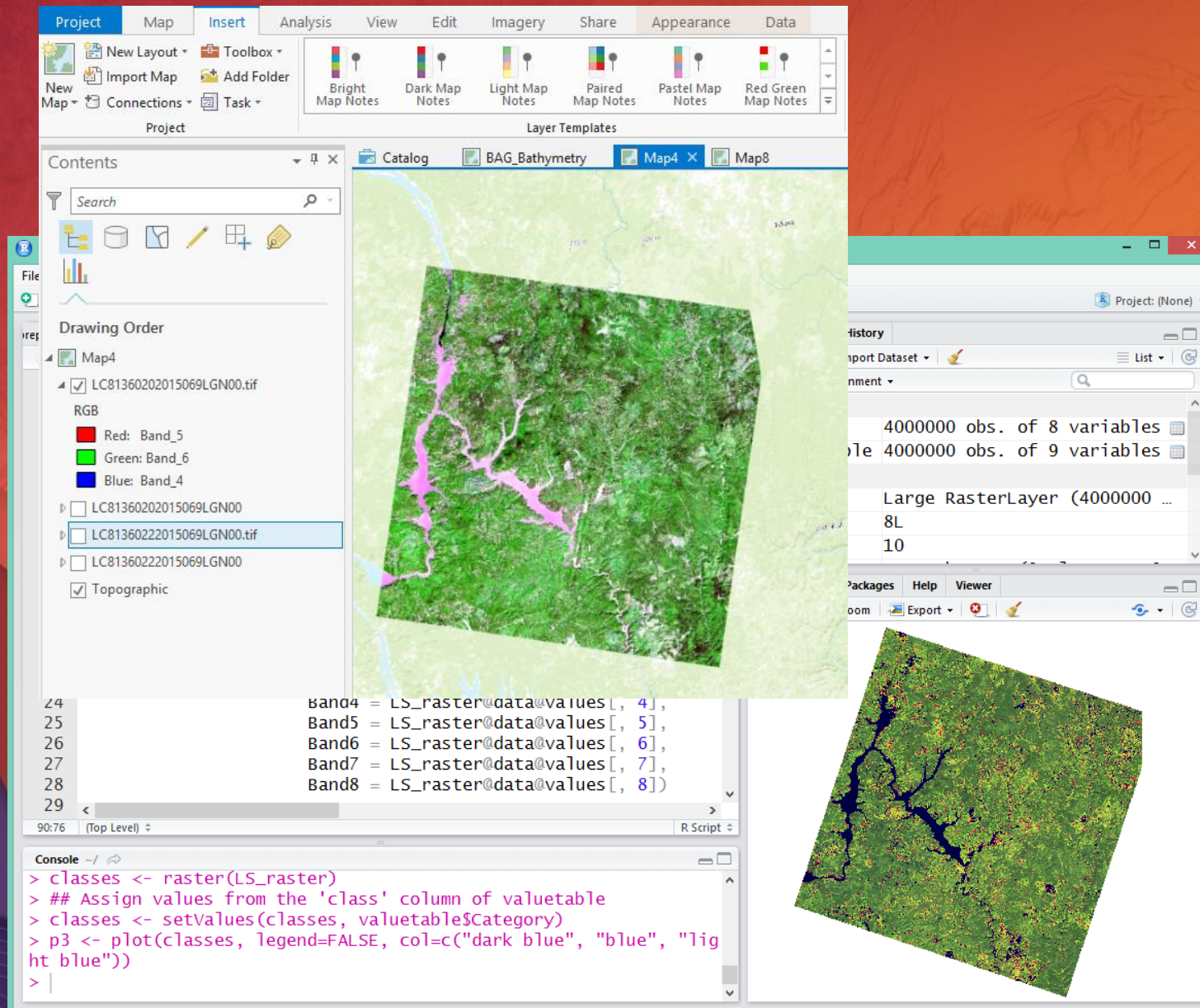
Basic Functionality with Spice



Introducing R Script Tools

Expanding Workflows with Ease





Introducing Raster Functionality

Coming in Pro 2.1

Resources to Learn More

Getting Started:

- Analyzing Crime Using Statistics and the R-ArcGIS Bridge Learn Lesson
(<https://learn.arcgis.com/en/projects/analyze-crime-using-statistics-and-the-r-arcgis-bridge/>)
- Using the R-ArcGIS Bridge Introductory Web Course
(<https://www.esri.com/training/catalog/58b5e417b89b7e000d8bfe45/using-the-r-arcgis-bridge/>)

Creating R Script Tools:

- Integrating R Scripts into Geoprocessing Tools Web Course
(<https://www.esri.com/training/catalog/58b5e578b89b7e000d8bffd/integrating-r-scripts-into-arcgis-geoprocessing-tools/>)
- **arcgisbinding** Package Vignette
(<https://r-arcgis.github.io/assets/arcgisbinding-vignette.html>)

The R-ArcGIS Community

GitHub (<https://r-arcgis.github.io/>)

- Detailed information on the R-ArcGIS bridge installation.
- Community-based script tools and projects for collaboration.

GeoNet (<https://geonet.esri.com/groups/rstats>)

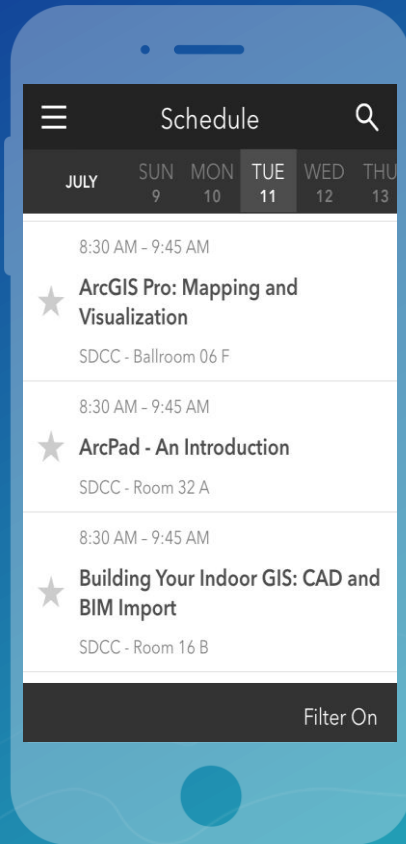
- Community support forums on questions or ideas you have.
- Additional resources like blogs, demo videos, and slides.

Please Take Our Survey on the Esri Events App!

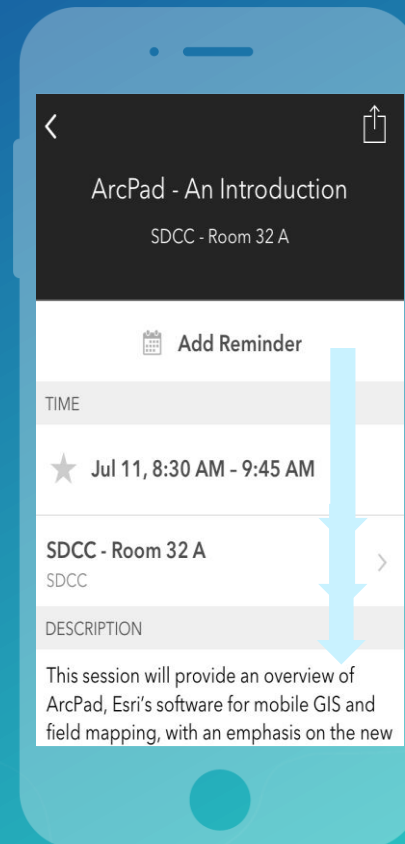
Download the Esri Events app and find your event



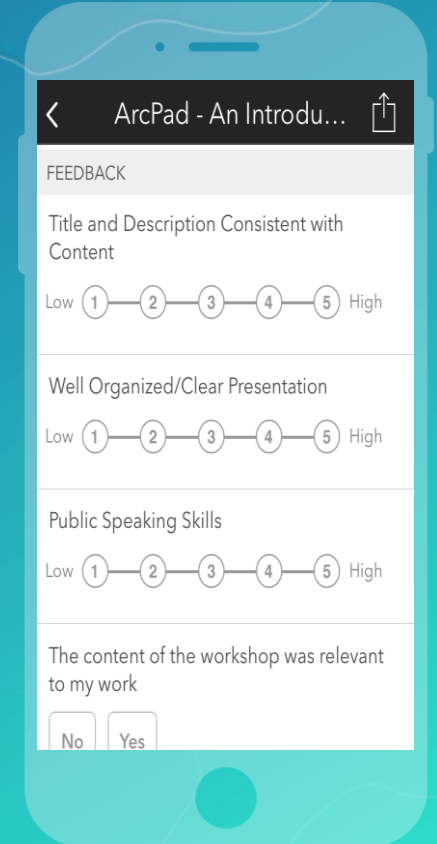
Select the session you attended



Scroll down to find the survey



Complete Answers and Select "Submit"

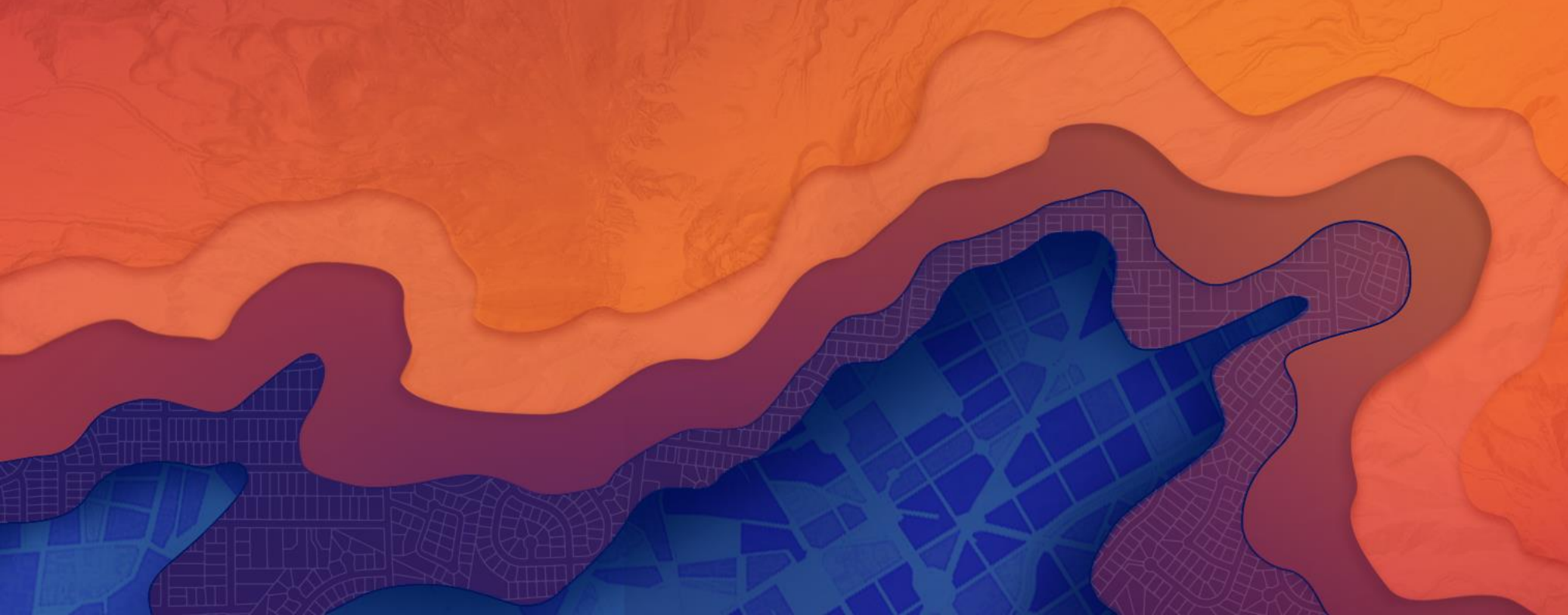





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Presenter Resources



Aspect Ratio Test

A large white circle is centered on the slide, serving as a visual reference for the aspect ratio test.

If this shape does not appear as a perfect circle, adjust the aspect ratio of your display until it does.

Try the resolution 1920x1080 for 16:9 displays.