



Mapping with Modern GIS

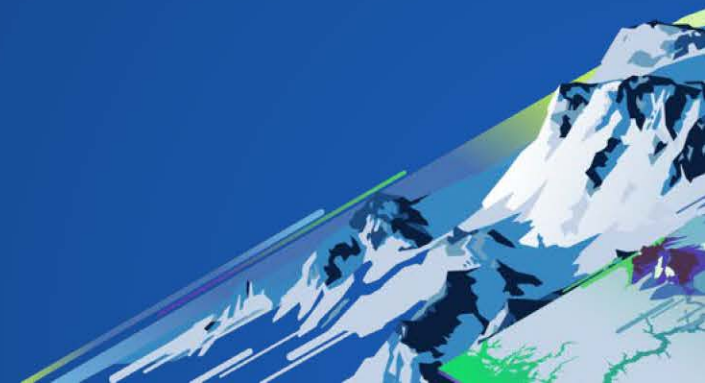
Aileen Buckley, Ph.D.
Mark Cygan

2024 IMIA Mapping Leader's Forum



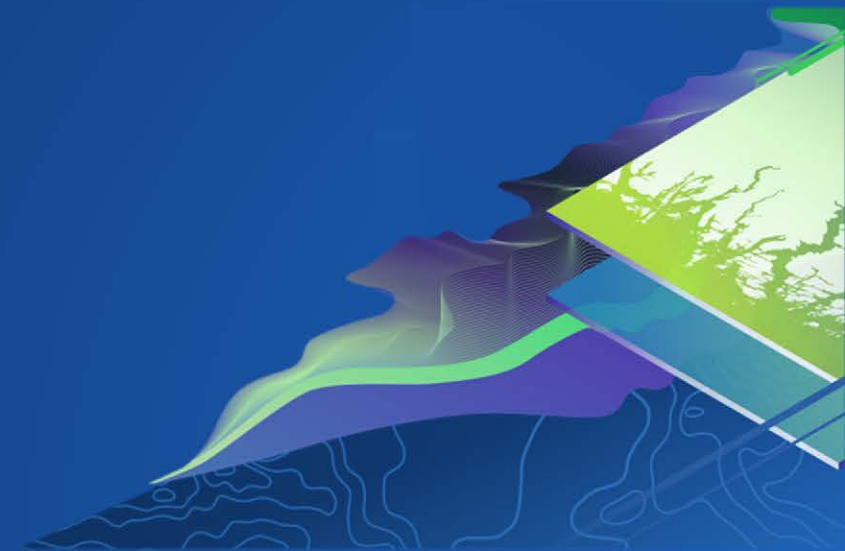
Agenda

- 11:00-12:30 – Mapping with Modern GIS - Aileen Buckley & Mark Cygan
- 12:30-1:30 – Lunch
- 1:30-2:00 – Trust and Value of Geospatial Data in Mapping and Society - Georg Gartner & Mark Cygan
- 2:00-2:30 – Networking Break
- 2:30-3:30 – IMIA Workshop | Building Trust in the Map Industry
- 3:30 – Closing Remarks – Bridger DeVille

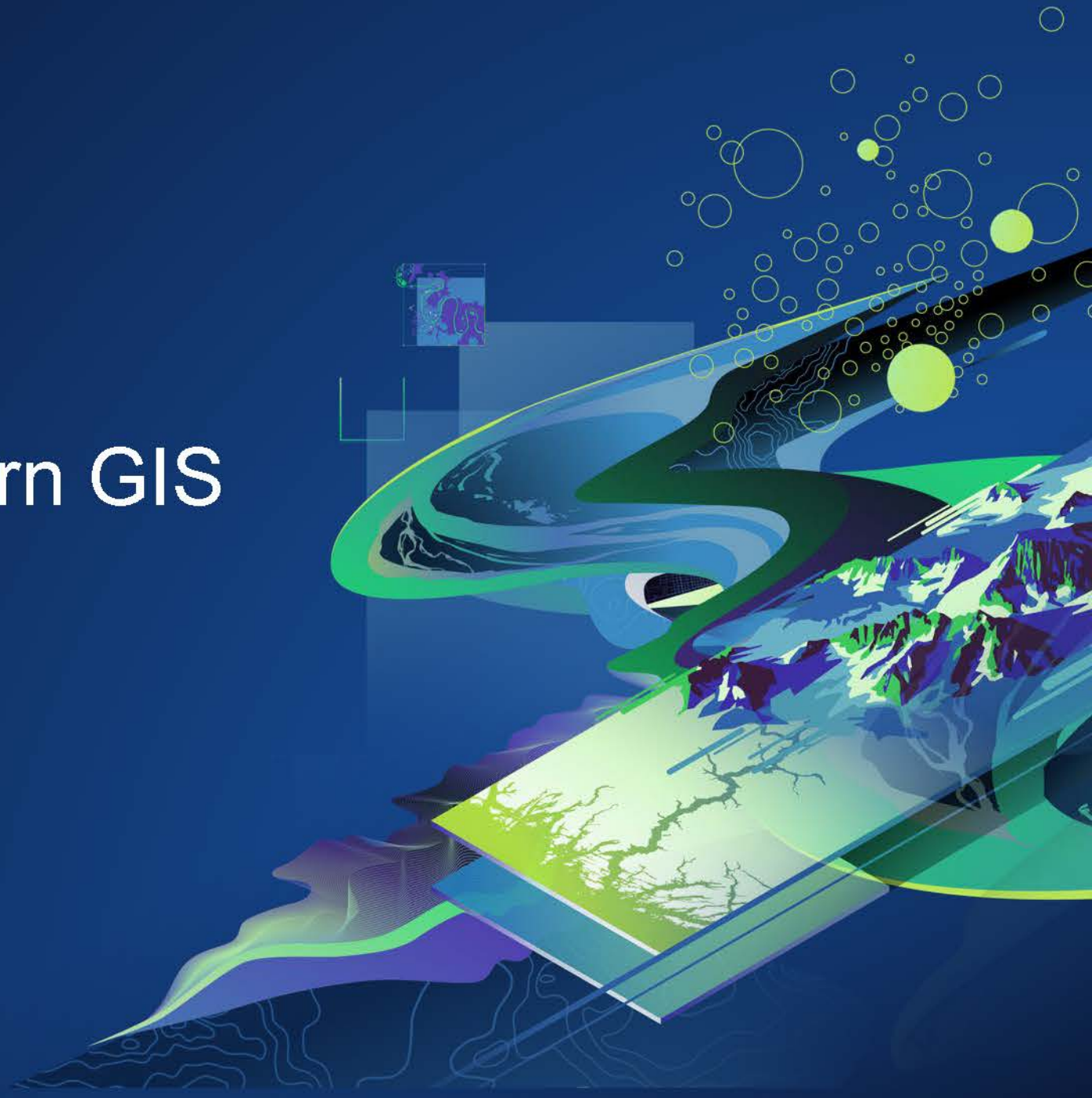


This session

- Mapping with Modern GIS – Aileen Buckley
- ArcGIS Maps for Adobe Creative Cloud – Mark Cygan
- Ethics in the Mapping Industry – Aileen Buckley



Mapping with Modern GIS



Maps in the world today

From Alan MacEachren in his 2021 ICA Mannerfelt Gold Medal acceptance speech

- Maps are **central to geospatial decisions** made by organizations and individuals
- Maps have become **ubiquitous**
- **Map making tools** are widely available and even free



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Mapping in the world today

- It's easy to **make maps**

- The **data** for mapping is easy to access and often free
- Map making **tools** are widely available and even free
- The **skills** to use the tools are minimal

- It's easy to **share maps**

- In print, on the web, through social media



ANNOUNCEMENTS

Esri and National Geographic Society Launch National Geographic MapMaker

Esri Insider

November 15, 2023

Newly Updated Online Interactive Mapping Tool Empowers Students, Teachers, and Individuals Everywhere to Explore the World through Geography

REDLANDS, Calif.–November 15, 2023—By learning about mapping skills and geography, students, teachers, and others can gain a better understanding of how the world's most crucial issues, challenges, and opportunities fit into the context of place. In celebration of [GIS Day](#) and as part of Geography Awareness Week, [Esri](#), the global leader in geographic information system (GIS) technology, and the [National Geographic Society \(NGS\)](#), the global nonprofit organization, have launched the reimaged [National Geographic MapMaker](#).

Developed in partnership with Esri, MapMaker is National Geographic's online mapping tool that uses the latest in GIS software to connect classrooms and individuals with essential geographic information and technology for exploration and education. With this web-based 2D and 3D app, anyone can visually experience and interact with geospatial information about Earth's interconnected social and physical systems while also exploring the art of mapmaking.



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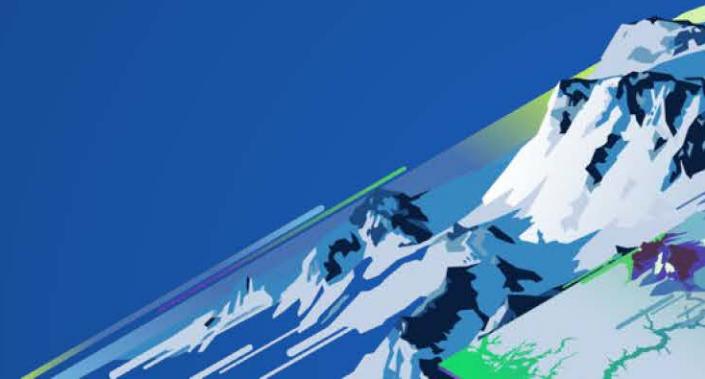
The **democratization of cartography**

- It's easy to **make maps**

- The **data** for mapping is easy to access and often free
- Map making **tools** are widely available and even free
- The **skills** to use the tools are minimal

- It's easy to **share maps**

- In print, on the web, through social media





The Cartographic Journal >
The World of Mapping
Volume 37, 2000 - Issue 1

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Journal homepage

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Views

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CrossRef citations to date

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Altmetric

Refereed Papers

Automation & Cartography: System at CE

Naresh Kumar

Pages 65-77 | Published online: 18 Ju

Cite this article https://doi.org/10.1080/00291950120034

References Citations Metrics

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Abstract

Over the last three decades technological advances have... Recently, the major emphasis is on 'democratising cartography', where individual users have developed tools to analyse and visualise geographical data (Kumar, 1994). But, an ordinary user

Article

An agenda for democratising cartography

January 2001 · Norsk Geografisk Tidsskrift 55(1)

January 2001 · 55(1)

DOI:10.1080/00291950120034

Authors:



Jan Ketil Rød

Norwegian University of Science and Tech...



Ferjan Ormeling

Utrecht University and University of Amst...

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Citations (40)

References (20)

Abstract

Cartographic visualisation tools aid exploration, but not exclusively by experts. A democratised visualisation tool for non-specialist users, and these non-specialists might also want to visualise their geographical data. In this paper, we discuss the development of a tool that has a functionality similar to visualisation tools and can be developed in order to do so. Our emphasis is on the development of methods and on elaborating principles for implementing democratised GISs.



News

Explore Topics

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UW in the News

Technology helps foster 'democratization of cartography'

September 20, 2006 By Brian Mattmiller

Mark Harrower recalls a raging debate in his field in the 1970s when geographers worried that commercial map-making software would lead to the demise of cartography.

The argument went like this: "Great, now anyone without an artistic or artistic skill can make a map."

But rather than sully the field, Harrower says the new technology – combined with the explosion of availability of geospatial information – is fueling one of the most exciting eras in his profession, where map-making has become a populist pursuit.

"One of the themes of my profession right now is the democratization of cartography," Harrower says, adding that the impact is comparable to how bloggers have influenced publishing. "Mapping used to be a niche activity, but now it's a mainstream pursuit."



Mapping in the world today

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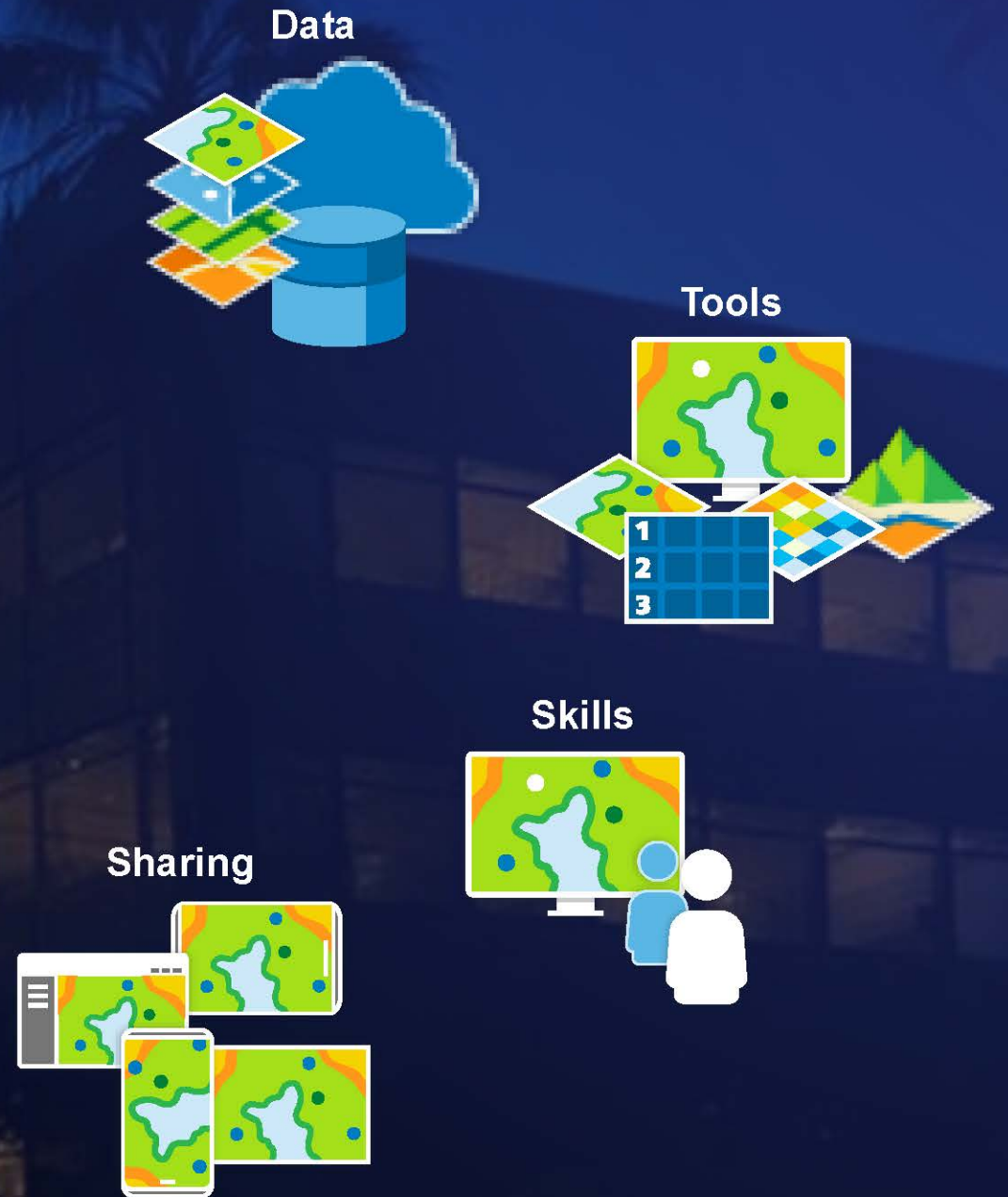
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Mapping in the world today







Mapping with modern GIS



Data



Tools



Skills



Sharing



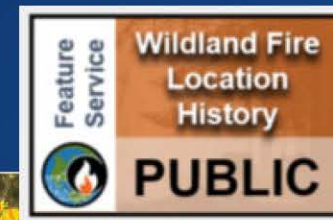
Data



ArcGIS offers an ecosystem of shared content

Enabling a global geospatial infrastructure of useful and authoritative content

- User shared apps, maps, and data...



- Millions of Public Items
- Billions of Views Yearly
- Thousands More Daily



... on many topics

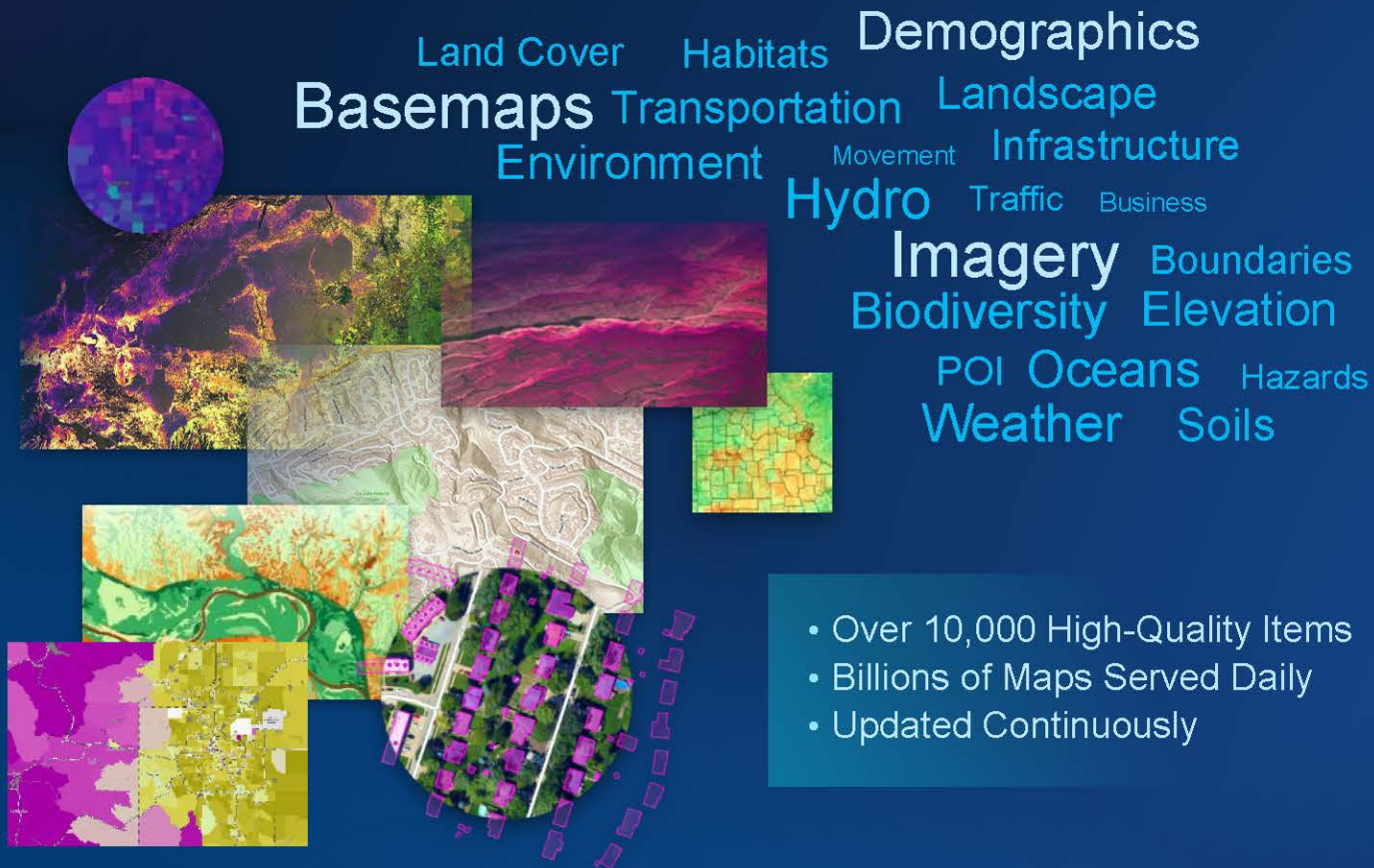
New & Noteworthy

- U.S. Census – My Community
- U.S. Weather Service – Drought
- Trust for Public Land – Heat Isles
- National Parks of Canada
- Alaska DHS Vaccine Data
- New Jersey Muni Energy Use
- Virginia DOT – Traffic Volume
- DC Opportunity Zones (OZ)
- LA Metro Equity Index
- City of Tucson Climate Action
- City of Calgary – Dev Permits

Built by and for the ArcGIS Community

ArcGIS includes a Living Atlas of the World

Curated collection of ready-to-use maps, layers, and apps



Land Cover Habitats Demographics
Basemaps Transportation Landscape
Environment Movement Infrastructure
Hydro Traffic Business
Imagery Boundaries
Biodiversity Elevation
POI Oceans Hazards
Weather Soils

- Over 10,000 High-Quality Items
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- Updated Continuously



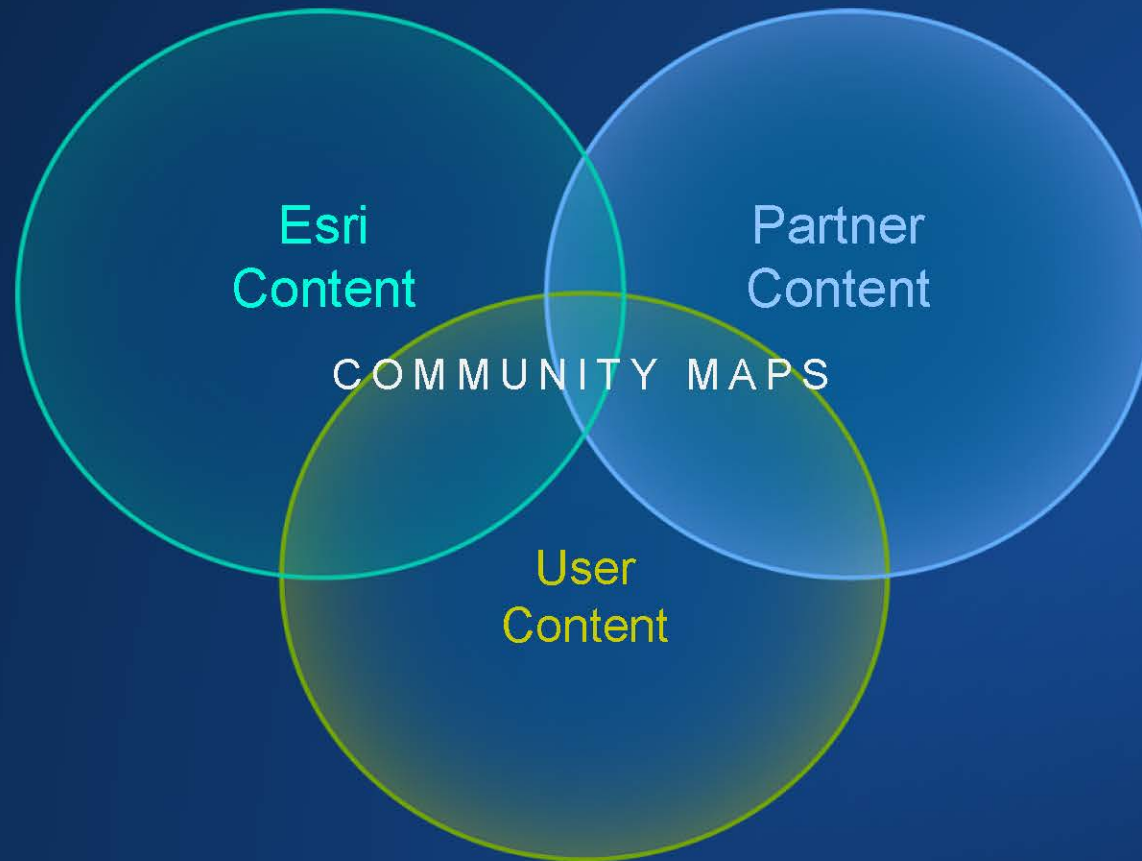
New & Improved

- Global 3D Basemaps & Layers
- Global Land Use (2017-2021)
- Global Places (POIs) Layers
- Global OpenStreetMap Layers
- U.S. Geologic Survey NHDplus
- U.S. Census ACS (2017-2021)
- U.S. DOT National Addresses
- U.S. FCC Broadband Data
- U.S. NAIP Imagery (2021)
- Analysis-Ready Imagery
- Global Climate Layers
- WorldPop 2000-2020
- Global Air Quality
- . . . and Many More

Built from Best Available Commercial and Community Sources

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Built by the ArcGIS Community and curated by Esri



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Esri contributions to ArcGIS Living Atlas

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Basemaps & OpenStreetMap

Living Atlas Website & Apps

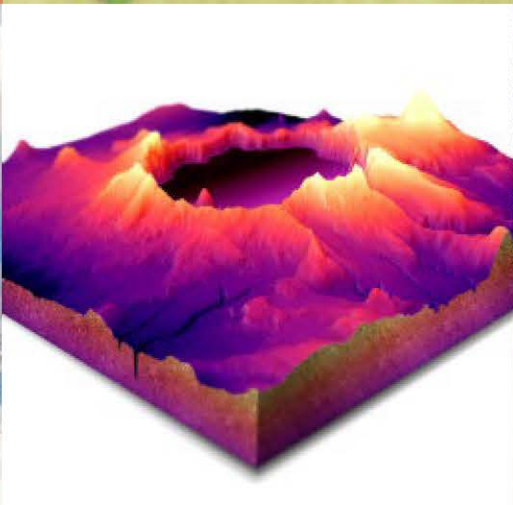
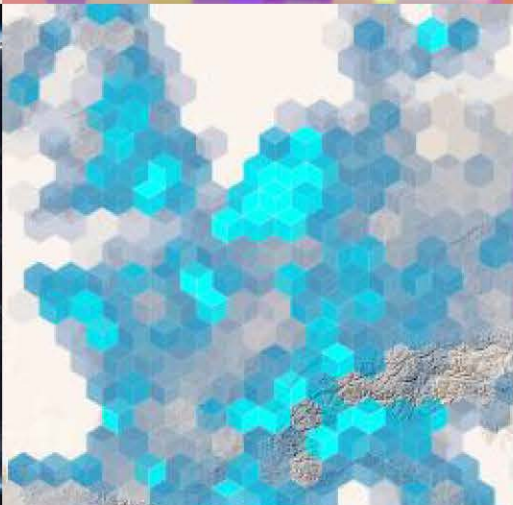
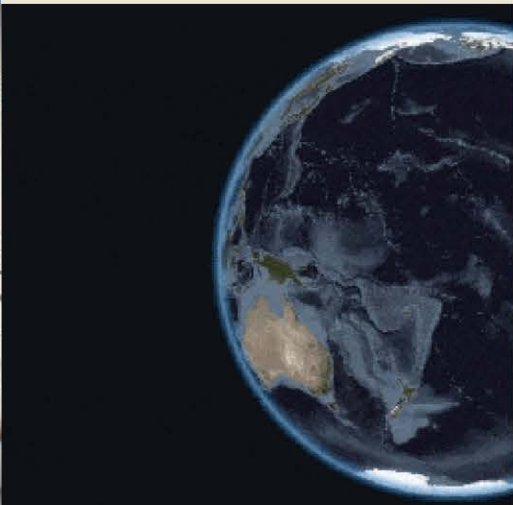
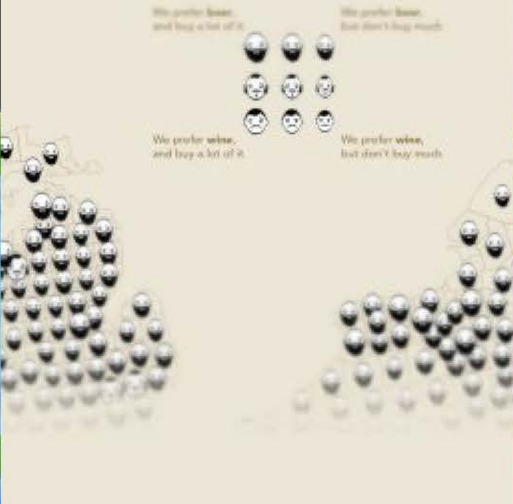
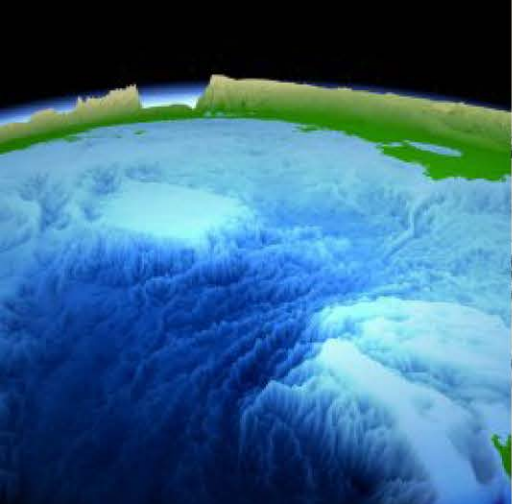
Imagery & Elevation

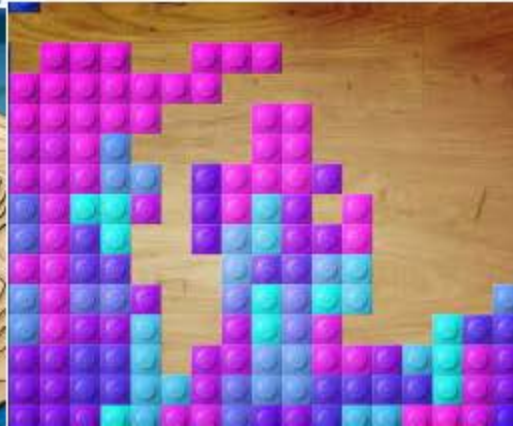
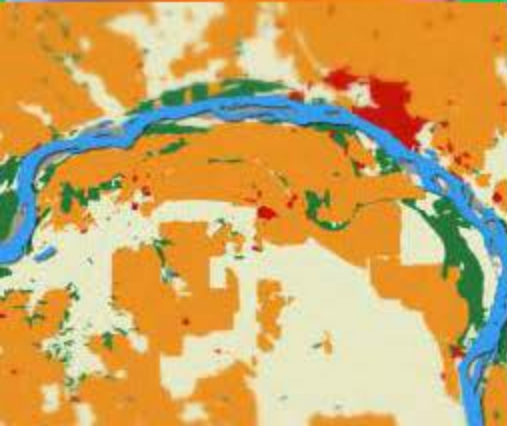
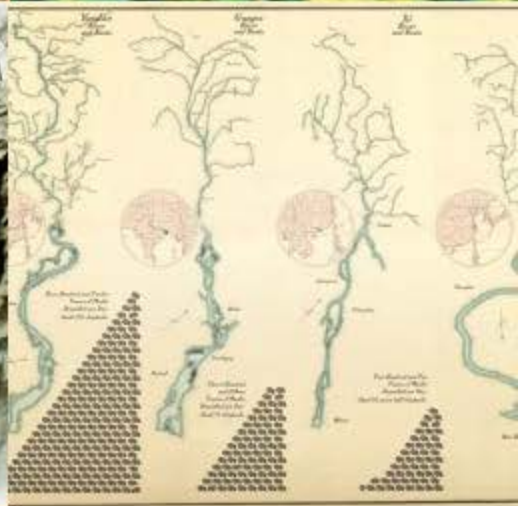
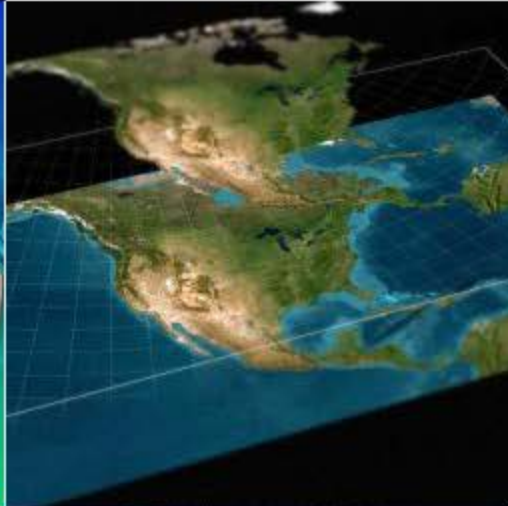
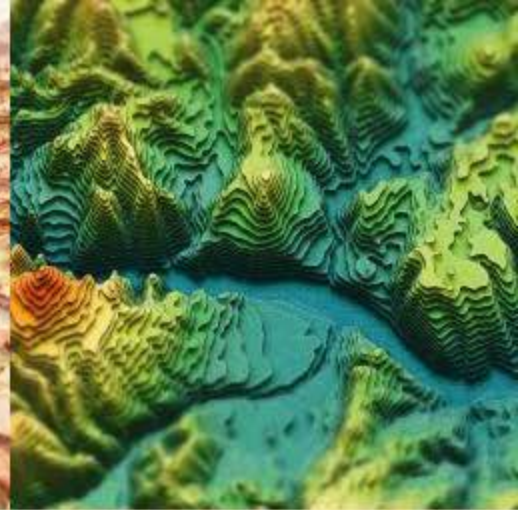
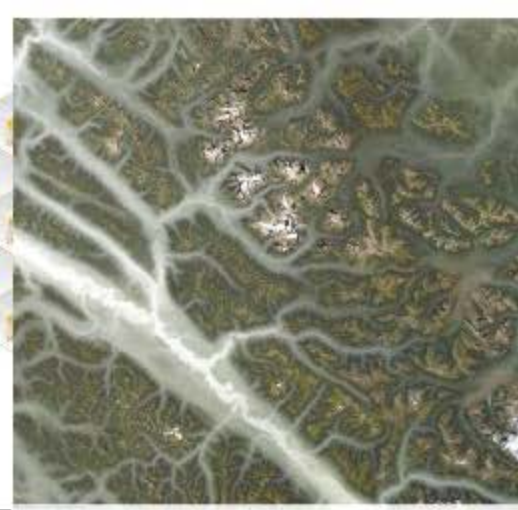
Demographics & Boundaries



Tools









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Authoritative



Recent Earthquakes

Feature Service By [esri_livefeeds2](#)

This service presents recent earthquake information from the USGS Prompt Assessment of Global Earthquakes for Response (PAGER) program.



Active Hurricanes, Cyclones and Typhoons

Feature Service By [esri_livefeeds2](#)

This layer describes the observed path, forecast track, and intensity of tropical cyclone activity (hurricanes, typhoons, cyclones) from the National Hurricane Center (NHC) and Joint Typhoon Warning Center (JTWC).

Authoritative



USA Current Wildfires

Feature Service By [esri_livefeeds2](#)

This layer shows wildfires that have been updated within the past 7 days in the United States from IRWIN and NIFC information.



USA Weather Watches and Warnings

Feature Service By [esri_livefeeds2](#)

A live data feed from the National Weather Service containing official weather warnings, watches, and advisory statements for the United States.

Authoritative



Authoritative



Recent Hurricanes, Cyclones and Typhoons

Feature Service By [esri_livefeeds2](#)

This layer features tropical storm (hurricanes, typhoons, cyclones) tracks, positions, and observed wind speeds from the past hurricane season.



Sentinel-2 Views

Image Service By [esri](#)

Sentinel-2, 10m Multispectral, Multitemporal, 13-band images with visual enhancements and indices. This layer is derived from the Sentinel-2 satellite.



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All



Trending



Basemaps



Imagery



Boundaries



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Tools



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Building Footprint Extraction - USA

Deep Learning Package By [esri_analytics](#)

Deep learning model to extract building footprints from high-resolution aerial and satellite imagery.

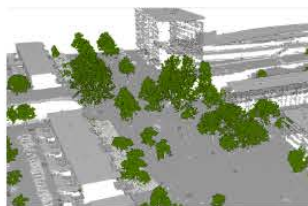
Authoritative



Segment Anything Model (SAM)

Deep Learning Package By [esri_analytics](#)

Meta's Segment Anything Model (SAM) for segmenting objects in any imagery.



Tree Point Classification

Deep Learning Package By [esri_analytics](#)

Deep learning model to classify point cloud into trees or background.

Authoritative



Text SAM

Deep Learning Package By [esri_analytics](#)

Deep learning model to detect objects using text prompts.



Textured Buildings from Footprint by Land Use

Rule Package By [esri_3d](#)

Creates 3D buildings with repeating photo-textured façades from building footprints.



Land Cover Classification (Landsat 8)

Deep Learning Package By [esri_analytics](#)

Deep learning model to perform land cover classification on Landsat 8 imagery.



Water Body Extraction (SAR) - USA

Deep Learning Package by esri_analytics

Deep learning model to extract water bodies from Sentinel-1 data.



Blocks and Streets Extraction - KSA

Deep Learning Package By esrisaudi_ai

Deep learning model to extract Blocks and Streets from high-resolution aerial and satellite imagery.



Joint Military Symbology MIL-STD-2525B Change 2

Style By esri_webstyles

An ArcGIS web Style for use with ArcGIS applications that incorporate the MIL-STD-2525B Change 2 symbol dictionary.

Authoritative



Building Footprint Extraction - China

Deep Learning Package By esri_analytics

Deep learning model to extract building footprints in China from high-resolution aerial or satellite imagery.



Cross Stitch style for ArcGIS Pro

Desktop Style by JohnMNelson_esristyles

A style for ArcGIS Pro that turns your maps into plausibly-realistic tapestries. Make engaging needlepoint maps with these point, line, and label symbols.



non std address	Result
1. 15. avenue royale north-east, macdonald rd, ca	15. avenue royale north-east, macdonald rd, ca
2. 10. avenue royale north-east, macdonald rd, ca	10. avenue royale north-east, macdonald rd, ca
3. 10. avenue royale north-east, macdonald rd, ca	10. avenue royale north-east, macdonald rd, ca
4. 1525th ave north-east, macdonald rd, ca	1525th ave north-east, macdonald rd, ca
5. 15. avenue royale north-east, macdonald rd, ca	15. avenue royale north-east, macdonald rd, ca
6. 15. avenue royale north-east, macdonald rd, ca	15. avenue royale north-east, macdonald rd, ca
7. 15. avenue royale north-east, macdonald rd, ca	15. avenue royale north-east, macdonald rd, ca
8. 15. avenue royale north-east, macdonald rd, ca	15. avenue royale north-east, macdonald rd, ca
9. 15. avenue royale north-east, macdonald rd, ca	15. avenue royale north-east, macdonald rd, ca
10. 15. avenue royale north-east, macdonald rd, ca	15. avenue royale north-east, macdonald rd, ca
11. 15. avenue royale north-east, macdonald rd, ca	15. avenue royale north-east, macdonald rd, ca
12. 15. avenue royale north-east, macdonald rd, ca	15. avenue royale north-east, macdonald rd, ca
13. 15. avenue royale north-east, macdonald rd, ca	15. avenue royale north-east, macdonald rd, ca
14. 15. avenue royale north-east, macdonald rd, ca	15. avenue royale north-east, macdonald rd, ca
15. 15. avenue royale north-east, macdonald rd, ca	15. avenue royale north-east, macdonald rd, ca

Address Standardization

Deep Learning Package By esri_analytics

Deep Learning model to transform non-standard address to standard address.



Pen and Ink style for ArcGIS Pro

Desktop Style By JohnMNelson_esristyles

A plausibly realistic pen and ink effect for your ArcGIS Pro cartography.



Terrain Ruggedness Index (TRI)

Raster function template by esri_analytics

Terrain Ruggedness Index (TRI) highlights the amount of elevation difference between adjacent cells of a digital elevation model (DEM).



Water World style for ArcGIS Pro

Desktop Style By JohnMNelson_esristyles

A beveled water polygon style. Sounds boring, but it's fun and probably somewhat handy.



Atmospherically Resistant Vegetation Index (ARVI)

Raster function template By esri_analytics

Atmospherically Resistant Vegetation Index (ARVI) minimizes the effects of atmospheric scattering for visualization.

ArcGIS Maps for Adobe Creative Cloud

Design with data-driven maps

Mark Cygan



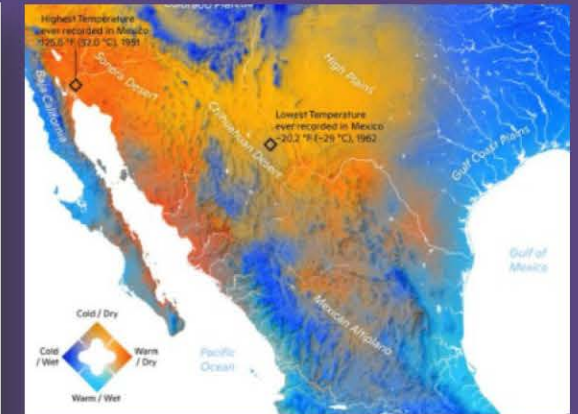
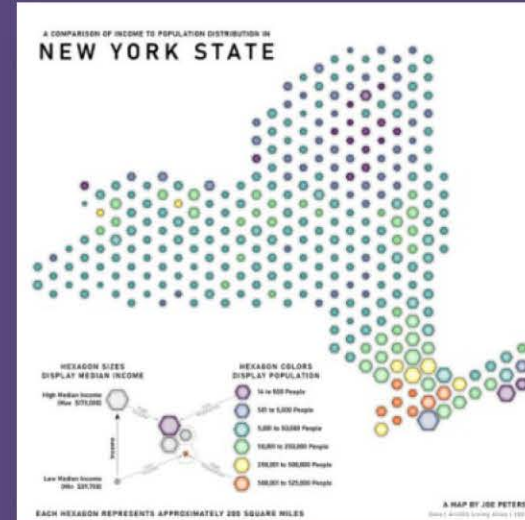
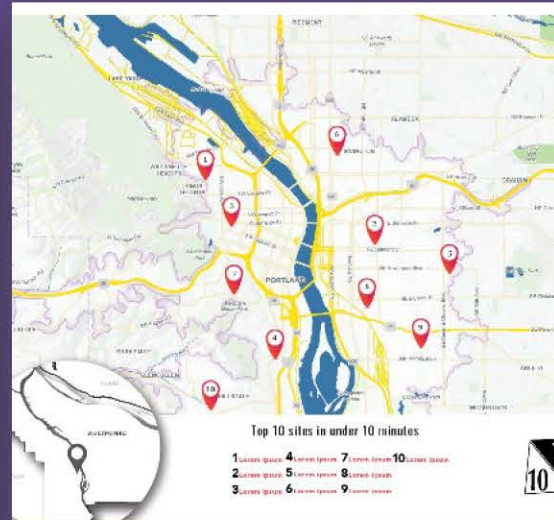
ArcGIS Maps for Adobe Creative Cloud



Topics

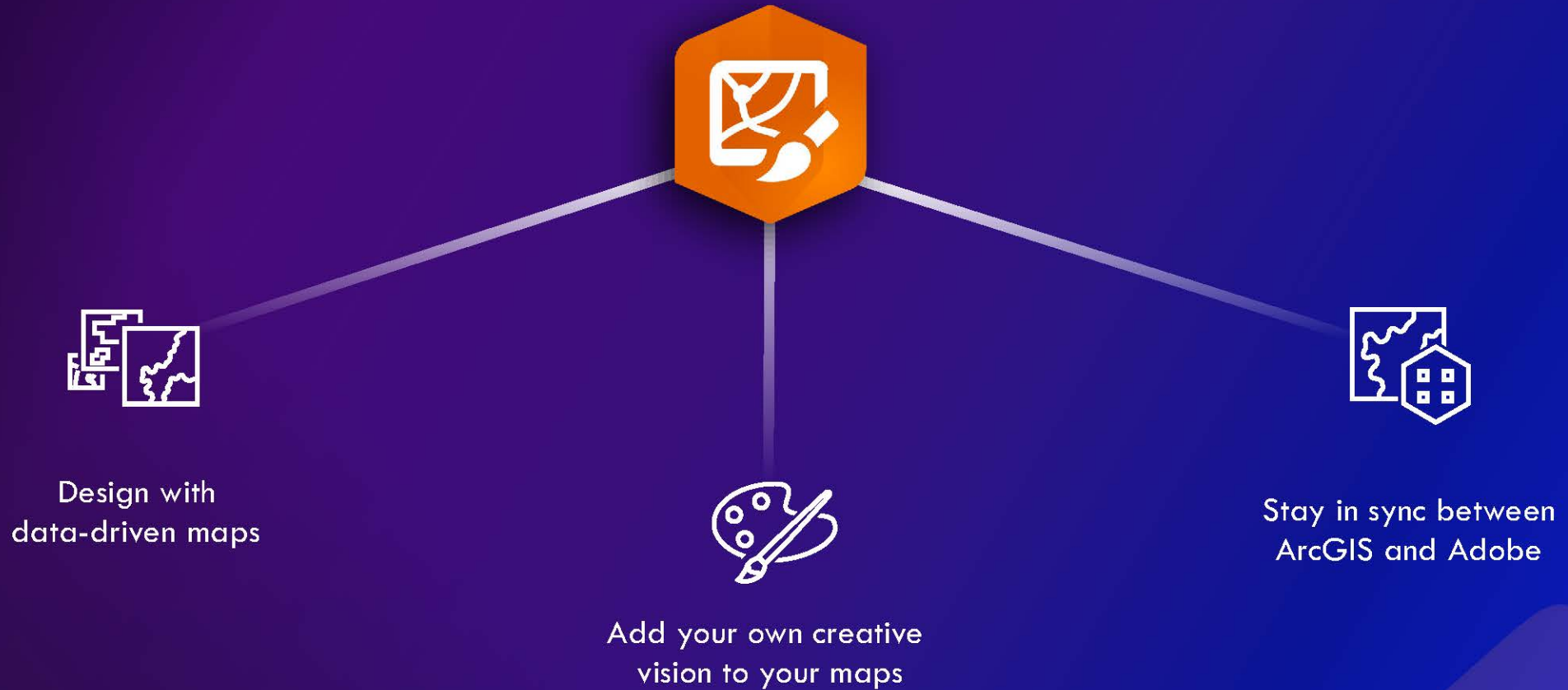
- Overview of ArcGIS Maps for Adobe Creative Cloud
- Empowering GIS Professionals, Cartographers, and Designers
- The Power of ArcGIS Maps for Adobe Creative Cloud
- Customer Success Stories Using the Plugin
- Create Maps Directly with Plugin Interface
- Design with ArcGIS Pro Maps & Layouts
- How-to with ArcGIS Maps for Adobe Creative Cloud
- Key Takeaways

Overview | ArcGIS Maps for Adobe Creative Cloud



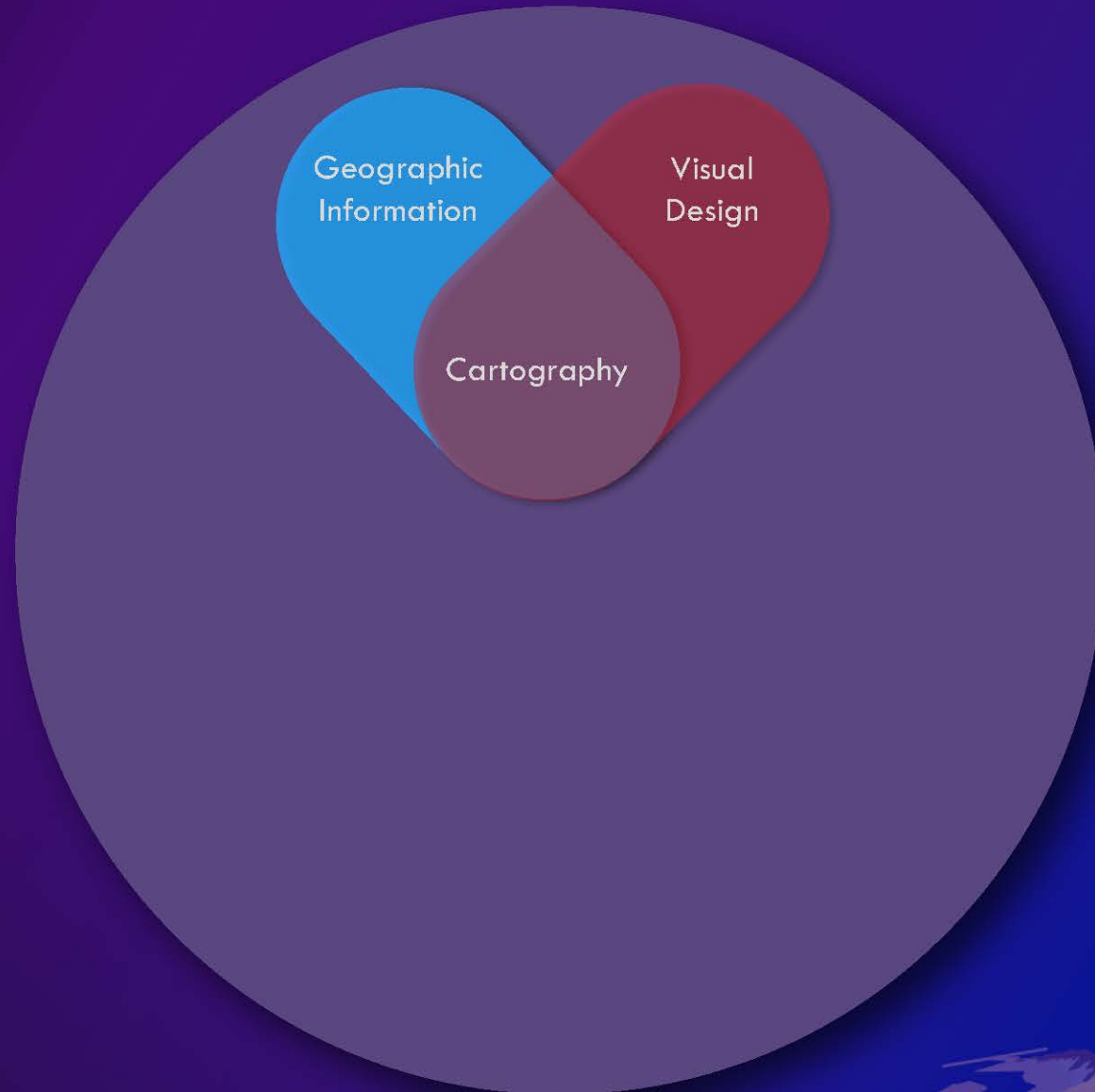


Overview | ArcGIS Maps for Adobe Creative Cloud



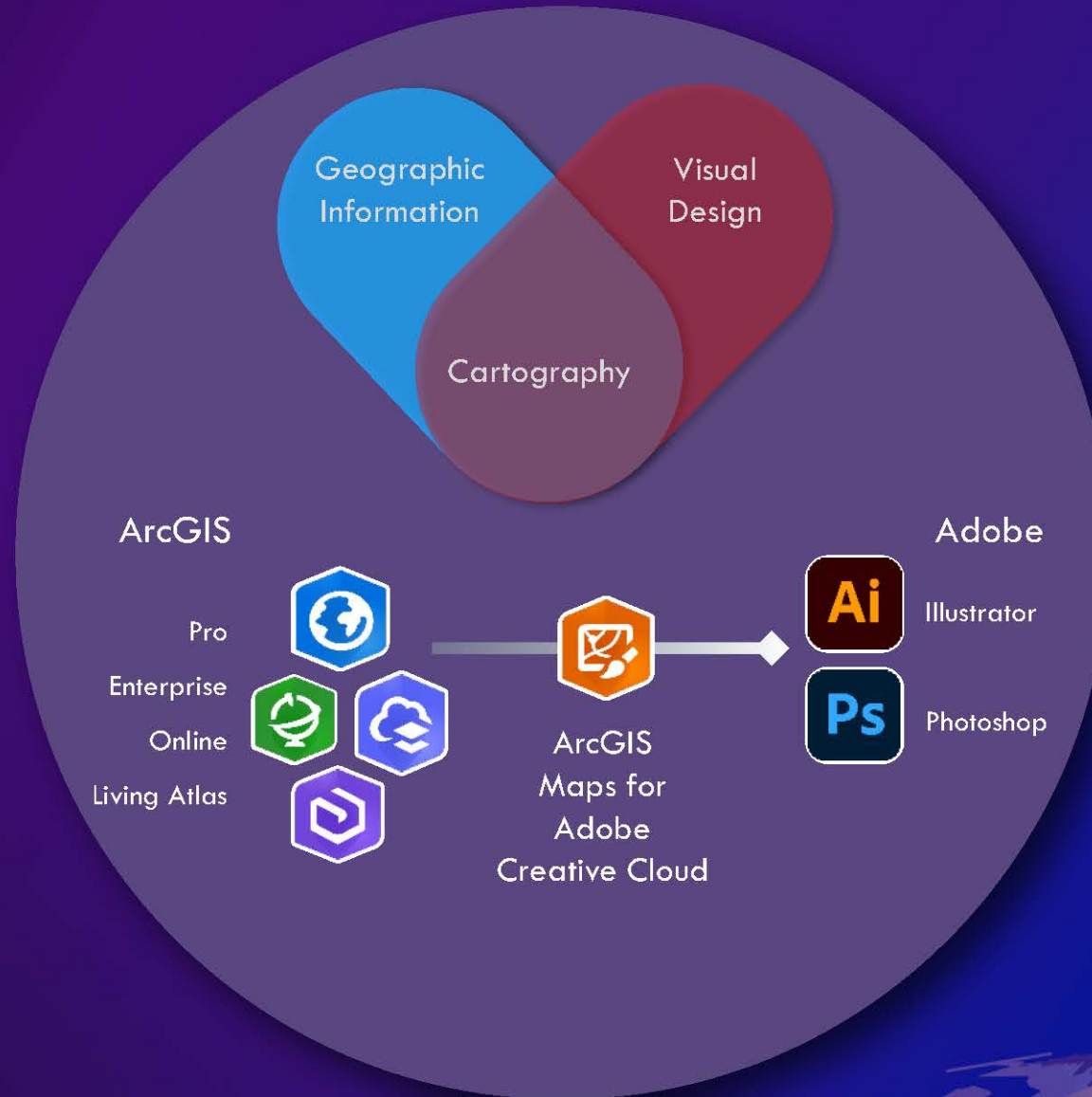
Overview

ArcGIS Maps for Adobe Creative Cloud



Overview

ArcGIS Maps for Adobe Creative Cloud



ArcGIS Maps for Adobe Creative Cloud



Topics

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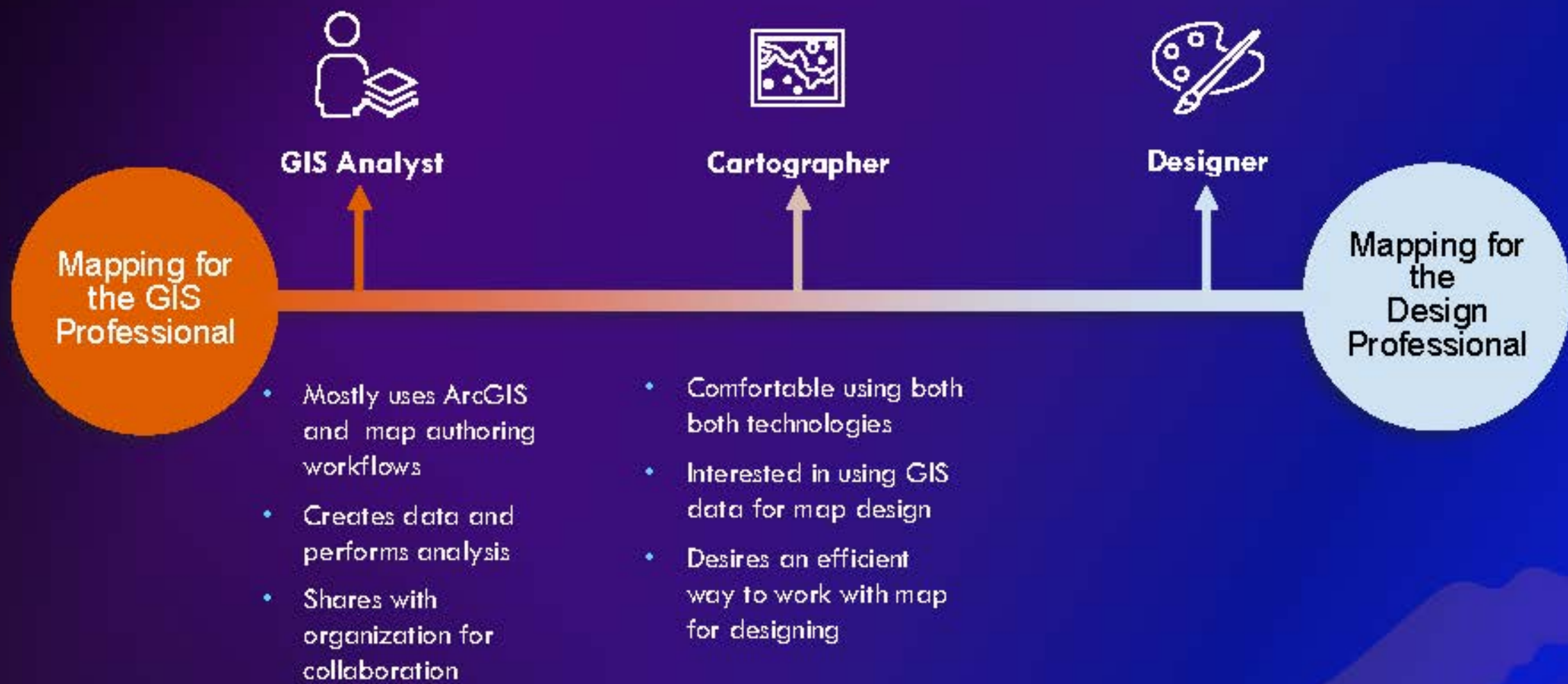
Empowering GIS Professionals, Cartographers, and Designers



Empowering GIS Professionals, Cartographers, and Designers



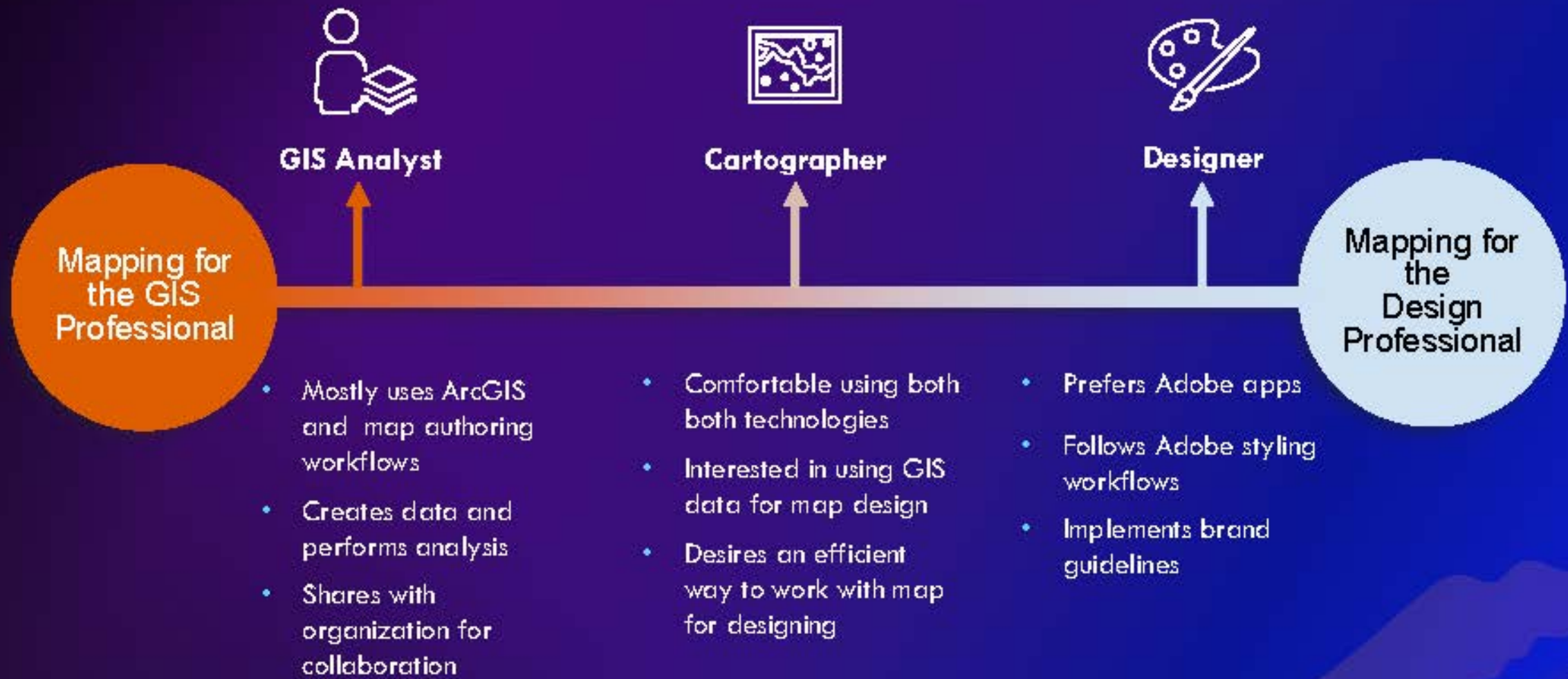
Empowering GIS Professionals, Cartographers, and Designers



Mapping for the GIS Professional

Mapping for the Design Professional

Empowering GIS Professionals, Cartographers, and Designers



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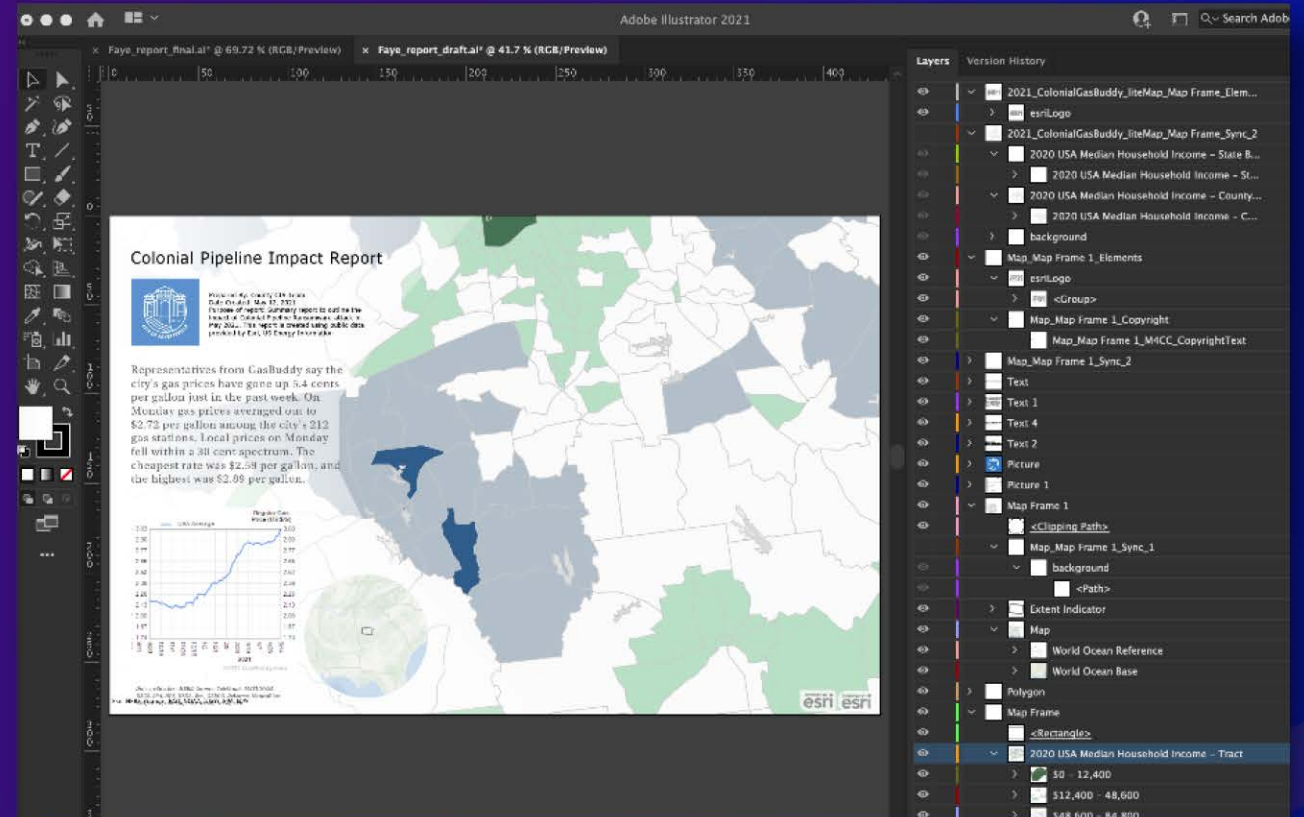
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The Power of ArcGIS Maps for Adobe Creative Cloud

Maximize Your Return on Investment

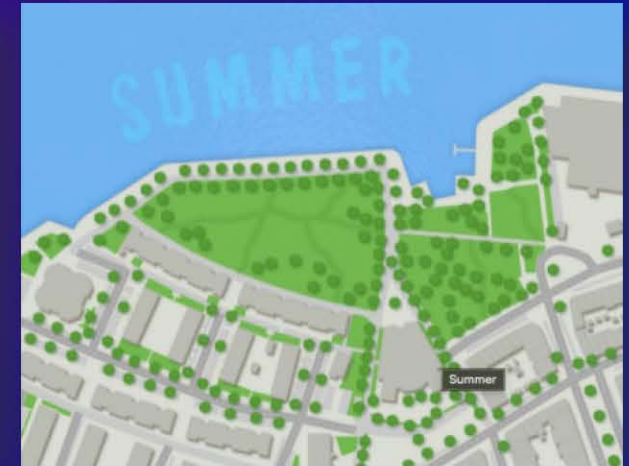
- Integrate ArcGIS and Adobe to maximize the value of your data investments
- Facilitate sharing of data and map assets between GIS and design departments
- Ensure your maps are always up-to-date with the latest information



The Power of ArcGIS Maps for Adobe Creative Cloud

Get Maps that Stand Out with Your Branding

- Ensure your maps are aligned with your brand identity
- Access customizable vector basemaps
- Implement brand guidelines and styles



ArcGIS Maps for Adobe Creative Cloud



Topics

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Success Stories Engineering Firm Designs with ArcGIS Maps for Adobe Creative Cloud

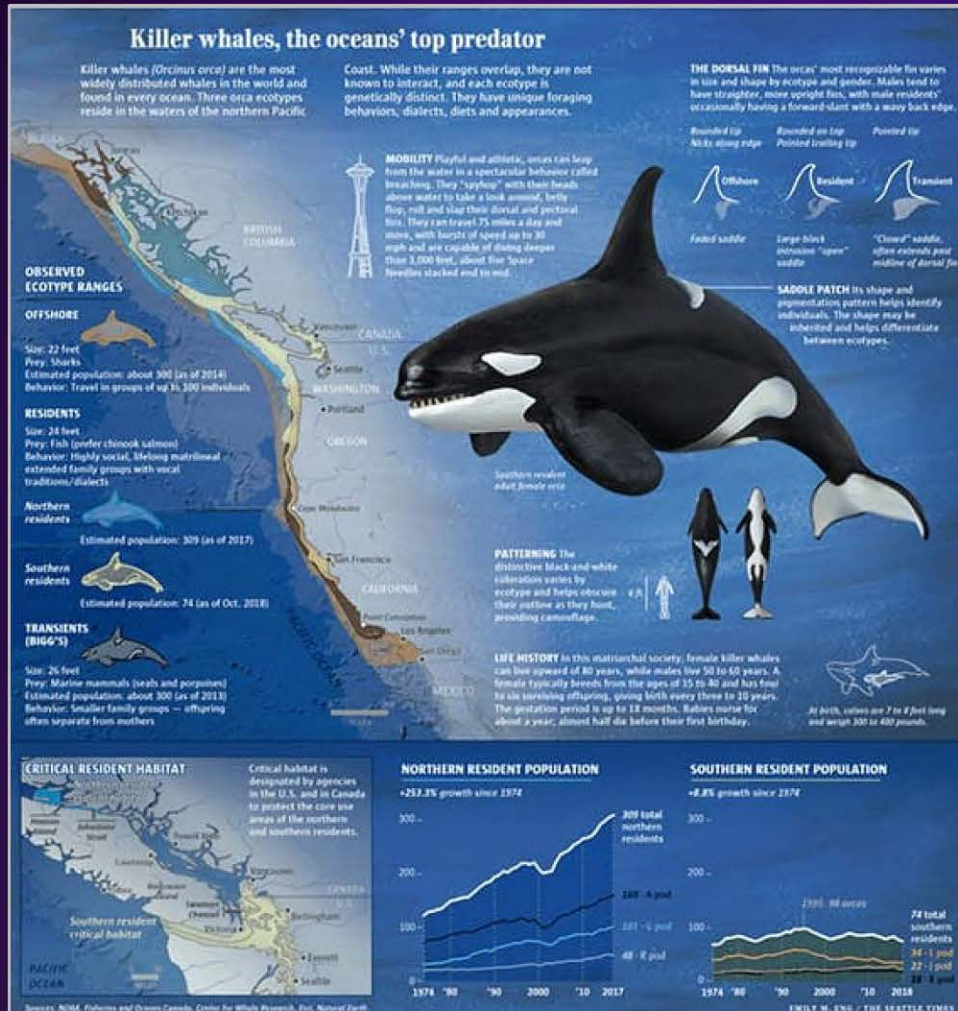


“I cut my time in half and came in under budget, but most importantly, I kept the City of New Orleans and my project manager happy. With the addition of ArcGIS to my workflow, I was a “one-stop-shop” for visualization graphics.”

- Jeanah Bauer, Visualization Specialist, Moffatt & Nichol



Success Stories Media Outlet Finds Creative Solution to Enhance Maps and Graphics



“ArcGIS Maps for Adobe Creative Cloud is a powerful extension that has strengthened our data and graphics. It's truly allowed our visual storytelling to grow.”

- Mark Nowlin, Seattle Times Lead News Artist



Success Stories Driven Maps

Maryland DOT Moves Forward with Design-Driven Maps



“Our agency is quite pleased with the design aesthetics in the maps, and we have received positive feedback. The process of transferring substantial amounts of data into geospatial visual depictions has also become more efficient and enjoyable.”

- Andrew Bernish, Transportation Planner/
GIS Analyst



ArcGIS Maps for Adobe Creative Cloud



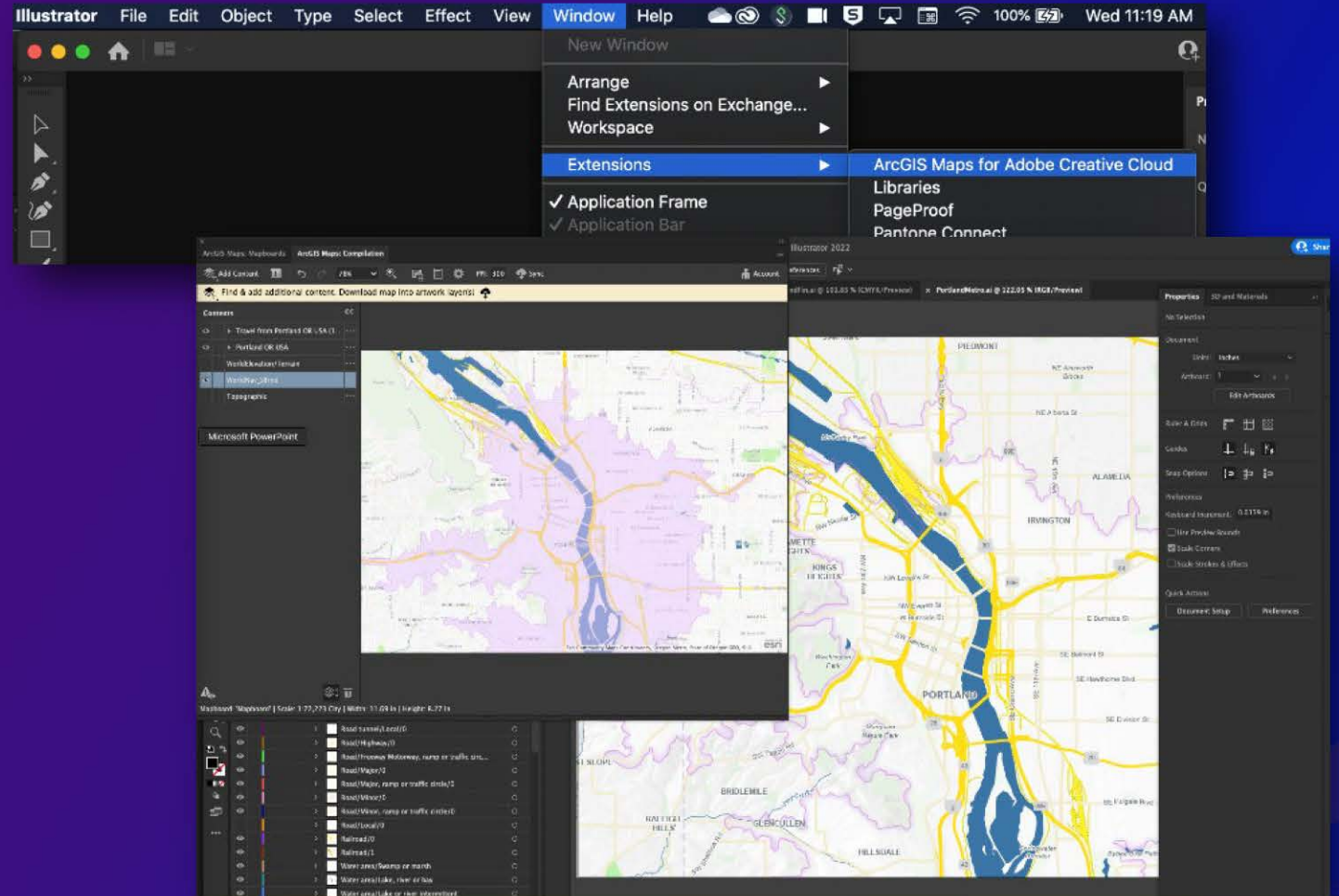
Topics

- Overview of ArcGIS Maps for Adobe Creative Cloud
- Empowering GIS Professionals, Cartographers, and Designers
- The Power of ArcGIS Maps for Adobe Creative Cloud
- Customer Success Stories Using the Plugin
- Create Maps Directly with Plugin Interface
- Design with ArcGIS Pro Maps & Layouts
- How-to with ArcGIS Maps for Adobe Creative Cloud
- Key Takeaways

Create Maps Directly with Plugin Interface

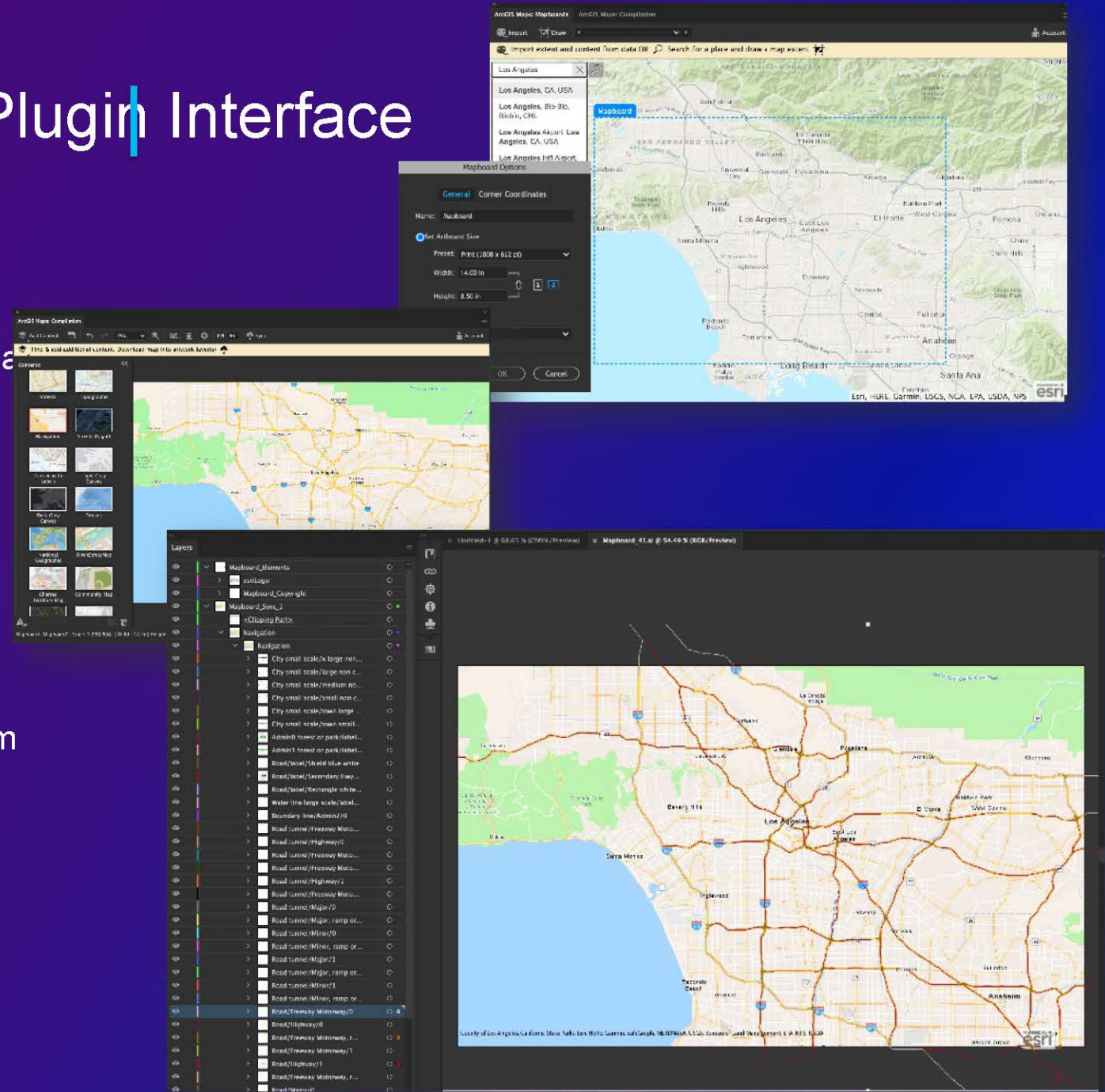
Map design with ArcGIS & Adobe

1. Using Plugin interface
2. ArcGIS Pro-to-Illustrator
3. ArcGIS Online Mapviewer print tool
4. Print widget in an ArcGIS web app



Create Maps Directly with Plugin Interface

- Graphic Design, Visualization, Marketing professionals
- Start map making in Adobe directly
- Strong knowledge of Adobes design apps
- Utilize Web GIS or geospatial file formats, e.g., Shapefiles, CSV files
- May collaborate with company's GIS / Mapping team
- Does not require extensive ArcGIS knowledge



ArcGIS Maps for Adobe Creative Cloud



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Design with ArcGIS Pro



Export Map 

Export Layout 

*Export Presets

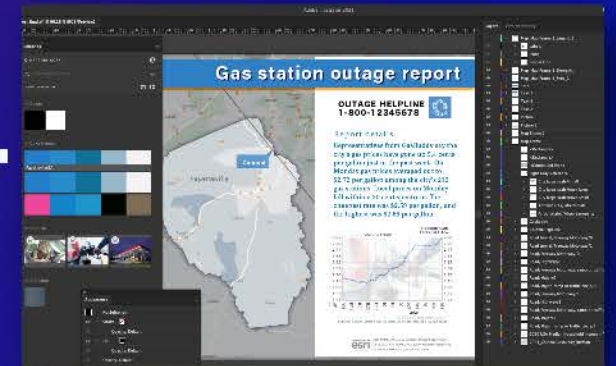
Adobe Illustrator
Exchange file
((AIX))



Maps for
Adobe



+ Illustrator



Design Ready AI file

ArcGIS Maps for Adobe Creative Cloud



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How-to with Maps for Adobe Creative Cloud

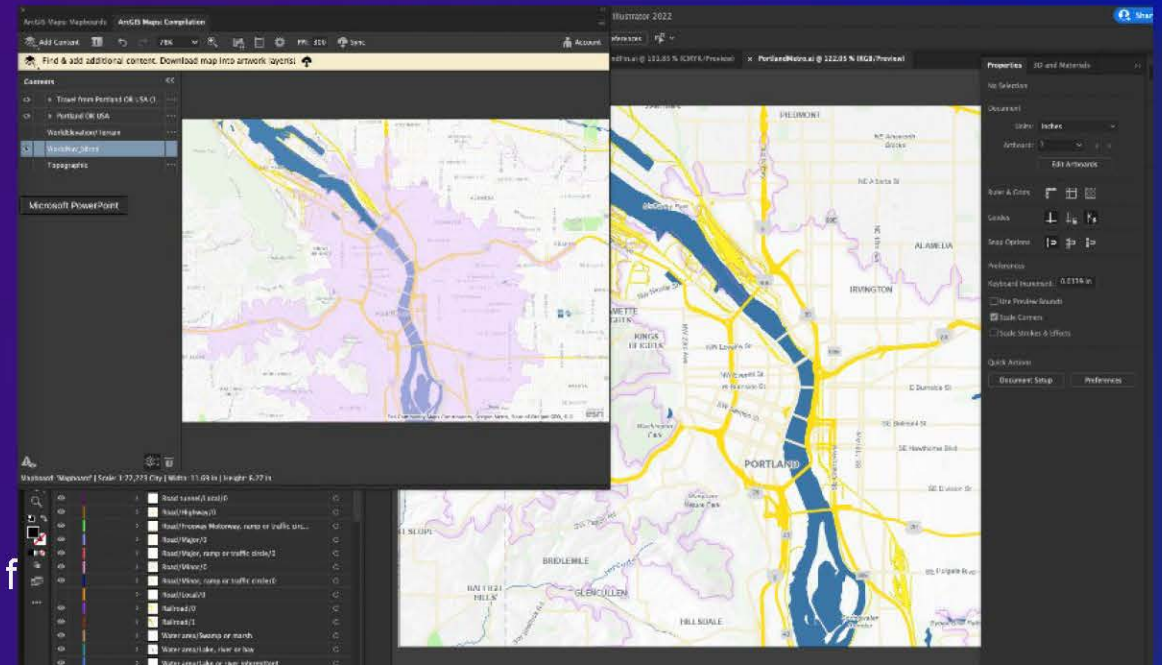
- Two key workflows:

1. In-app workflow

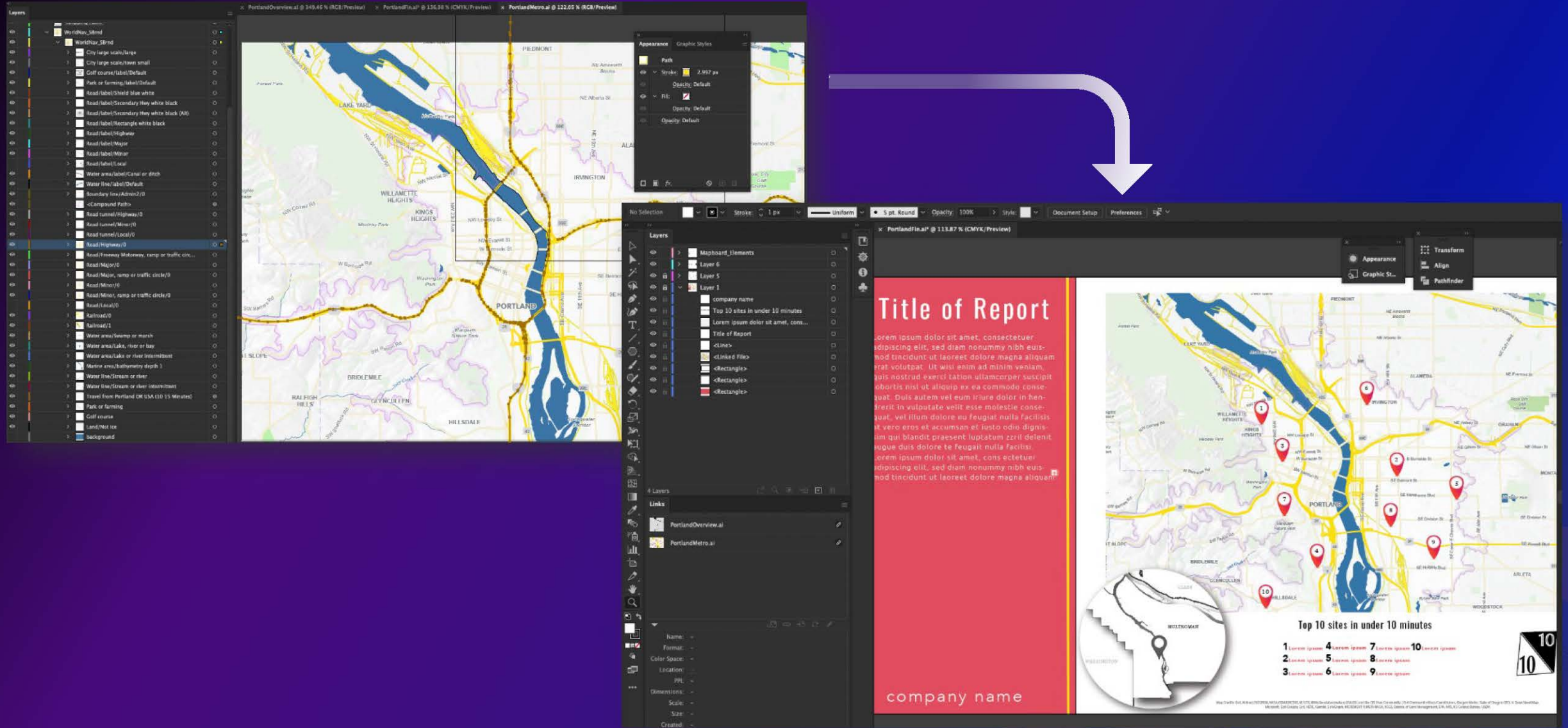
- Add custom Vector basemap as layer or basemap
- Add your own data – points, areas, results of analysis
- Sync

2. ArcGIS Pro-to-Illustrator workflow – exporting as AIX for

- In both cases, the vector basemap is converted to vector artwork and organized into meaningful layers



Example



ArcGIS Maps for Adobe Creative Cloud



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Takeaways

ArcGIS Maps for Adobe Creative Cloud



Maps at your fingertips

- Access street maps, political boundaries, terrain layers, satellite images, and other spatial data.



Access to Living Atlas of the World

- Access Esri's rich map content, open data, and other authoritative information.



Artistic control

- Creative freedom lets your organization make the beautiful maps you want.



A seamless experience

- Get the tools you need while keeping data and files in sync between ArcGIS and Adobe.



Return on data investment

- Serve GIS data and analytics to your designers and publishers for maximum value.

Questions & Resources

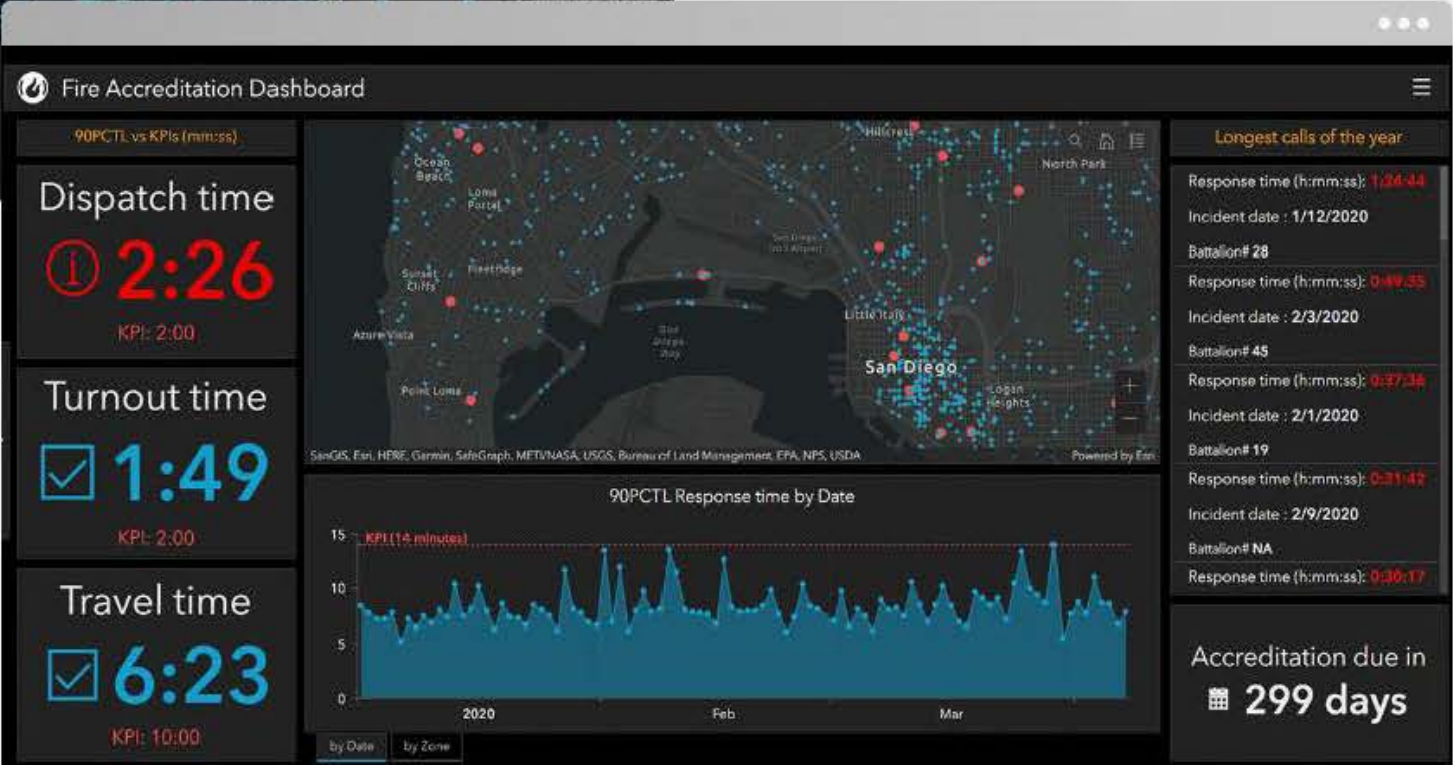
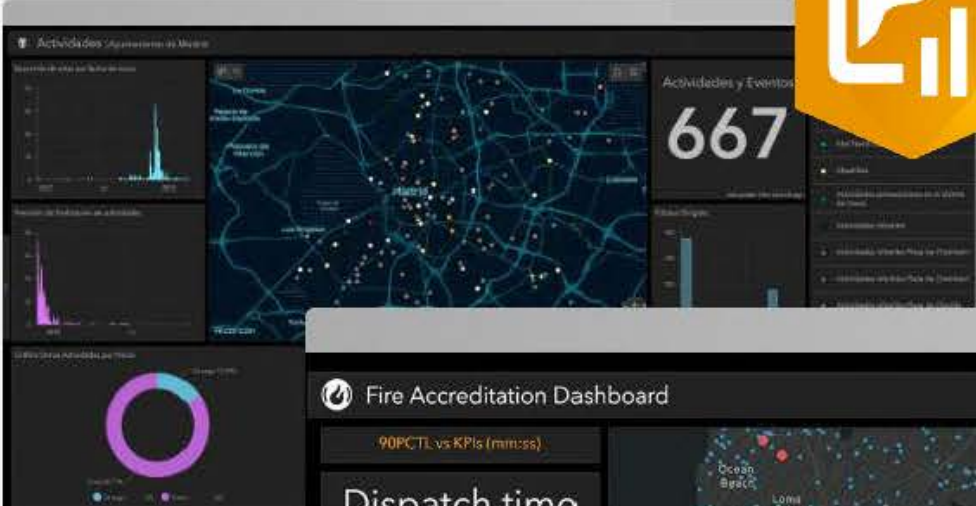
Scan the QR code for more resources!



Sharing



ArcGIS Dashboards



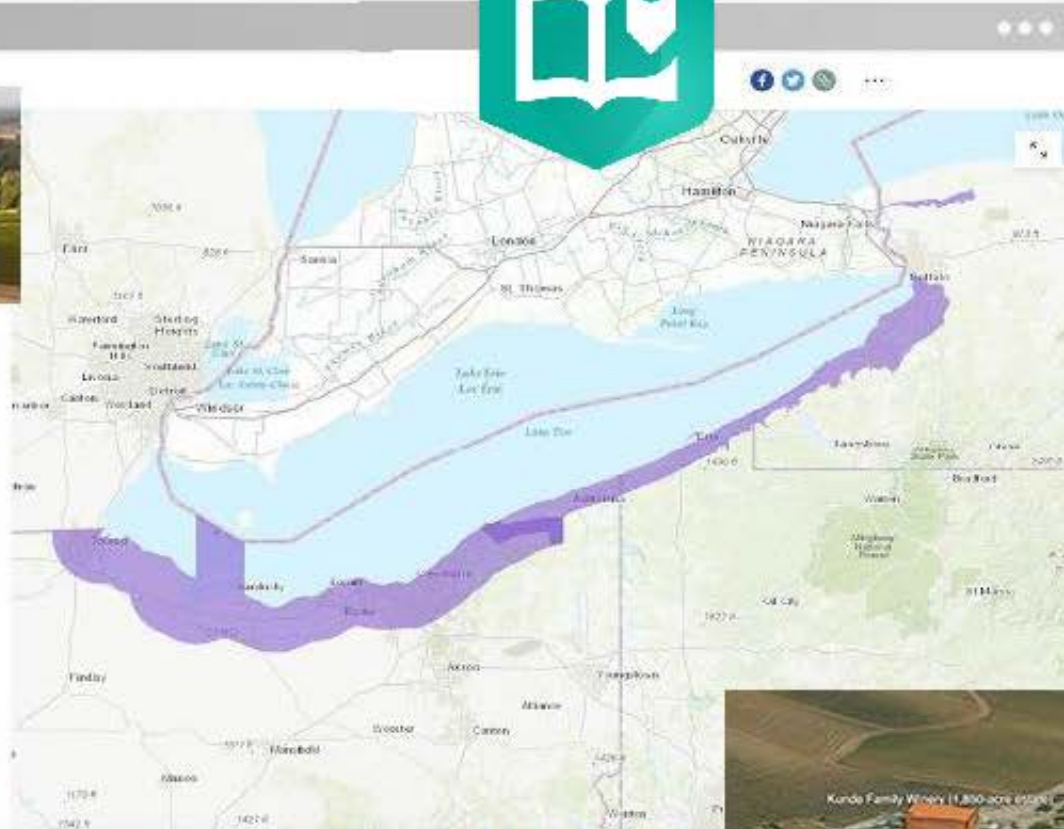
ArcGIS StoryMaps



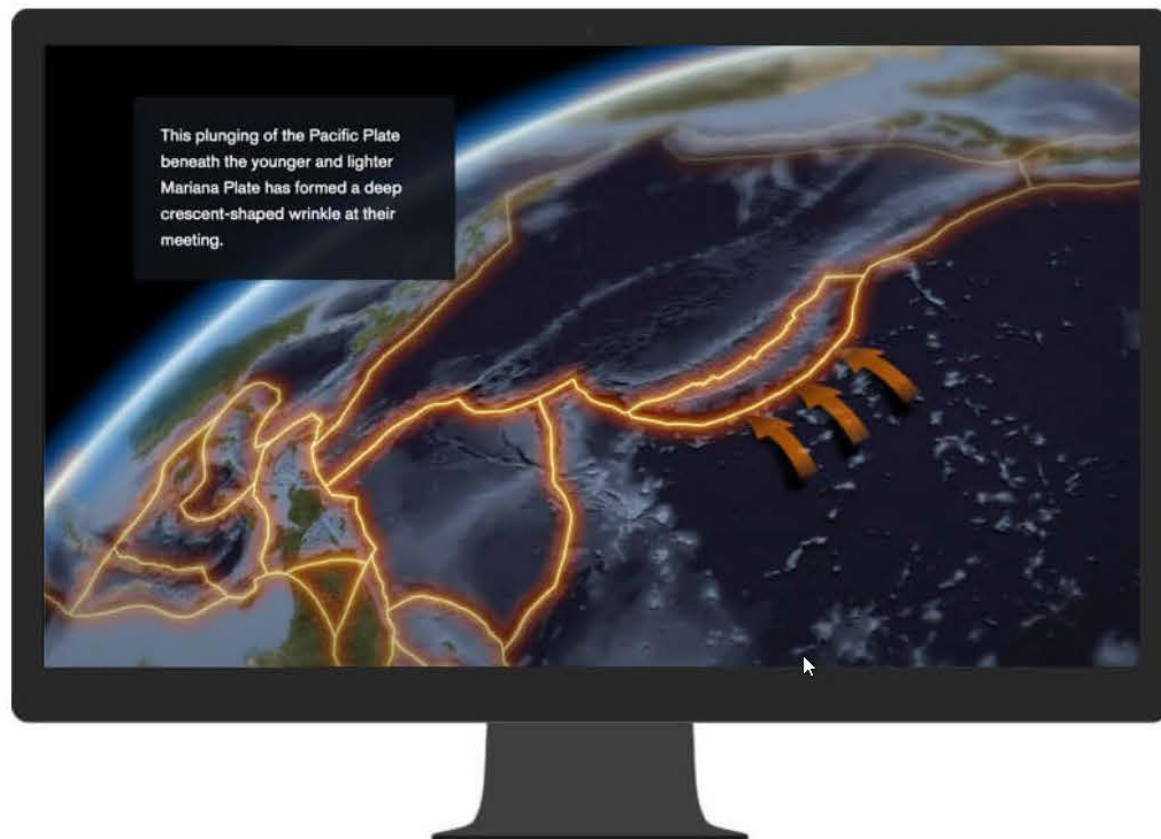
The Lake Erie AVA

The Lake Erie AVA encompasses the entire great lake shoreline of Ohio, Pennsylvania, and New York State. It is the largest Concord Grape growing region in the world.

- *This region's characteristics are unique, because it includes an appellation that specializes in ice wines*



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Key dates and submission deadlines

SUBMISSION DEADLINE

- October 27, 2023, 5:00 p.m. (PT)

FINALISTS ANNOUNCED

- November 15, 2023

WINNERS ANNOUNCED

- December 14, 2023

Follow [@ArcGISStoryMaps](#) Twitter for ongoing competition resources and announcements.



Call for Maps

Maps tell powerful stories that educate, inspire, and unite us through the lens of geography. Submit your best work to showcase in the Map Gallery.



Submission deadline

The last day to submit your map is Thursday, June 6, 2024.

[Submit a map](#) →



How it works

All accepted submissions will appear in the Map Gallery. Gallery entries must showcase practical applications of GIS. Please carefully review the eligibility criteria and submission information to ensure that your submission meets the guidelines.

[Review eligibility and requirements](#)



criteria

ria to find the right category for three entries in each category will receive awards.

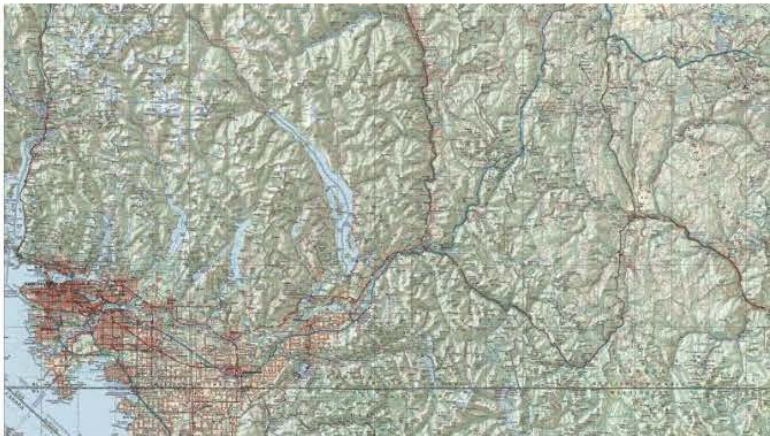
[Criteria](#) →

ICA-IMIA Recognition of Excellence in Cartography

<https://imiamaps.org/the-ica-imia-awards/>

Each summer at the Esri User Conference in San Diego, IMIA partners with the International Cartographic Association (ICA) to present the ICA-IMIA Recognition of Excellence in Cartography. Judges from both organizations review entries to the renowned Esri Map Gallery, to recognize excellence in map design and advancement in cartography. Below are recent award winners and honorable mentions.

2023 Winning Maps



British Columbia Road and Recreation Atlas

Benchmark Maps

 [VIEW MAP](#)



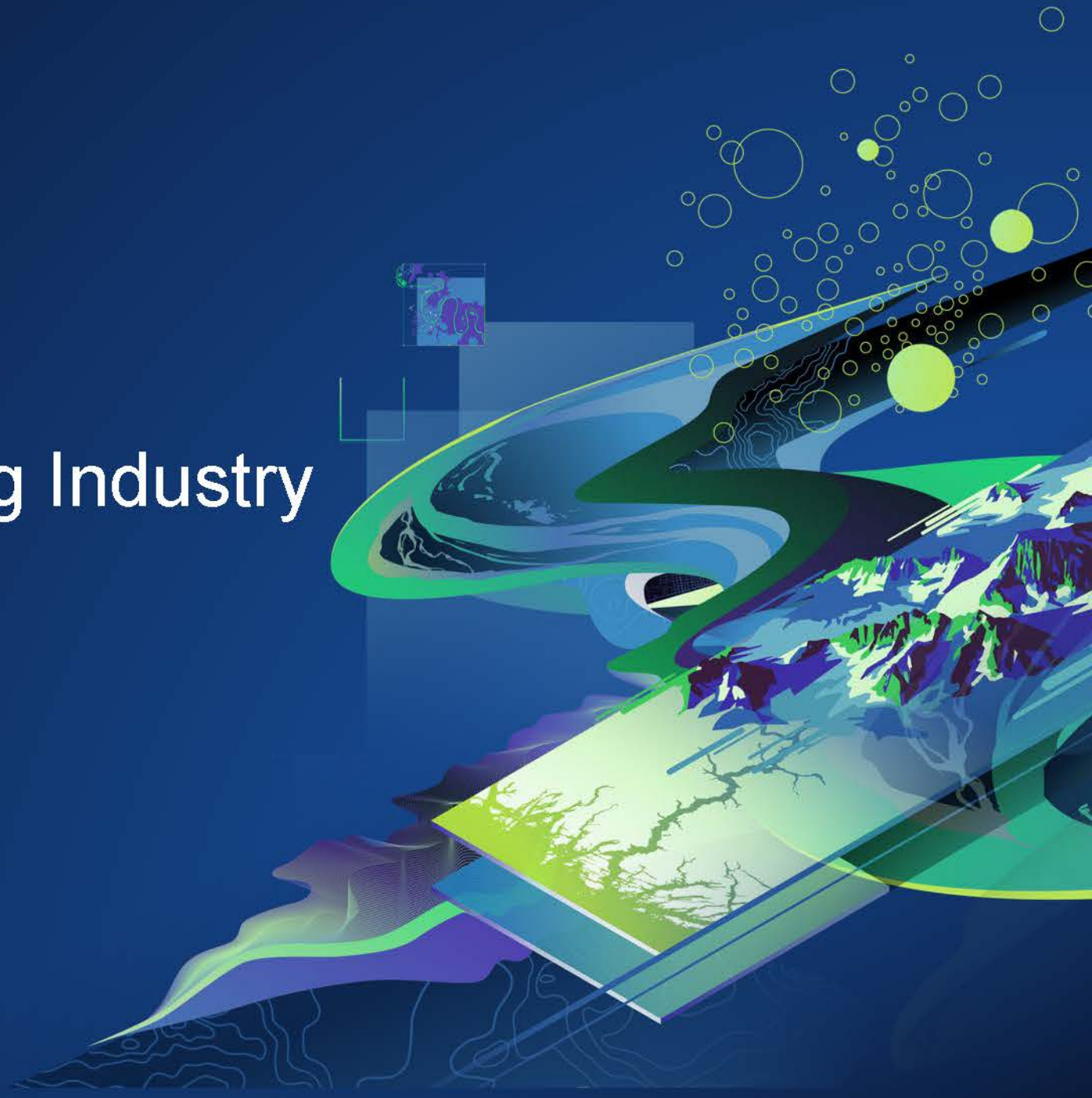
Alaska Topography

Greg Fiske

Woodwell Climate Research Center

 [VIEW MAP](#)

Ethics in the Mapping Industry



As a result of cartographic democracy

- People are making **professional-looking map-like objects**
- Maps are made for peoples' **personal subjects of interest**
- Many people making maps are **not cartographers**
- The **audiences are larger and more diverse**



As a result of cartographic democracy

- People are making **professional-looking map-like objects**
- Maps are made for peoples' **personal subjects of interest**
- Many people making maps are **not cartographers**
- The **audiences are larger and more diverse**
- It's becoming harder to **discern map reliability**



Who bears responsibility?



Responsibilities...

- ...of the **data providers**
- ...of the **tool makers**
- ...of the **skill sharers**
- ...of the **map sharers**

Data



Tools



Skills



Sharing

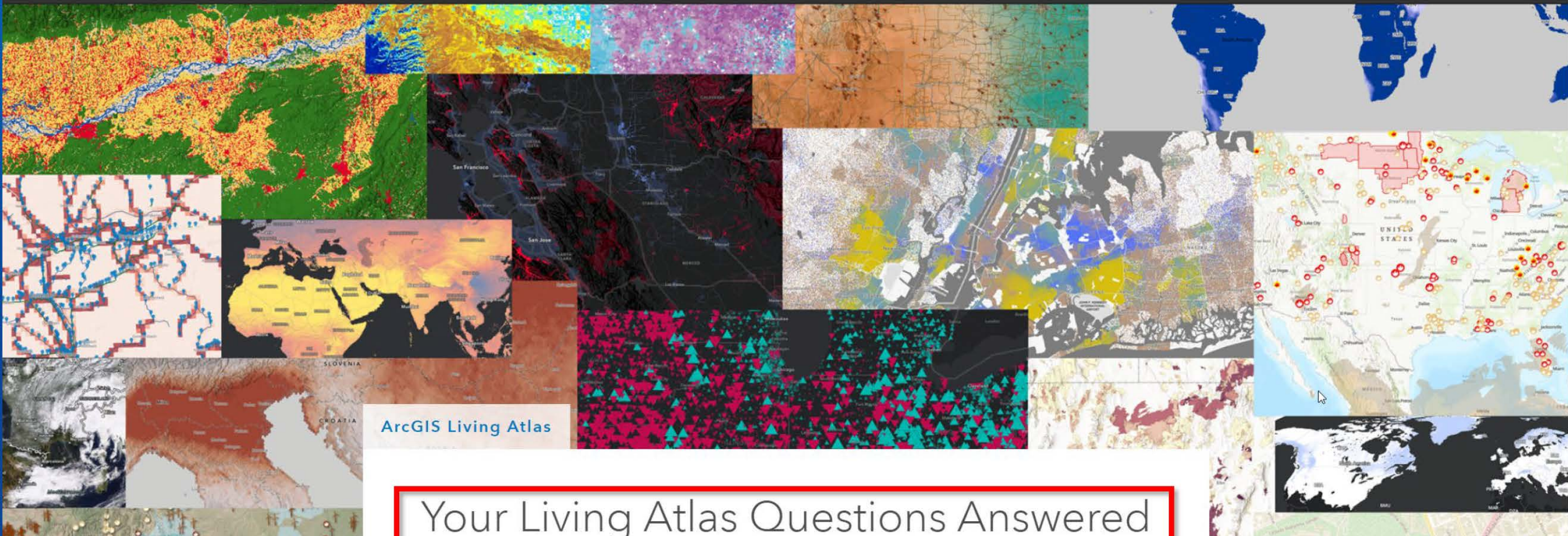


Data



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ArcGIS Living Atlas

Your Living Atlas Questions Answered

Sharing and Collaboration

April 23, 2024



Lisa Berry

A great map starts with great data. But finding the data you need for your specific project isn't always an easy accomplishment. The traditional workflow has always been to go find a data source, download the raw data, process it into the format you need, fumble through the nuances of metadata, and then you'd finally start your real GIS work. Luckily, ArcGIS



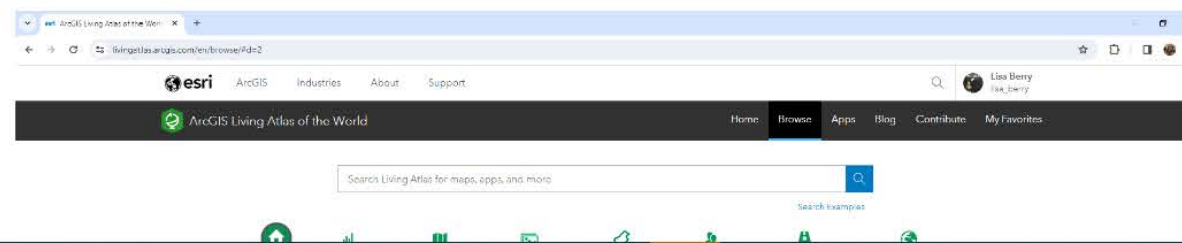
Can I trust the content I find in Living Atlas?

Items go through a curation process in order to appear within Living Atlas, and are reviewed by an Esri staff member to ensure that the content is well-documented and comes from a reliable source. In order to be accepted into Living Atlas, the curator from Esri will investigate the account who nominated the item, the source of the data, and the quality of the content. To be accepted, the item must also be well-documented, so that you can also investigate the item yourself to check if it is what you need for your work.

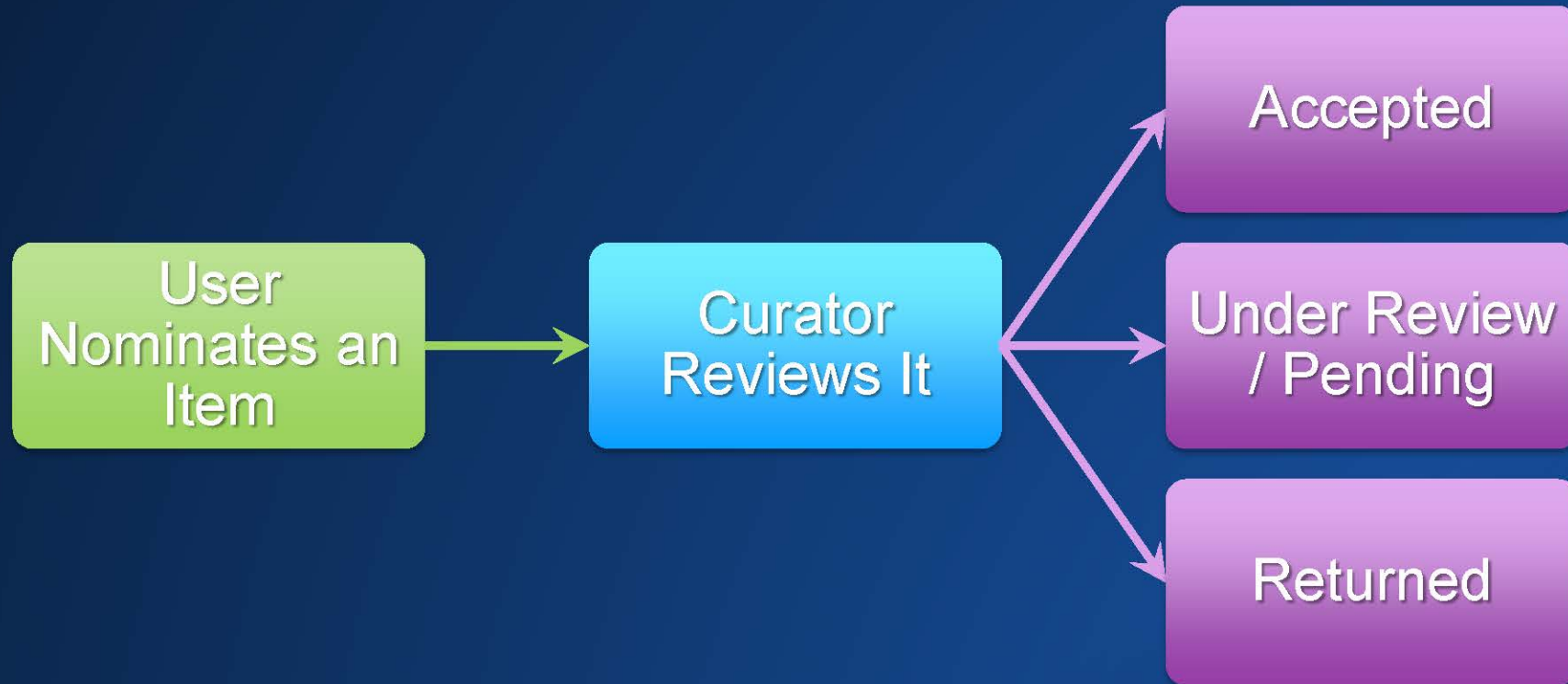
Living Atlas comes with your ArcGIS license, and can be easily accessed from the same places you normally would add data, layers, or maps into your projects. Depending on where you are working, you may see different types of items.

Living Atlas website

All item types can be found here. This is the most comprehensive view of Living Atlas content, and has a specialized search for finding what you need.



Item curation in Living Atlas



Responsibilities

- Of the **data providers**
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- Of the **map sharers**





› About ArcGIS Pro Help

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Find tools and help using Command Search

Frequently asked questions

Manage add-ins

› Project and application options

▾ Accessibility

Accessibility in ArcGIS Pro

Use ArcGIS Pro with a keyboard

Use the offline help system with a

Accessibility in ArcGIS Pro

ArcGIS Pro 3.2 | [Other versions ▾](#) | [Help archive](#)

Esri is working to improve accommodations for people with disabilities and situational limitations. Efforts are made to enhance the accessibility of ArcGIS Pro with each release. Within limits imposed by the visual nature of geographic information systems, Esri software supports screen readers such as [JAWS](#) and [Microsoft Narrator](#). See the following help topics for information on keyboard accessibility, visual display, and other accessible functionality:

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- [Visual modes of operation](#)
- [Accessibility for layout exports](#)
- [Set user interface options](#)
- [Use the Color Vision Deficiency Simulator tool](#)

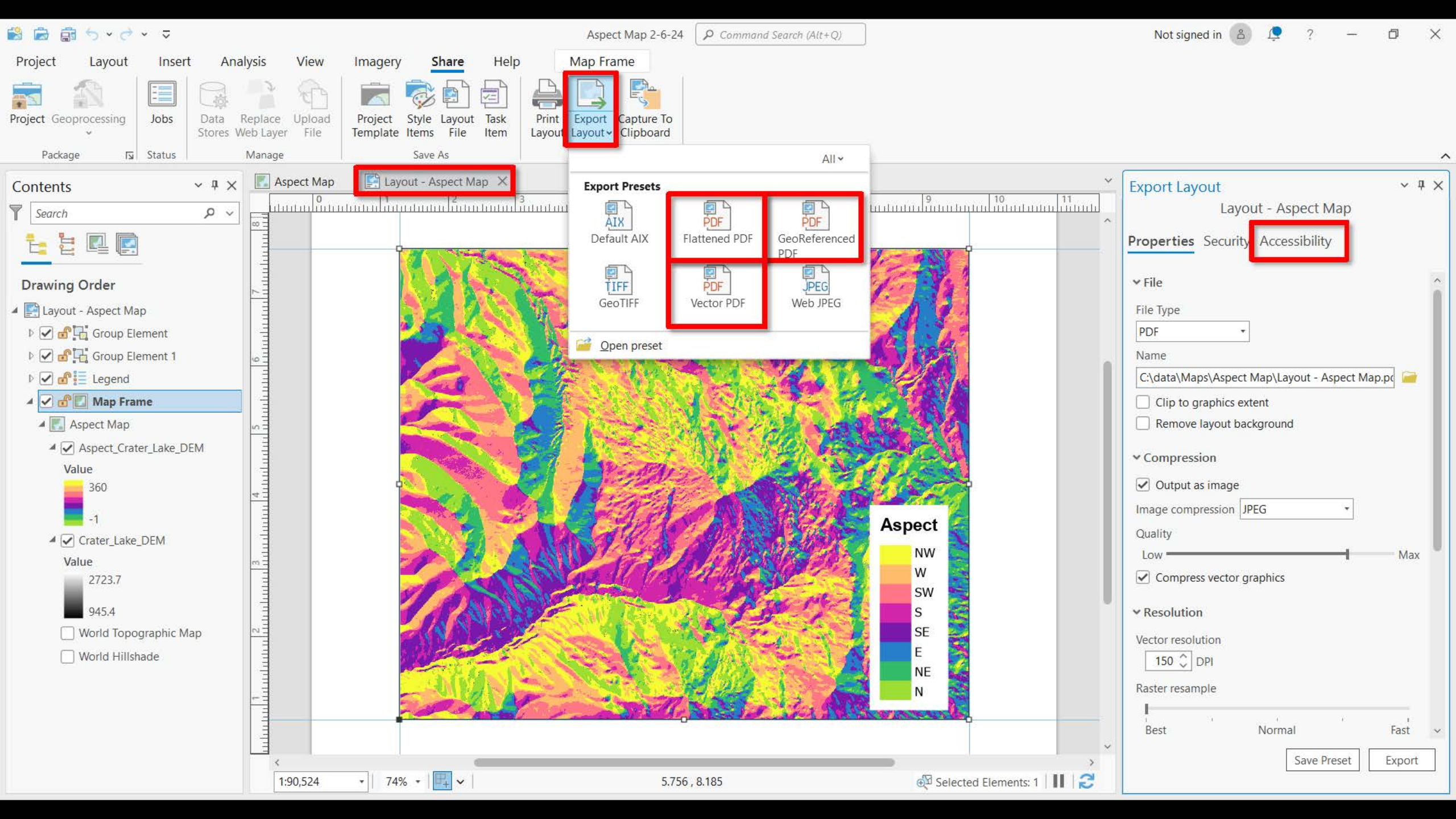
For information about the conformance level for accessibility features in this release of ArcGIS Pro, see Esri's [Accessibility Conformance](#)

Accessibility for layout exports

[Back to Top](#)

The **Accessibility** tab contains options for writing a tagged PDF document, which can be read by screen readers or other assistive technology. A tagged PDF document can include alt text—a text description of a graphic element that a screen reader uses to describe the element—for map frames, pictures, and chart frames. Alt text is added in the **Element Pane** for each element. Tagged PDF documents are currently only available for layout exports.

Property	Description
Include accessibility tags	Output a tagged PDF document from which text can be read by screen readers or other assistive technology. Alt text for layout elements is not included in the PDF document unless this option is checked.
Title	Set the title of the document. This will be displayed when the document is opened.
Language	Set the language of the text in the document so a screen reader can interpret it correctly. If the map or layout is in multiple languages, additional post-processing may be required to set the language appropriately for individual text elements.
Subject	Include a brief overview of what the document is about.
Author	Include the document author. According to some accessibility guidelines, this should be the office or group producing the document and not an individual person.
Keywords	Include keywords to assist in document searches.



Project Layout Insert Analysis View Imagery **Share** Help

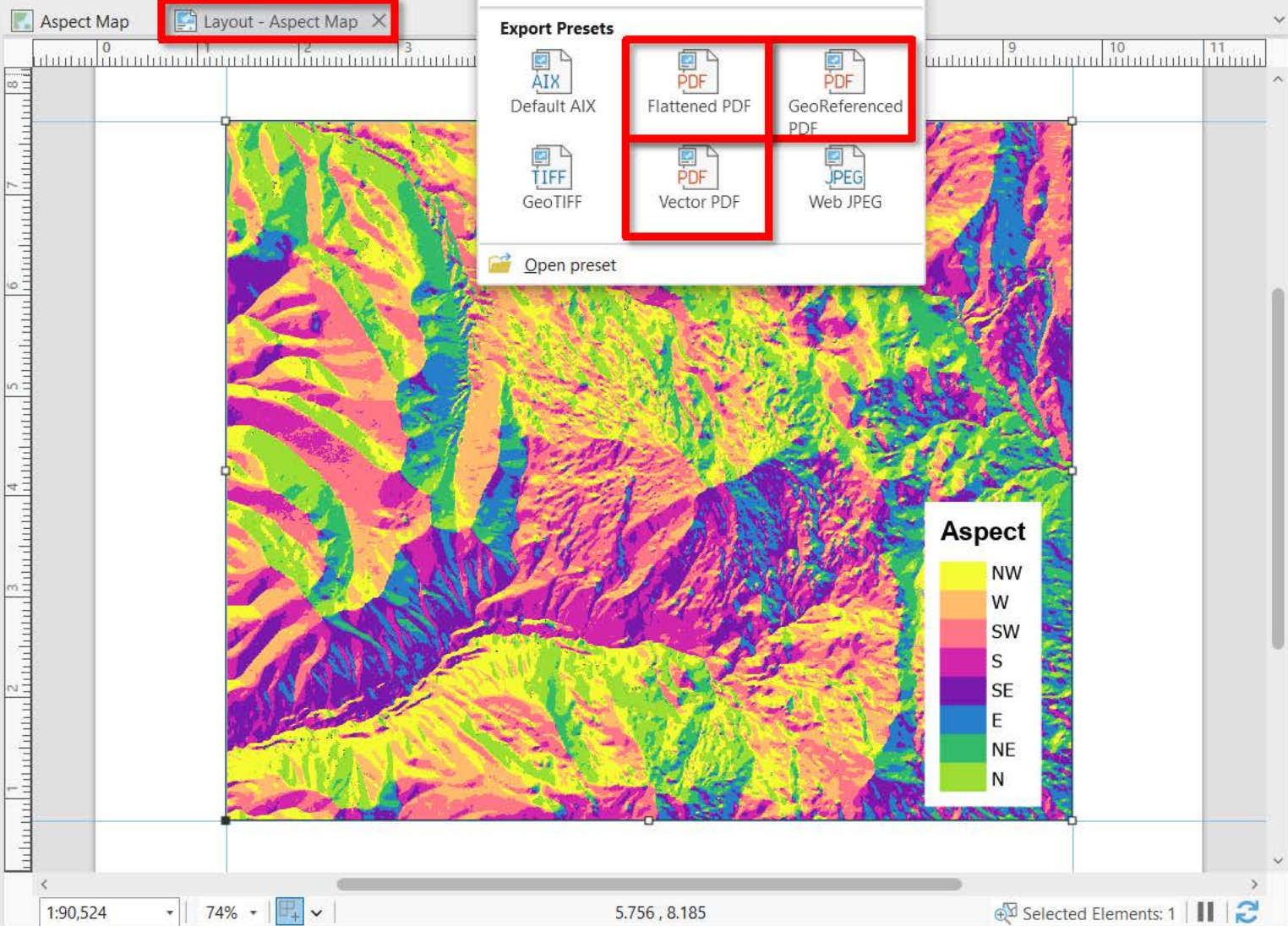
Project Geoprocessing Jobs Data Stores Replace Web Layer Upload File Project Template Style Items Layout File Task Item Print Layout Export Layout Capture To Clipboard

Contents

Search

Drawing Order

- Layout - Aspect Map
 - Group Element
 - Group Element 1
 - Legend
 - Map Frame**
 - Aspect Map
 - Aspect_Crater_Lake_DEM
 - Value
 - 360
 - 1
 - Crater_Lake_DEM
 - Value
 - 2723.7
 - 945.4
 - World Topographic Map
 - World Hillshade



Export Layout

Layout - Aspect Map

Properties Security **Accessibility**

File

File Type: PDF

Name: C:\data\Maps\Aspect Map/Layout - Aspect Map.pdf

Clip to graphics extent

Remove layout background

Compression

Output as image

Image compression: JPEG

Quality: Low

Compress vector graphics

Resolution

Vector resolution: 150 DPI

Raster resample: Normal

Best Normal Fast

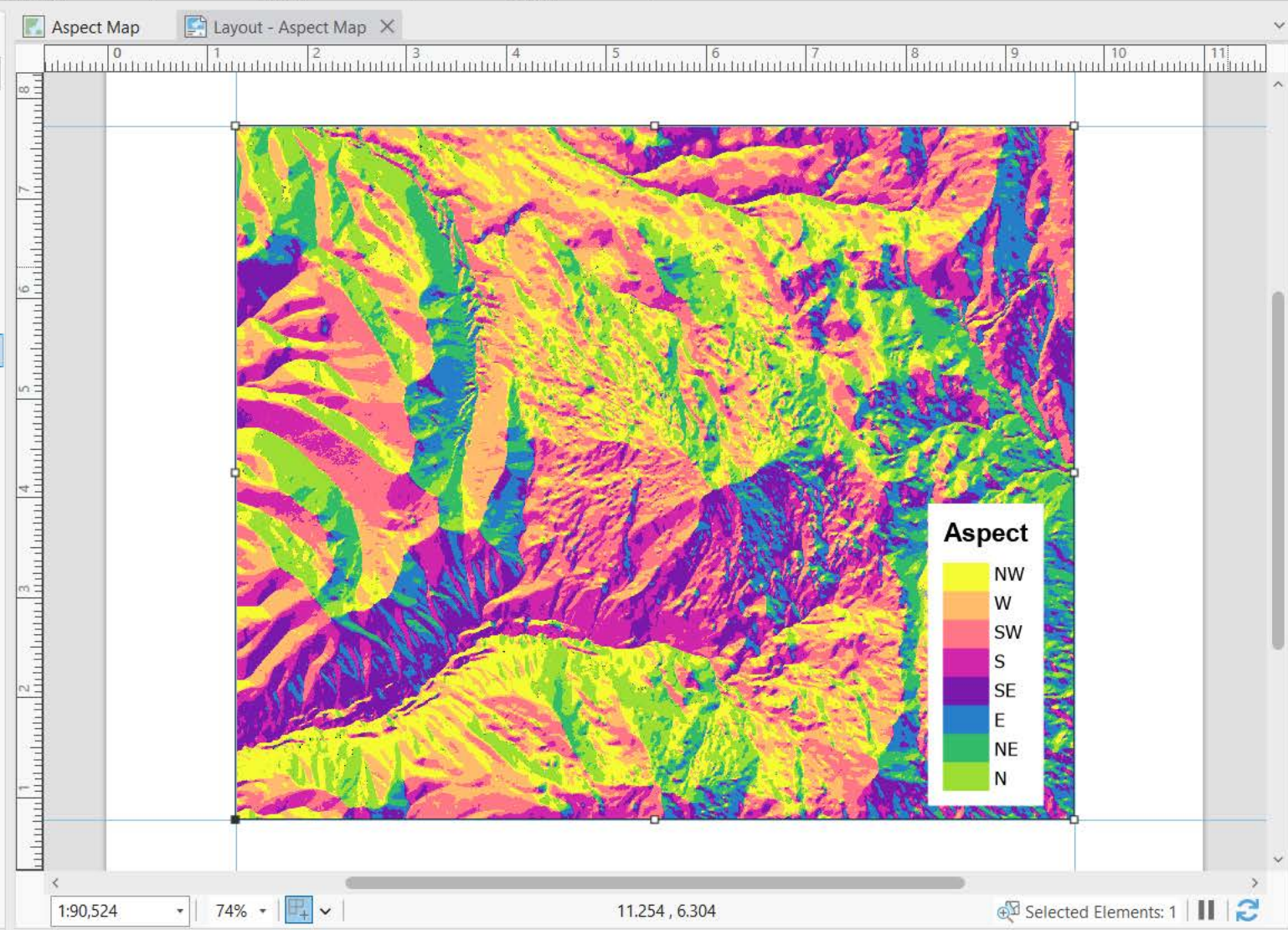
Save Preset Export

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Export Layout

Layout - Aspect Map

Properties Security **Accessibility**

Accessibility

Include accessibility tags

PDF Metadata

Title	Aspect
Language	English (United States) [en-US]
Subject	Surface Parameter - Aspect
Author	Aileen Buckley, Esri
Keywords	aspect, surface parameters, surface analysis

Save Preset Export



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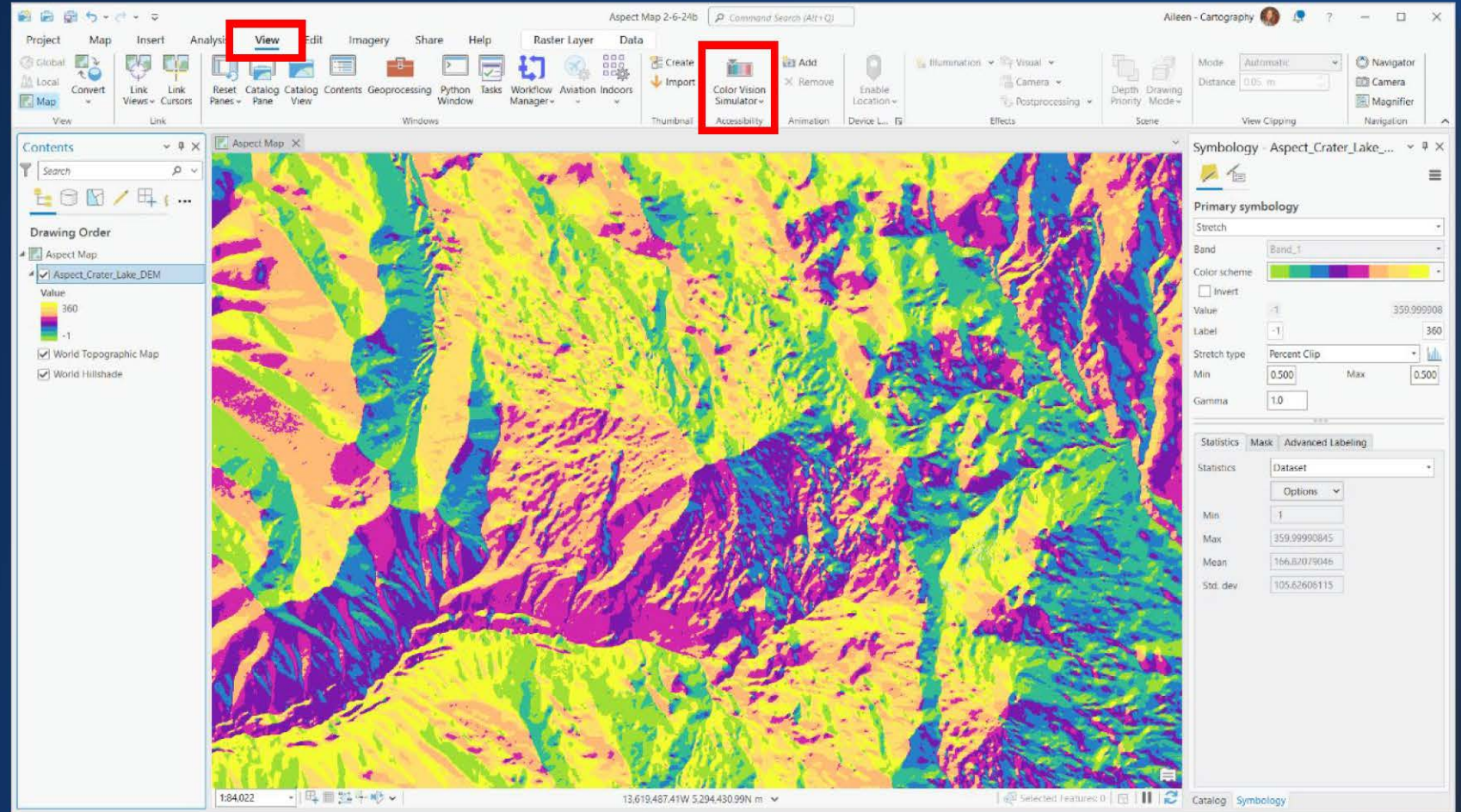
ArcGIS Pro 3.2 | [Other versions](#) ▾ | [Help archive](#)

The **Color Vision Deficiency Simulator** tool is a color mode implementation to simulate how a map, layout, or report appears to someone who has a color vision deficiency, sometimes referred to as color blindness. With a color vision deficiency, not all of the cones are present and able to perceive color. Full color vision is when all three types of cone cells are present and perceive color. While there are many types and levels of color vision deficiency, the color vision simulator modes focus on three primary conditions.

The following video demonstrates the benefits of the **Color Vision Deficiency Simulator** and how to use it.

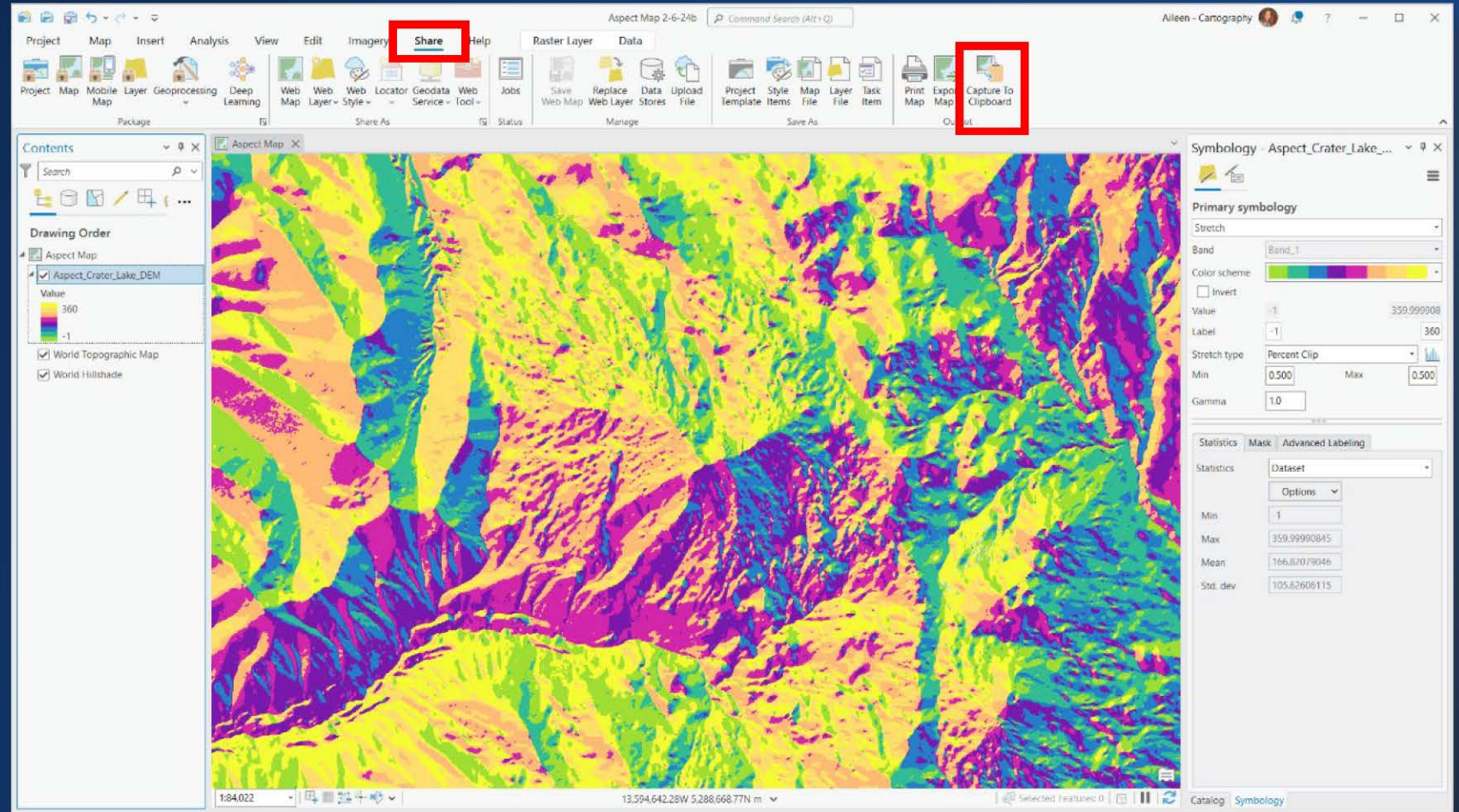
Color Vision Simulator

- For **maps**, **scenes**, **layouts**, and **reports**



Color Vision Simulator

- For **maps**, **scenes**, **layouts**, and **reports**
- Also, when capturing to **clipboard**



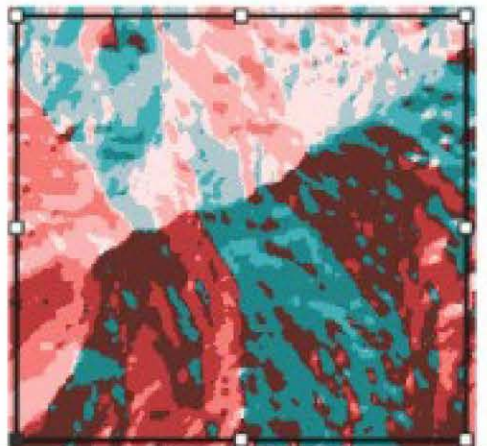
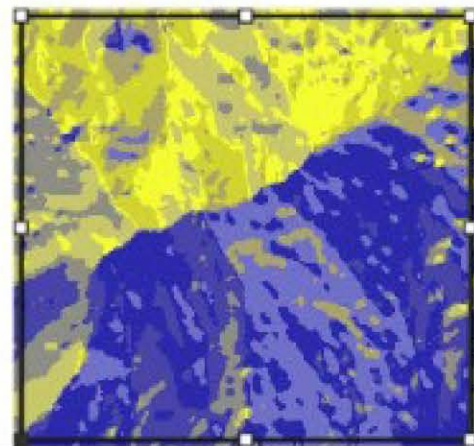
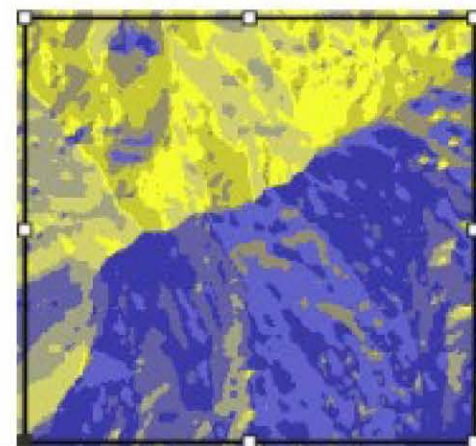
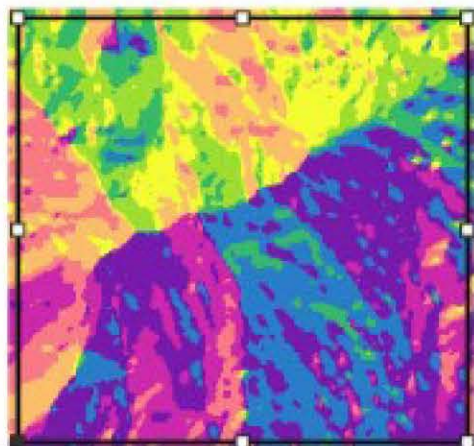
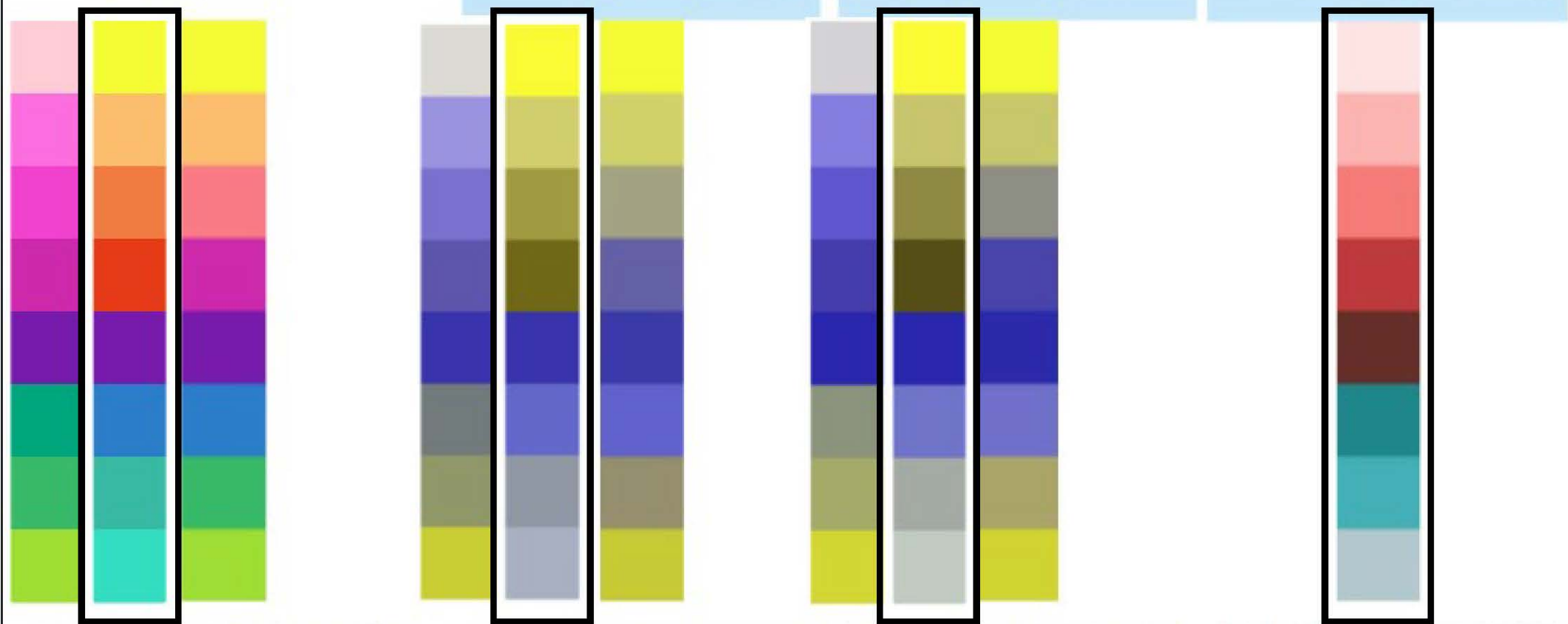


yellow
F5fc34
fcbd6d
f17c42
e63a17
771bac
2b7dc9
38b9a4
34ddc1
teal

Deuteranopia
Simulate green-blind vision.

Protanopia
Simulate red-blind vision.

Tritanopia
Simulate blue-blind vision.



Contents

Search

Drawing Order

- Layout
 - Legend
 - bathy_dem_ft
 - Slope
 - Map Frame
 - Map
 - Slope

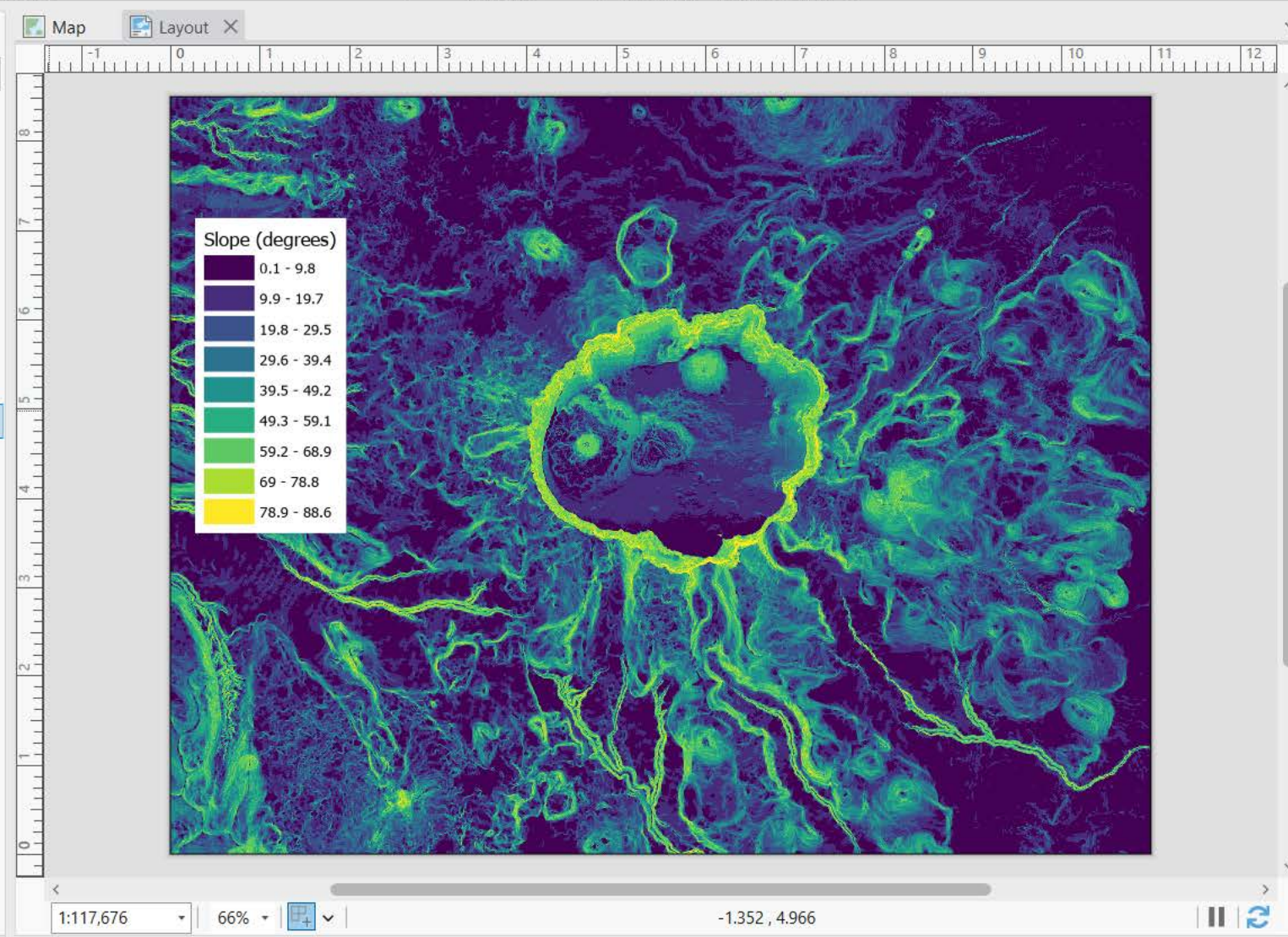
Value

0.1 - 9.8
9.9 - 19.7
19.8 - 29.5
29.6 - 39.4
39.5 - 49.2
49.3 - 59.1
59.2 - 68.9
69 - 78.8
78.9 - 88.6
- bathy_dem_ft

Value

8936.02
3101.71

 - World Topographic Map
 - World Hillshade



Symbology - Slope

Primary symbology: Classify

Field: No fields

Normalization: No fields

Method: Equal Interval

Classes: 9

Color scheme: [Color gradient bar]

Classes Mask Histogram

Color	Upper value	Label
[Dark Purple]	≤ 9.844598	0.1 - 9.8
[Dark Blue]	≤ 19.689096	9.9 - 19.7
[Medium Blue]	≤ 29.533593	19.8 - 29.5
[Teal]	≤ 39.378091	29.6 - 39.4
[Green-Teal]	≤ 49.222588	39.5 - 49.2
[Green]	≤ 59.067086	49.3 - 59.1
[Light Green]	≤ 68.911583	59.2 - 68.9
[Yellow-Green]	≤ 78.756081	69 - 78.8
[Yellow]	≤ 88.600578	78.9 - 88.6

Catalog Symbology Geoprocessing Element

Contents

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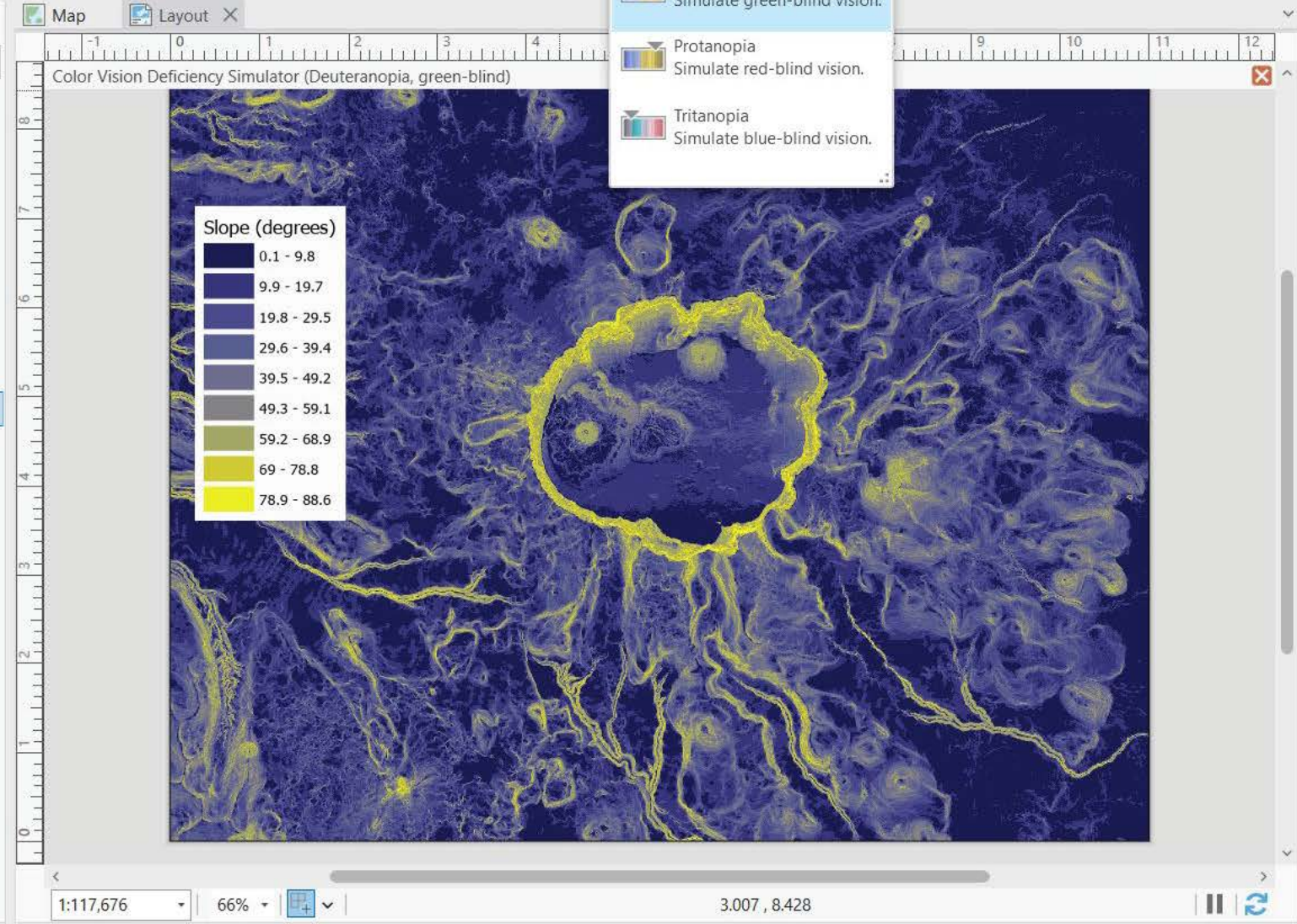
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39.5 - 49.2	≤ 49.222588	39.5 - 49.2
49.3 - 59.1	≤ 59.067086	49.3 - 59.1
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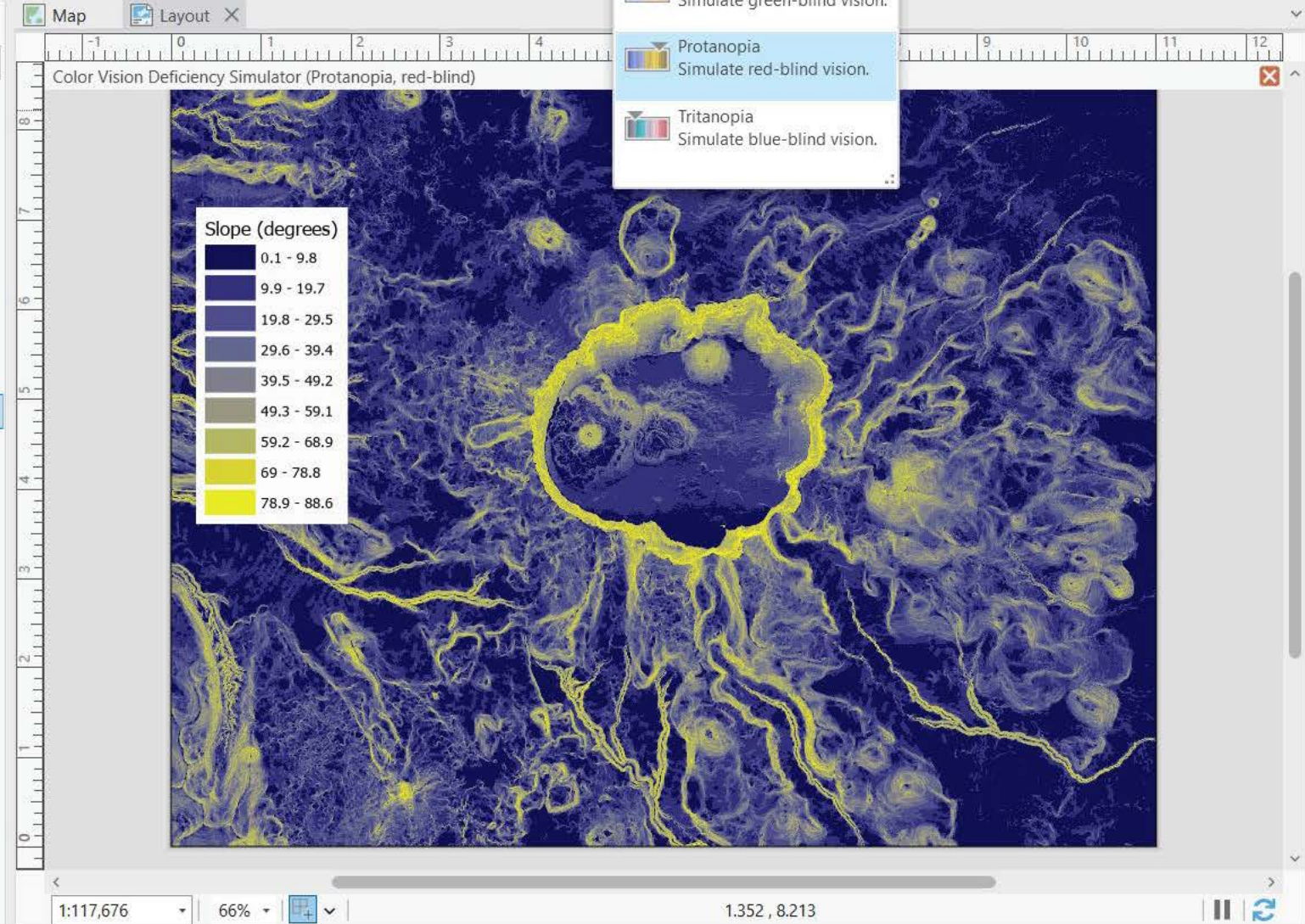
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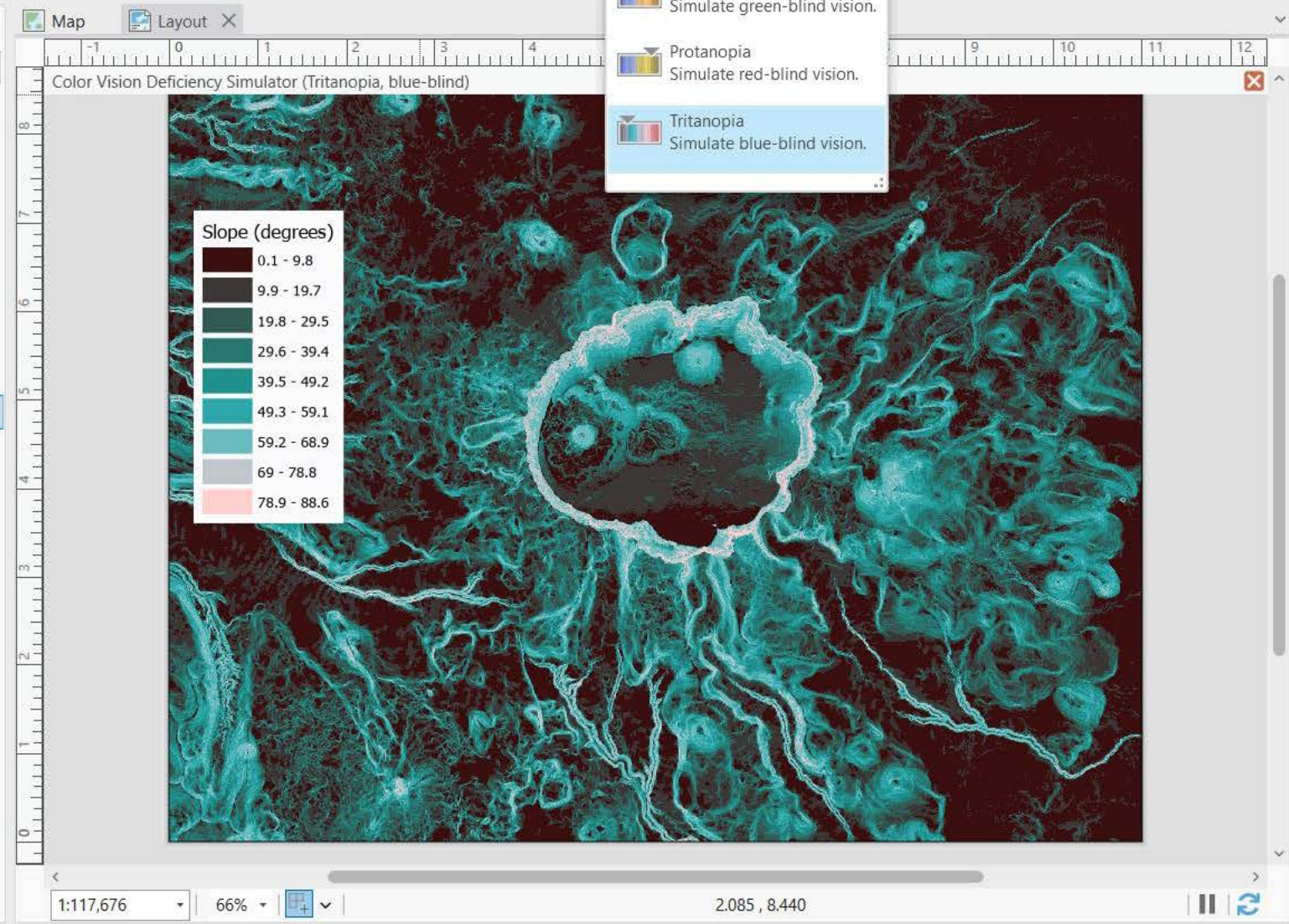
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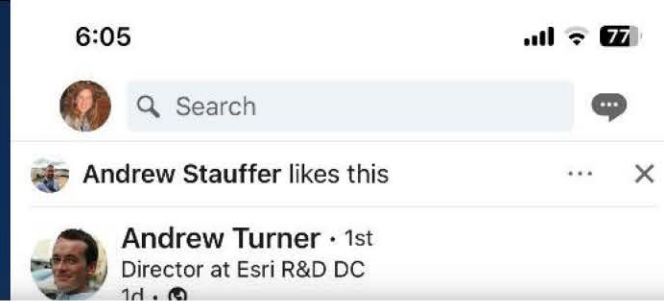
Color	Upper value	Label
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29.6 - 39.4	≤ 39.378091	29.6 - 39.4
39.5 - 49.2	≤ 49.222588	39.5 - 49.2
49.3 - 59.1	≤ 59.067086	49.3 - 59.1
59.2 - 68.9	≤ 68.911583	59.2 - 68.9
69 - 78.8	≤ 78.756081	69 - 78.8
78.9 - 88.6	≤ 88.600578	78.9 - 88.6

Catalog Symbology Geoprocessing Element



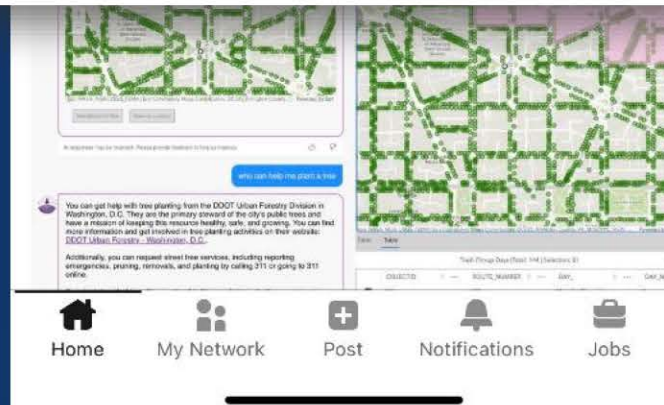






Last week at the FedGIS conference, my colleague [Adam Pfister](#) and I shared a few examples of Esri's work adding generative AI to ArcGIS. These first AI Assistants are exciting as they provide better access to data, guided analysis, and facilitated collaboration.

Esri's AI Assistants automate and accelerate workflows, access live data and services, and have configurable safety guardrails to improve quality and mitigate risks of inaccurate responses.





Responsibilities

- Of the **tool makers**
- Of the **data providers**
- Of the **skill teachers**
- Of the **map sharers**

Data



Tools



Skills



Sharing



Resources

Helping you create and share interactive web maps in ArcGIS Online

[See setup guides](#) →

Search resources



Tutorials

Experience what's possible with ArcGIS Online through a curated series of tutorials.

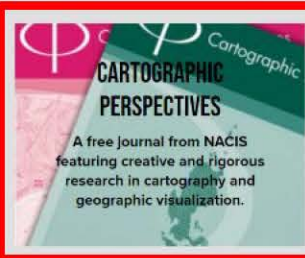




NATURAL EARTH

Natural Earth is a public domain map dataset available at 1:10m, 1:50m, and 1:110 million scales. Featuring tightly integrated vector and raster data, with Natural Earth you can make a variety of visually pleasing, well-crafted maps with cartography or GIS software.

[GO TO NATURAL EARTH →](#)



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A free journal from NACIS featuring creative and rigorous research in cartography and geographic visualization.

STUDENT MAP AND POSTER COMPETITION

Students who'd like to display their works at our Annual Meeting should register for the Student Map and Poster Competition.

STUDENT DYNAMIC MAP COMPETITION

Collections of the best examples of dynamic mapping in cartography.

MAP GALLERY

Show off your work in our annual Map Gallery!

CORLIS BENEFIDEO AWARD

A NACIS award recognizing imaginative cartography and the perspective it brings to the field.

CALL FOR MAPS

Enter your maps in the map gallery or one of our student competitions!

What are NACIS' objectives?

- To improve communication, coordination and cooperation among the producers, disseminators, curators, and users of cartographic information
- To support and coordinate activities with other professional organizations and institutions involved with cartographic information
- To improve the use of cartographic materials through education and to promote graphycacy
- To promote and coordinate the acquisition, preservation, and automated retrieval of all types of cartographic material, and
- To influence government policy on cartographic information

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Special issue of *Cartographic Perspectives* – fall 2024

•Peer-reviewed articles

- Geospatial Ethics: Concerns, Codes, and Cases
- Elements of Trust in Maps
- Objectivity in Storytelling, Spatial Narratives, and Data Journalism

•Case studies — 12



Case studies

1. Regrets
2. Better Than Good Enough for Government Work
3. Ethical dilemmas in early career: Reflections on a GIS internship experience and its echo in geospatial teaching
4. The Harm Mapping Project: Navigating Ethics and Collaboration in Map Design
5. Ethical Challenges in Analyzing and Mapping Demographic Changes and Migration with Population-Scale Family Trees
6. Ethical Reflections on Making the Untitled TETÁCES Map
7. [interview on ethics in data journalism]
8. Cartographic Considerations for Ethical Rockhounding
9. Mapping COVID-19: Applying Ethical Strategies in Web Mapping Decisions
10. A Discussion on the Ethics of Mapping Place Names for Riverine Forests in Tana River, Kenya
11. The “AfterMap” of the February 2023 Earthquakes in Turkey
12. Interview with an anonymous graphics reporter



[ArcGIS Online](#)

The Mapmaker's Mantra

Mapping

February 04, 2022



Aileen Buckley
Allen Carroll
Clint Brown

Maps are widely regarded as objective and authoritative sources of information. Over the past decade, news and other information sources have often been distorted on social media, eroding their authority. It's our hope that we can help avoid a similar erosion of



IMIA Mission

The International Map Industry Association (IMIA) is a global organization that represents the world of maps. IMIA brings together leaders from across the spectrum of mapping and location-oriented businesses to connect, share and learn. With business networking and education conferences, meetups, exchange of business information, worldwide IMIA membership is a proven global leadership opportunity.

IMIA Statement on Ethics for the Map Industry

The International Map Industry Association (IMIA) recognizes the following essential priorities and practices for ethical conduct by global mapping and geospatial businesses:

- Demonstrating integrity in all aspects of business operations, particularly correct map information and proper treatment of intellectual property.
- Maintaining business relationships through truthful communication and inclusive practices.
- Utilizing best practices for sourcing appropriate data and producing map content at resolutions/scales aligned with expected usage.
- Producing quality map and data products and services by focusing on their relevant usability, fidelity to a consistent ethical cartographic process, and accountability through honest and transparent procedures.

IMIA is a truly global organization. It welcomes members from every corner of the world. During the past 20 years, the mapping industry has witnessed dramatic growth and change through new technologies and mediums for map-based products. This change has brought about whole new industry sectors and companies.

IMIA's focus on networking and education allows you as a member to forge new relationships you will need and how your company will need to adapt to be successful in the years to come. New mapping products are emerging all the time and keeping up-to-date with industry developments can be a real challenge.

As a member of IMIA, you will have access to worldwide business networking and education with global conferences, committees, and discussion groups to facilitate the exchange of business information among companies.

It's precisely what you need to stay on the map.



Additional case studies

Aileen Buckley
abuckley@esri.com

Additional case studies

- We are looking for short (1000-3000 word; shorter if need be) texts that address **ethical dilemmas you have encountered in the map world**, and **how they were or were not resolved**.

We are looking for variety in every dimension we can think of—what **sector of the map world** you work in; what **kind of issues** you are dealing; the **cultures** the conflict comes out of.





Thank you!

Aileen Buckley, Ph.D.
abuckley@esri.com





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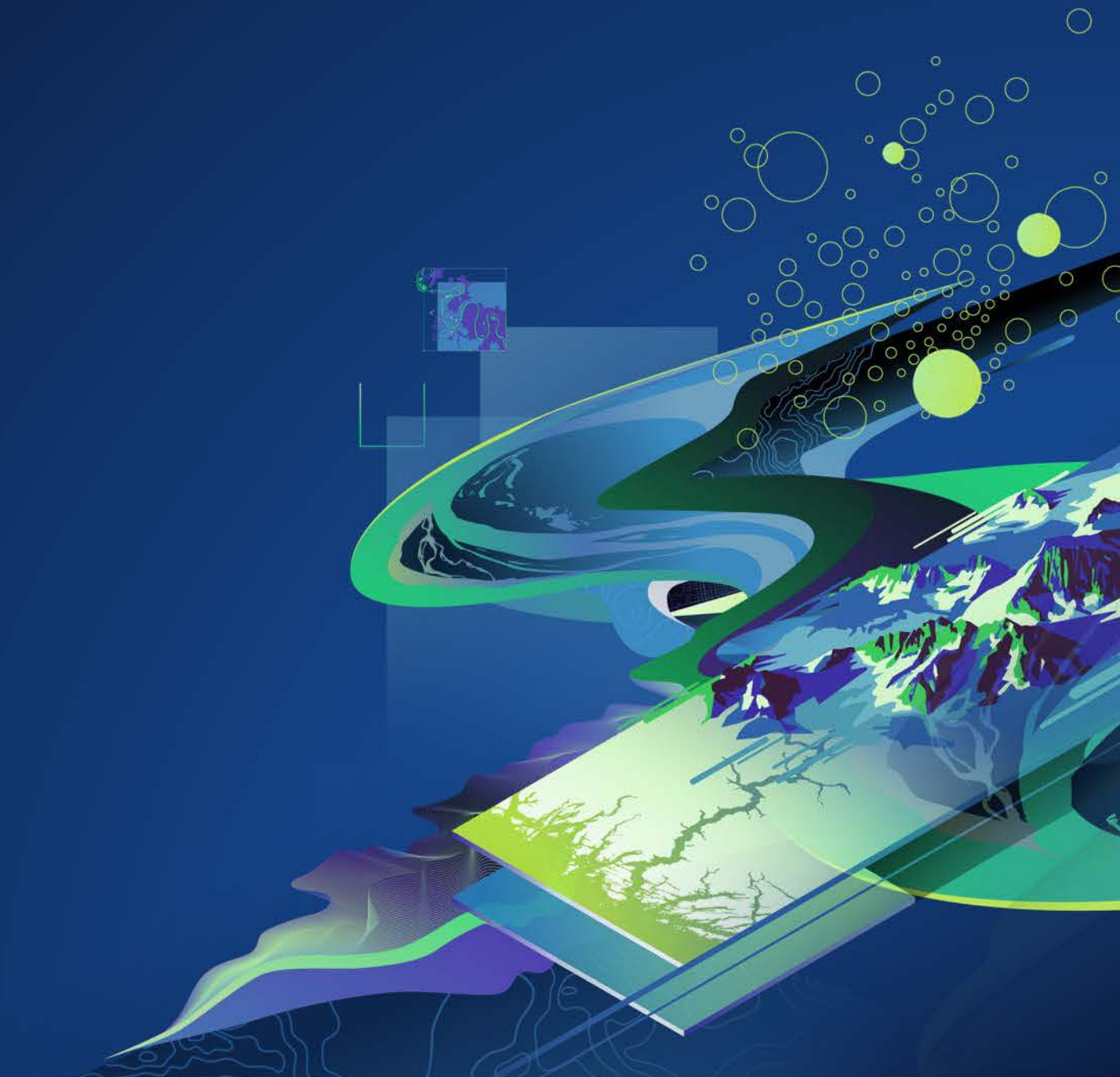
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Presentation Title

Presenter Names

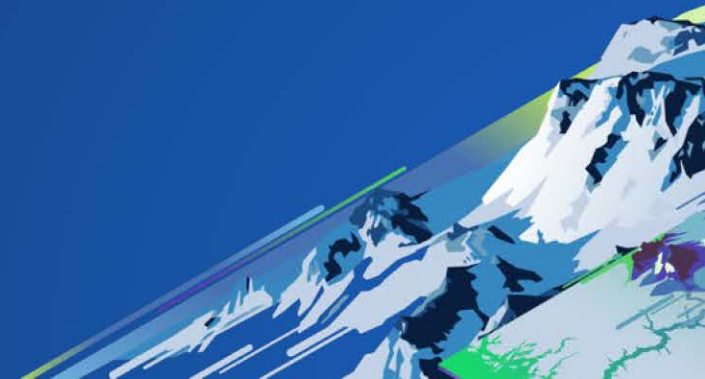
2022 ESRI PARTNER CONFERENCE



Headline

Subhead

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Headline

Subhead

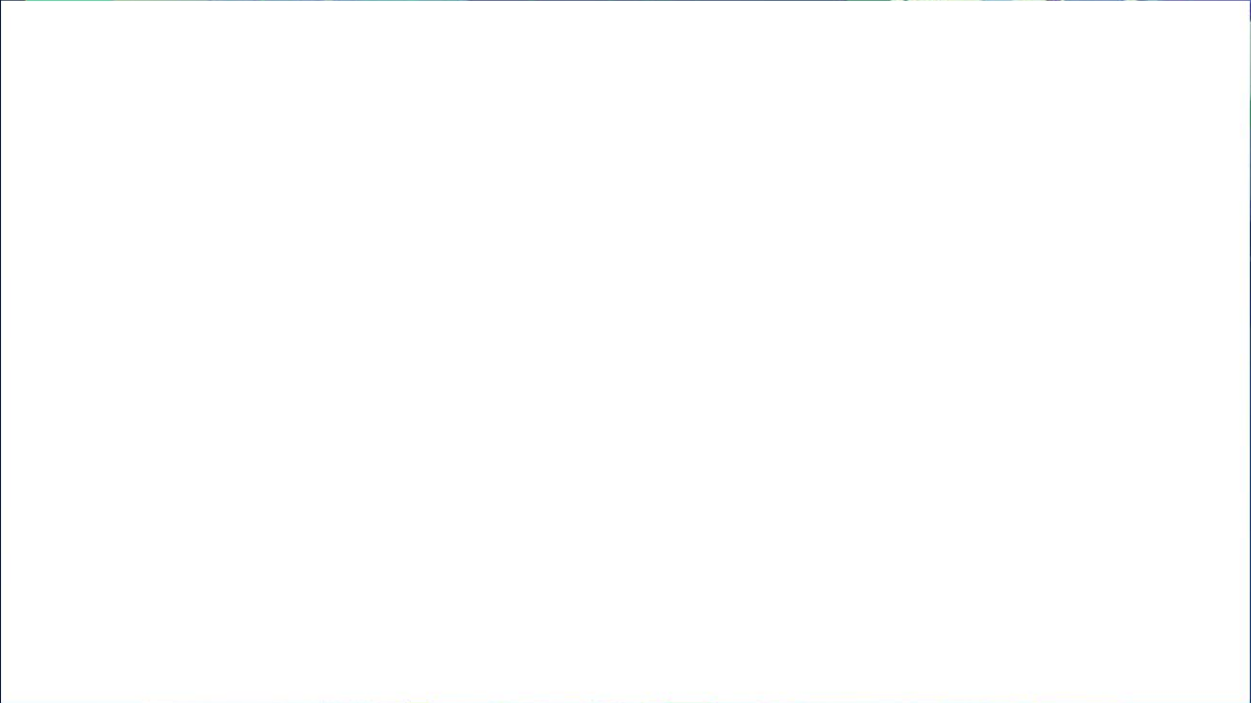
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Section Header

Section Subhead

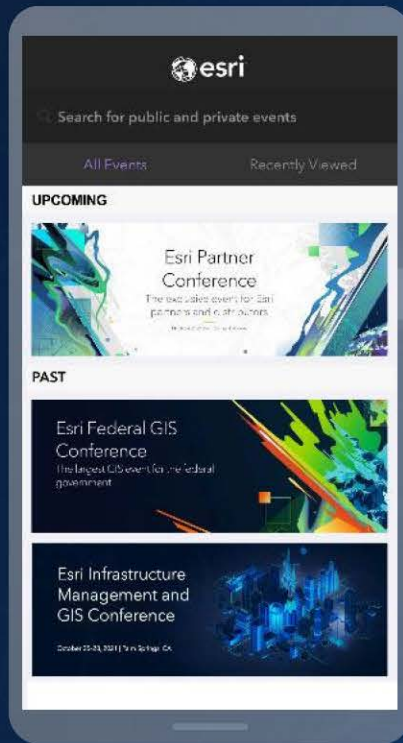


Demo Title

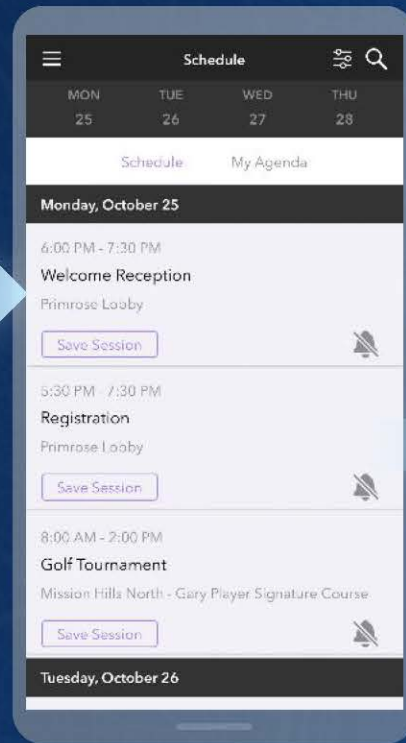
Demo Presenter

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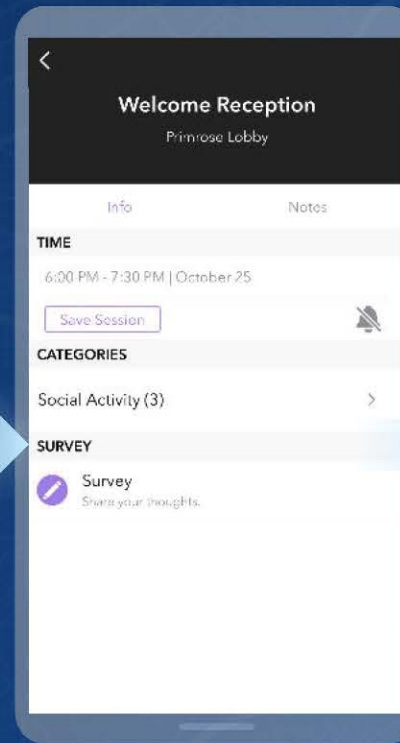
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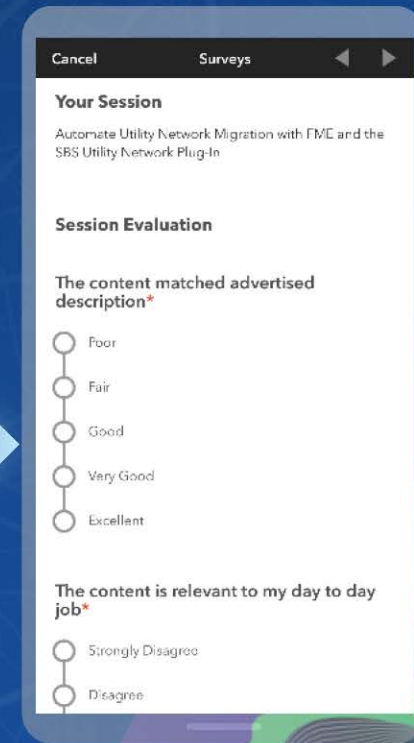
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